

catalogue
2022/23
appendix

content

tissue microarrays (TMA)	3
iCon (internal control) TMA	119
primary cell cultures	156
culture media	229
perfusion culture systems	336

tissue microarrays (TMA)

normal TMA	4
tumour TMA	33
inflammatory and autoimmune TMA	99
cardiovascular TMA	107

Tissue Microarray - Normal adult tissue I

Cat.-No.: 401 1110

Sample Datasheet

Slide Label				
	a	b	c	d
1	●	●	●	●
2	●	●	●	●
3	●	●	●	●
4	●	●	●	●
5	●	●	●	●
6	●	●	●	●
7	●	●	●	●
8	●	●	●	

Technical Information: 31 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1110

Position	Organ (Specifications)	Sex	Age
1a	Pancreas	f	67
1b	Spleen	m	72
1c	Breast	f	57
1d	Esophagus (smooth muscle - muscularis media)	m	40
2a	Skeletal muscle	f	51
2b	Salivary gland (Gl. Submandibularis)	f	59
2c	Gall bladder	m	45
2d	Thyroid gland	m	70
3a	Kidney	m	61
3b	Appendix vermiformis	m	33
3c	Uterus (Myometrium, Endometrium)	f	44
3d	Stomach	m	60
4a	Placenta	f	27
4b	Testis	m	70
4c	Tonsilla palatina	m	37
4d	Colon (submucosa)	m	67
5a	Liver	M	61
5b	Brain (temporal cortex)	m	19
5c	Skin	m	50
5d	Small intestine	m	77
6a	Parathyroid (benigne hyperplasia)	m	67
6b	Lymph node	m	65
6c	Fat	f	50
6d	Artery (A. iliaca, external wall - media and adventitia)	f	40
7a	Urinary bladder	f	60
7b	Thymus	m	35
7c	Lung	f	52

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
 Cat.-No.: 401 1110

Position	Organ (Specifications)	Sex	Age
7d	Colon (smooth muscle - muscularis media)	m	66
8a	Heart	m	45
8b	Prostate	m	65
8c	Ovarian stroma	f	55

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Normal adult tissue II

Cat.-No.: 401 1120 Sample Datasheet

Slide Label							
	a	b	c	d	e	f	g
1	●	●	●	●	●	●	●
2	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●
7	●	●	●	●	●	●	●
8	●	●	●	●	●	●	
9		●	●	●	●	●	
10		●	●	●	●	●	
11		●	●	●	●	●	

Technical Information: 70 spots
 - Spot diameter: 2.0 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.
 Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1120

Position	Organ	Tissue Specification	Sex	Age
1a	brain	central nerval system/ cortex frontal	f	56
1b	brain	central nerval system/ cortex frontal	m	72
1c	brain	central nerval system/ cortex frontal	m	42
1d	brain	central nerval system/ cortex frontal	f	52
1e	brain	central nerval system/ cortex frontal	m	20
1f	colon	mucosa	m	63
1g	colon	mucosa	m	58
2a	colon	mucosa	f	78
2b	colon	mucosa	m	37
2c	colon	mucosa	m	66
2d	heart	myocard left ventricle	f	45
2e	heart	myocard left ventricle	m	61
2f	heart	myocard left ventricle	f	69
2g	heart	myocard left ventricle	f	77
3a	heart	myocard left ventricle	f	75
3b	kidney	cortex	m	62
3c	kidney	cortex	f	45
3d	kidney	cortex	m	61
3e	kidney	cortex	m	53
3f	kidney	cortex	f	61
3g	liver	parenchyma	m	54
4a	liver	parenchyma	f	77
4b	liver	parenchyma	m	72
4c	liver	parenchyma	f	66
4d	liver	parenchyma	m	65
4e	lung	parenchyma	m	77
4f	lung	parenchyma	f	39

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1120

Position	Organ	Tissue Specification	Sex	Age
4g	lung	parenchyma	m	20
5a	lung	parenchyma	f	52
5b	lung	parenchyma	m	78
5c	muscle	skeletal muscle	m	62
5d	muscle	skeletal muscle	m	62
5e	muscle	skeletal muscle	m	53
5f	muscle	skeletal muscle	m	63
5g	muscle	skeletal muscle	m	60
6a	spleen	parenchyma	m	76
6b	spleen	parenchyma	m	47
6c	spleen	parenchyma	m	72
6d	spleen	parenchyma	f	65
6e	spleen	parenchyma	m	62
6f	testis	parenchyma	m	74
6g	testis	parenchyma	m	70
7a	testis	parenchyma	m	38
7b	testis	parenchyma	m	66
7c	testis	parenchyma	m	68
7d	ovary/ uterus	uterus endometrium	f	39
7e	ovary/ uterus	uterus endometrium	f	45
7f	ovary	ovary cortex	f	25
7g	ovary	ovary cortex	f	49
8a	ovary	ovary cortex	f	52
8b	pancreas	parenchyma	f	68
8c	pancreas	parenchyma	f	76
8d	pancreas	parenchyma	m	72
8e	pancreas	parenchyma	m	56

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1120

Position	Organ	Tissue Specification	Sex	Age
8f	pancreas	parenchyma	m	75
9a				
9b	small intestine	mucosa	m	73
9c	small intestine	mucosa	m	49
9d	small intestine	mucosa	m	49
9e	small intestine	mucosa	f	69
9f	small intestine	mucosa	m	77
10a				
10b	rectum	mucosa	m	55
10c	rectum	mucosa	m	53
10d	rectum	mucosa	m	57
10e	rectum	mucosa	f	63
10f	rectum	mucosa	m	66
11a				
11b	skin	epidermis	m	47
11c	skin	epidermis	m	37
11d	skin	epidermis	m	91
11e	skin	epidermis	m	55
11f	skin	epidermis	m	50

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Normal Tissue according to FDA panel

Cat.-No.: 401 1130

Sample Datasheet

Slide Label									
	a	b	c	d	e	f	g	h	i
1	Adrenal gland	Adrenal gland	Adrenal gland	Bladder	Bladder	Bladder	Bone marrow	Bone marrow	Bone marrow
2	Blood cells	Blood cells	Blood cells	Cerebellum	Cerebellum	Cerebellum	Cerebral cortex	Cerebral cortex	Cerebral Cortex
3	Breast	Breast	Breast	Cecum	Cecum	Cecum	Ascending Colon	Ascending Colon	Ascending Colon
4	Descending Colon	Descending Colon	Descending Colon	Sigmoid Colon	Sigmoid Colon	Sigmoid Colon	Artery	Artery	Artery
5	Vein	Vein	Vein	Fallopian tube	Fallopian tube	Fallopian tube	Esophagus	Esophagus	Esophagus
6	Stomach	Stomach	Stomach	Jejunum	Jejunum	Jejunum	Ileum	Ileum	Ileum
7	Myocardium	Myocardium	Myocardium	Kidney – Cortex	Kidney – Cortex	Kidney – Cortex	Kidney – Medulla	Kidney – Medulla	Kidney - Medulla
8	Liver – right lobe	Liver – right lobe	Liver – right lobe	Liver – left lobe	Liver – left lobe	Liver – left lobe	Lung	Lung	Lung
9	Lymph node	Lymph node	Lymph node	Ovary	Ovary	Ovary	Pancreas	Pancreas	Pancreas
10	Parathyroid	Parathyroid	Parathyroid	Parotid gland	Parotid gland	Parotid gland	Peripheral nerve	Peripheral nerve	Peripheral nerve
11	Pituitary gland	Pituitary gland	Pituitary gland	Placenta	Placenta	Placenta	Prostate	Prostate	Prostate
12	Skin	Skin	Skin	Spinal cord	Spinal cord	Spinal cord	Spleen	Spleen	Spleen
13	Striated muscle	Striated muscle	Striated muscle	Testis	Testis	Testis	Tonsil	Tonsil	Tonsil
14	Thymus	Thymus	Thymus	Thyroid	Thyroid	Thyroid	Ureter	Ureter	Ureter
15	Uterus – Cervix	Uterus – Cervix	Uterus – Cervix	Uterus – Endometrium	Uterus – Endometrium	Uterus – Endometrium			

Technical Information: 132 spots

- Spot diameter: 1.5 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1130

Position	Organ	Specification	Sex	Age
1a	Adrenal Gland		f	59
1b	Adrenal Gland		m	28
1c	Adrenal Gland		f	26
1d	Bladder (urinary)		m	65
1e	Bladder (urinary)		m	72
1f	Bladder (urinary)		m	57
1g	Bone marrow	Core	f	44
1h	Bone marrow	Core	m	37
1i	Bone marrow	Core	f	25
2a	Blood cells		f	38
2b	Blood cells		f	33
2c	Blood cells		f	50
2d	Brain	Cerebellum	f	88
2e	Brain	Cerebellum	m	72
2f	Brain	Cerebellum	f	57
2g	Brain	Cerebral cortex	f	88
2h	Brain	Cerebral cortex	m	72
2i	Brain	Cerebral cortex	f	56
3a	Breast		f	23
3b	Breast		f	36
3c	Breast		f	73
3d	Colon	Cecum	m	71
3e	Colon	Cecum	m	75
3f	Colon	Cecum	m	76
3g	Colon	Ascending Colon	m	74
3h	Colon	Ascending Colon	m	75
3i	Colon	Ascending Colon	f	56

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1130

Position	Organ	Specification	Sex	Age
4a	Colon	Descending Colon	m	87
4b	Colon	Descending Colon	m	60
4c	Colon	Descending Colon	m	52
4d	Colon	Sigmoid Colon	f	71
4e	Colon	Sigmoid Colon	m	62
4f	Colon	Sigmoid Colon	f	70
4g	Endothelium	Artery	f	83
4h	Endothelium	Artery	f	53
4i	Endothelium	Artery	m	53
5a	Endothelium	Vein	f	67
5b	Endothelium	Vein	f	66
5c	Endothelium	Vein	f	53
5d	Fallopian tube		f	35
5e	Fallopian tube		f	35
5f	Fallopian tube		f	67
5g	Gastrointestinal tract	Esophagus	f	54
5h	Gastrointestinal tract	Esophagus	m	67
5i	Gastrointestinal tract	Esophagus	m	65
6a	Gastrointestinal tract	Stomach (fundus)	m	72
6b	Gastrointestinal tract	Stomach (fundus)	m	63
6c	Gastrointestinal tract	Stomach (fundus)	m	68
6d	Gastrointestinal tract	Jejunum	m	70
6e	Gastrointestinal tract	Jejunum	m	28
6f	Gastrointestinal tract	Jejunum	f	61
6g	Gastrointestinal tract	Ileum	m	75
6h	Gastrointestinal tract	Ileum	f	50
6i	Gastrointestinal tract	Ileum	m	64

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1130

Position	Organ	Specification	Sex	Age
7a	Heart	Myocardium (LV)	f	68
7b	Heart	Myocardium (LV)	m	62
7c	Heart	Myocardium (LV)	m	79
7d	Kidney	Cortex	f	75
7e	Kidney	Cortex	f	64
7f	Kidney	Cortex	f	74
7g	Kidney	Medulla	f	75
7h	Kidney	Medulla	f	64
7i	Kidney	Medulla	f	74
8a	Liver	Right lobe	f	53
8b	Liver	Right lobe	m	61
8c	Liver	Right lobe	f	85
8d	Liver	Left lobe	m	77
8e	Liver	Left lobe	f	66
8f	Liver	Left lobe	f	60
8g	Lung	Including bronchioles	m	73
8h	Lung	Including bronchioles	m	78
8i	Lung	Including bronchioles	m	60
9a	Lymph node	Central lymph node	m	68
9b	Lymph node	Central lymph node	m	79
9c	Lymph node	Central lymph node	f	80
9d	Ovary		f	82
9e	Ovary		f	70
9f	Ovary		f	48
9g	Pancreas		f	54
9h	Pancreas		m	44
9i	Pancreas		m	72

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1130

Position	Organ	Specification	Sex	Age
10a	Parathyroid		m	67
10b	Parathyroid		f	39
10c	Parathyroid		f	65
10d	Parotid gland		f	62
10e	Parotid gland		m	52
10f	Parotid gland		m	69
10g	Peripheral nerve		m	72
10h	Peripheral nerve		f	58
10i	Peripheral nerve		m	70
11a	Pituitary gland		f	77
11b	Pituitary gland		f	57
11c	Pituitary gland		m	42
11d	Placenta		f	22
11e	Placenta		f	28
11f	Placenta		f	33
11g	Prostate		m	45
11h	Prostate		m	42
11i	Prostate		m	45
12a	Skin		m	50
12b	Skin		f	18
12c	Skin		f	55
12d	Spinal cord	Cross-section	f	66
12e	Spinal cord	Cross-section	m	64
12f	Spinal cord	Cross-section	m	49
12g	Spleen		m	79
12h	Spleen		f	51
12i	Spleen		m	48

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1130

Position	Organ	Specification	Sex	Age
13a	Striated muscle		m	65
13b	Striated muscle		m	45
13c	Striated muscle		f	61
13d	Testis		-	22
13e	Testis		m	88
13f	Testis		m	18
13g	Tonsil		m	34
13h	Tonsil		m	37
13i	Tonsil		m	50
14a	Thymus		f	21
14b	Thymus		f	55
14c	Thymus		m	23
14d	Thyroid		f	68
14e	Thyroid		f	59
14f	Thyroid		f	40
14g	Ureter		f	68
14h	Ureter		m	51
14i	Ureter		m	70
15a	Uterus	Cervix	f	44
15b	Uterus	Cervix	f	44
15c	Uterus	Cervix	f	36
15d	Uterus	Endometrial tissue	f	45
15e	Uterus	Endometrial tissue	f	33
15f	Uterus	Endometrial tissue	f	47

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Normal adult brain tissue

Cat.-No.: 401 1210

Sample Datasheet

Slide Label				
	a	b	c	d
1	●	●	●	●
2	●	●	●	●
3	●			

Technical Information: 9 spots

- Spot diameter: 1.5 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1210

Position	Code	Tissue of	Sex	Age
1a	H1	Hippocampus/temporal Cortex	f	88
1b	H2	Medulla oblongata	f	88
1c	H3	Cerebrum, white matter	m	72
1d	H4	Cerebellum, white matter	f	88
2a	H5	Pons	f	88
2b	H6	Cerebellum, white matter	m	72
2c	H7	Cerebellum, cortex	m	72
2d	H8	Basal ganglia/internal capsule	f	88
3a	H9	Pons	f	88

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Normal adult and fetal bone tissue

Cat.-No.: 401 1211

Sample Datasheet

Slide Label				
	a	b	c	d
1	●	●	●	●
2	●	●		
3	●	●		
4	●	●	●	●
5	●	●	●	●
6	●	●	●	●

Technical Information: 20 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1211

Position	Localisation	Tissue	Sex	Age
1a	unknown	fetal	f	37 weeks of gestation
1b	unknown	fetal	f	37 weeks of gestation
1c	unknown	fetal	f	34 weeks of gestation
1d	unknown	fetal	f	34 weeks of gestation
2a	unknown	fetal	m	25 weeks of gestation
2b	unknown	fetal	m	25 weeks of gestation
3a	unknown	fetal	f	40 weeks of gestation
3b	unknown	fetal	f	40 weeks of gestation
4a	Hip	adult	m	68
4b	Hip	adult	m	68
4c	Hip	adult	f	72
4d	Hip	adult	f	72
5a	Femur	adult	m	76
5b	Femur	adult	m	76
5c	Hip	adult	m	61
5d	Hip	adult	m	61
6a	Hip	adult	f	60
6b	Hip	adult	f	60
6c	Femur	adult	f	62
6d	Femur	adult	f	62

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Normal adult cartilage tissue I

Cat.-No.: 401 1221 Sample Datasheet

Slide Label					
	a	b	c	d	e
1	●	●			
2	●	●	●		
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●

Technical Information: 20 spots
 - Spot diameter: 2.0 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.
 Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1221

Position	Localisation	Sex	Age
1a	hip	f	50
1b	hip	f	50
2a	hip	m	21
2b	hip	m	21
2c	trachea	m	56
3a	trachea	m	56
3b	knee	m	15
3c	knee	m	15
3d	trachea	m	25
3e	trachea	m	25
4a	trachea	f	53
4b	trachea	f	53
4c	hip	f	53
4d	hip	f	53
4e	trachea	f	57
5a	trachea	f	57
5b	trachea	m	72
5c	trachea	m	72
5d	knee	m	76
5e	knee	m	76

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Normal embryonic and fetal cartilage tissue II

Cat.-No.: 401 1222 Sample Datasheet

Slide Label					
	a	b	c	d	e
1	●	●			
2	●	●	●		
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●

Technical Information: 20 spots
 - Spot diameter: 2.0 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.
 Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1222

Position	Localisation	Tissue	Age
1a	humerus	fetal, human, normal	30 weeks of gestation
1b	humerus	fetal, human, normal	30 weeks of gestation
2a	femur	fetal, human, normal	30 weeks of gestation
2b	femur	fetal, human, normal	30 weeks of gestation
2c	femur re	fetal, human, normal	23 weeks of gestation
3a	femur re	fetal, human, normal	23 weeks of gestation
3b	femur + tibia	fetal, human, normal	27 weeks of gestation
3c	femur + tibia	fetal, human, normal	27 weeks of gestation
3d	femur prox.	fetal, human, normal	27 weeks of gestation
3e	femur prox.	fetal, human, normal	27 weeks of gestation
4a	humerus	fetal, human, normal	13 weeks of gestation
4b	humerus	fetal, human, normal	13 weeks of gestation
4c		embryonal, human, normal	12 weeks of gestation
4d		embryonal, human, normal	12 weeks of gestation
4e		embryonal, human, normal	9 weeks of gestation
5a		embryonal, human, normal	9 weeks of gestation
5b		embryonal, human, normal	10 weeks of gestation
5c		embryonal, human, normal	10 weeks of gestation
5d		embryonal, human, normal	8 weeks of gestation
5e		embryonal, human, normal	8 weeks of gestation

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Normal adult and neonatal cartilage tissue I+II

Cat.-No.: 401 1223

Sample Datasheet

Slide Label				
	a	b	c	d
1	●	●	●	●
2	●	●	●	●
3	●	●	●	●
4	●	●	●	●
5	●	●	●	●
6	●	●	●	●
7	●	●	●	●
8	●	●	●	●
9	●	●	●	●
10	●	●		

Technical Information: 38 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1223

Position	Localisation	Tissue	Sex	Age
1a	hip	adult	m	73
1b	hip	adult	m	73
1c	hip	adult	m	79
1d	hip	adult	m	79
2a	hip	adult	f	80
2b	hip	adult	f	80
2c	hip	adult	f	50
2d	hip	adult	f	50
3a	knee	adult	m	76
3b	knee	adult	m	76
3c	knee	adult	m	56
3d	knee	adult	m	56
4a	knee	adult	f	45
4b	knee	adult	f	45
4c	knee	adult	f	33
4d	knee	adult	f	33
5a	knee	adult	f	83
5b	knee	adult	f	83
5c	knee	adult	f	52
5d	knee	adult	f	52
6a	humerus	fetal, normal		30 weeks of gestation
6b	humerus	fetal, normal		30 weeks of gestation
6c	femur	fetal, normal		30 weeks of gestation
6d	femur	fetal, normal		30 weeks of gestation
7a	femur re	fetal, normal		23 weeks of gestation
7b	femur re	fetal, normal		23 weeks of gestation
7c	femur + tibia	fetal, normal		27 weeks of gestation

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1223

Position	Localisation	Tissue	Sex	Age
7d	femur + tibia	fetal, normal		27 weeks of gestation
8a	femur prox.	fetal, normal		27 weeks of gestation
8b	femur prox.	fetal, normal		27 weeks of gestation
8c	humerus	fetal, normal		13 weeks of gestation
8d	humerus	fetal, normal		13 weeks of gestation
9a		embryonal, normal		12 weeks of gestation
9b		embryonal, normal		12 weeks of gestation
9c		embryonal, normal		9 weeks of gestation
9d		embryonal, normal		9 weeks of gestation
10a		embryonal, normal		10 weeks of gestation
10b		embryonal, normal		10 weeks of gestation

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Normal tissue, multi-species

Cat.-No.: 401 1310

Sample Datasheet

Slide Label					
	a	b	c	d	e
1	●	●		●	●
2	●	●	●	●	
3	●	●	●	●	
4	●	●	●	●	
5	●	●	●	●	
6	●	●	●	●	
7	●	●	●	●	
8	●	●	●	●	
9	●	●	●	●	
10	●	●	●	●	
11	●	●	●	●	
12	●	●	●	●	

Technical Information: 48 spots

- Spot diameter: 1.5 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1310

Position	Species	Breed	Organ	Gender
1a	Immundeficient mouse	CD-1® Nude	heart	F
1b	inbred rat	lewis	heart	M
1c				
1d	domestic pig		heart	M
1e	human		heart	F
2a	Immundeficient mouse	CD-1® Nude	lung	F
2b	inbred rat	lewis	lung	M
2c	domestic pig		lung	M
2d	human		lung	M
3a	Immundeficient mouse	CD-1® Nude	liver	F
3b	inbred rat	lewis	liver	M
3c	domestic pig		liver	M
3d	human		liver	M
4a	Immundeficient mouse	CD-1® Nude	kidney	F
4b	inbred rat	lewis	kidney	M
4c	domestic pig		kidney	M
4d	human		kidney	F
5a	Immundeficient mouse	CD-1® Nude	stomach	F
5b	inbred rat	lewis	stomach	M
5c	domestic pig		stomach	M
5d	human		stomach	M
6a	Immundeficient mouse	CD-1® Nude	small intestine	F
6b	inbred rat	lewis	small intestine	M
6c	domestic pig		small intestine	M
6d	human		small intestine	M
7a	Immundeficient mouse	CD-1® Nude	colon	F
7b	inbred rat	lewis	colon	M

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 1310

Position	Species	Breed	Organ	Gender
7c	domestic pig		colon	M
7d	human		colon	M
8a	Immundeficient mouse	CD-1® Nude	muscle	F
8b	inbred rat	lewis	muscle	M
8c	domestic pig		muscle	M
8d	human		muscle	M
9a	Immundeficient mouse	CD-1® Nude	skin	F
9b	inbred rat	lewis	skin	M
9c	domestic pig		skin	M
9d	human		skin	F
10a	Immundeficient mouse	CD-1® Nude	spleen	F
10b	inbred rat	lewis	spleen	M
10c	domestic pig		spleen	M
10d	human		spleen	F
11a	Immundeficient mouse	CD-1® Nude	brain	F
11b	inbred rat	lewis	brain	M
11c	domestic pig		brain	M
11d	human		brain	M
12a	Immundeficient mouse	CD-1® Nude	fat	F
12b	inbred rat	lewis	fat	M
12c	domestic pig		fat	M
12d	human		fat	F

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Stem cell rich tissue -Stem Cell TMA[®]

Cat.-No.: 401 1401

Sample Datasheet

Slide Label				
	a	b	c	d
1	●	●	●	
2	●	●		
3	●	●	●	●
4	●	●	●	
5	●	●	●	
6	●	●	●	

Technical Information: 18 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry CD34+

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 1401

Position	Tissue	Sex	week of gestation
1a	abdomen	n.s.	12.
1b	abdomen	n.s.	12.
1c	liver	m	34.
2a	liver	m	34.
2b	liver	m	21.
3a	liver	m	21.
3b	liver	f	25.
3c	liver	f	25.
3d	liver	f	32.
4a	liver	f	32.
4b	liver	m	17.
4c	liver	m	17.
5a	liver	f	18.
5b	liver	f	18.
5c	liver	n.s.	14.
6a	liver	n.s.	14.
6b	liver	n.s.	14.
6c	liver	n.s.	14.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Lymphoma

Cat.-No.: 401 2101 Sample Datasheet

Slide Label					
	a	b	c	d	e
1	●	●			
2	●	●	●		
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●

Technical Information: 20 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2101

Position	Tissue	Diagnostics	ICD-O	Sex	Age
1a	Lymph node	normal		m	53
1b	Lymph node	normal		m	53
2a	tonsil	normal		m	51
2b	tonsil	normal		m	51
2c	Lymph node	BCLL	9823/3	m	64
3a	Lymph node	BCLL	9823/3	m	64
3b	Lymph node	Mantle cell lymphoma	9673/3	m	63
3c	Lymph node	Mantle cell lymphoma	9673/3	m	63
3d	Lymph node	DLBCL	9680/3	m	60
3e	Lymph node	DLBCL	9680/3	m	60
4a	Lymph node	DLBCL	9680/3	m	39
4b	Lymph node	DLBCL	9680/3	m	39
4c	Lymph node	DLBCL	9680/3	f	69
4d	Lymph node	DLBCL	9680/3	f	69
4e	Lymph node	Hodgkin	9652/3	f	33
5a	Lymph node	Hodgkin	9652/3	f	33
5b	Lymph node	Hodgkin	9663/3	f	20
5c	Lymph node	Hodgkin	9663/3	f	20
5d	Lymph node	T-NHL-NOS	9702/10	m	62
5e	Lymph node	T-NHL-NOS	9702/10	m	62

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Colon Carcinoma

Cat.-No.: 401 2201 Sample Datasheet

Slide Label						
	a	b	c	d	e	f
1	●	●	●	●	●	●
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●
6	●	●	●	●	●	●
7	●	●	●	●		
8	●	●	●	●	●	●
9	●	●	●	●		
10	●	●	●	●	●	
11	●	●	●	●	●	

Technical Information: 60 spots
 - Spot diameter: 1.5 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2201

Position	Organ (Specification)	Sex	Age	Stage pT	Stage pN	Stage pM	Grade
1a	primary tumor (adenocarcinoma)	f	72	3	1	X	2
1b	primary tumor (adenocarcinoma)	f	96	3	0	X	2
1c	primary tumor (adenocarcinoma)	m	60	3	1	X	2
1d	primary tumor (adenocarcinoma)	f	67	2	0	X	2
1e	primary tumor (adenocarcinoma)	m	55	3	1	X	2
1f	primary tumor (adenocarcinoma)	f	88	3	X	X	3
2a	primary tumor (adenocarcinoma)	f	65	4	1	X	2
2b	primary tumor (adenocarcinoma)	m	73	3	2	X	3
2c	primary tumor (adenocarcinoma)	f	74	3	2	1	2
2d	primary tumor (adenocarcinoma)	m	74	2	0	X	2
2e	primary tumor (adenocarcinoma)	m	55	3	3	X	2
2f	primary tumor (adenocarcinoma)	m	66	3	1	X	2
3a	primary tumor (adenocarcinoma)	f	84	3	1	X	2
3b	primary tumor (adenocarcinoma)	f	60	1	0	X	2
3c	primary tumor (adenocarcinoma)	f	75	3	1	X	2
3d	primary tumor (adenocarcinoma)	f	78	2	1	X	2
3e	primary tumor (adenocarcinoma)	m	67	3	0	X	2
3f	primary tumor (adenocarcinoma)	f	77	3	0	X	2

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2201

Position	Organ (Specification)	Sex	Age	Stage pT	Stage pN	Stage pM	Grade
4a	primary tumor (adenocarcinoma)	m	84	3	1	X	2
4b	primary tumor (adenocarcinoma)	f	81	3	1	X	3
4c	primary tumor (adenocarcinoma)	m	89	3	2	X	2
4d	primary tumor (adenocarcinoma)	f	57	4	2	1	3
4e	primary tumor (adenocarcinoma)	m	79	3	1	X	2
4f	primary tumor (adenocarcinoma)	f	74	2	2	X	2
5a	primary tumor (adenocarcinoma)	f	59	4	0	X	2
5b	primary tumor (adenocarcinoma)	f	73	3	1	1	2
5c	primary tumor (adenocarcinoma)	m	68	2	1	X	2
5d	primary tumor (adenocarcinoma)	m	40	4	3	X	3
5e	primary tumor (adenocarcinoma)	f	74	3	0	X	2
5f	primary tumor (adenocarcinoma)	m	67	3	2	X	2
6a	primary tumor (adenocarcinoma)	f	72	3	2	X	2
6b	primary tumor (adenocarcinoma)	f	78	3	0	X	1
6c	primary tumor (adenocarcinoma)	m	65	3	1	X	2
6d	primary tumor (adenocarcinoma)	f	36	3	0	1	2
6e	primary tumor (adenocarcinoma)	f	76	3	0	X	2
6f	primary tumor (adenocarcinoma)	f	78	2	0	X	2
7a	primary tumor	f	61	1	X	X	2

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Mamma Carcinoma

Cat.-No.: 401 2202 Sample Datasheet

Slide Label						
	a	b	c	d	e	f
1	●	●	●	●	●	●
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●
6	●	●	●	●	●	●
7	●	●	●	●		
8	●	●	●	●		●
9	●	●	●	●	●	●
10	●	●	●			
11	●	●	●	●	●	

Technical Information: 59 spots
 - Spot diameter: 1.5 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2202

Position	Organ (Specification)	Sex	Age	Stage pT	Stage pN	Stage pM	Grade
1a	ID-CA	f	67	2	0(0/12)	x	2
1b	ID-CA	f	90	1c	1biii	x	2
1c	ID-CA	f	25	2	x(0/2)	x	3
1d	ID-CA	f	49	2	1bi(1/18)	x	1
1e	ID-CA	f	60	3	1biii	x	3
1f	ID-CA	f	56	1c	0	x	1
2a	ID-CA	f	58	2	x	x	3
2b	ID-CA	f	39	1c	0	x	1
2c	ID-CA	f	73	2	0	x	3
2d	ID-CA	f	56	2	1biv	x	2
2e	ID-CA	f	42	2	1biii	x	3
2f	ID-CA	f	42	1c	1biv	x	3
3a	ID-CA	f	52	1c	0	x	2
3b	ID-CA	f	54	1c	0	x	1
3c	ID-CA	f	66	1c	1biii	x	1
3d	ID-CA	f	53	1b	0	x	2
3e	ID-CA	f	72	2	1biii	x	1
3f	ID-CA	f	46	1c	x	x	1
4a	ID-CA	f	52	1b	x	x	3
4b	ID-CA	f	40	2	x	x	2
4c	ID-CA	f	58	2	0	x	2
4d	ID-CA	f	60	4b	0	x	3
4e	ID-CA	f	63	1c	1biv(9/54)	x	2
4f	ID-CA	f	62	2	1a	x	2
5a	ID-CA	f	69	1b	0	x	1
5b	ID-CA	f	70	2	0	x	3
5c	ID-CA	f	45	1c	1biii	x	2

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2202

Position	Organ (Specification)	Sex	Age	Stage pT	Stage pN	Stage pM	Grade
5d	ID-CA	f	48	2	1biv	x	2
5e	ID-CA	f	46	1b	0(0/20)	x	3
5f	ID-CA	f	65	4b	2	x	2
6a	ID-CA	f	65	1c	0	x	3
6b	ID-CA	f	57	1c	0	x	3
6c	ID-CA	f	75	2	x	X	2
6d	ID-CA	f	65	2	0	x	2
6e	ID-CA	f	59	1c	0	x	2
6f	ID-CA	f	50	2	0	x	2
7a	ID-CA	f	64	1c	0	x	1
7b	ID-CA	f	63	1b	0	x	2
7c	ID-CA	f	43	2	2	x	3
7d	ID-CA	f	25	2	0	x	3
8a	IL-CA	f	52	2	0	x	2
8b	IL-CA	f	50	2	1bi	x	2
8c	IL-CA	f	59	2	1biv	x	2
8d	IL-CA	f	56	1c	0	x	2
8f	IL-CA	f	60	1c	1a	x	1
9a	IL-CA	f	57	1c	0	x	2
9b	IL-CA	f	45	1c	0(0/11)	x	2
9c	IL-CA	f	47	2	1biii(4/15)	x	2
9d	IL-CA	f	55	1b	0(0/15)	x	2
9e	IL-CA	f	69	1c	0	x	2
9f	IL-CA	f	59	1c	x	x	2
10a	IL-CA	f	65	1c	x	x	2
10b	IL-CA	f	58	2	1a	x	2

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2202

Position	Organ (Specification)	Sex	Age	Stage pT	Stage pN	Stage pM	Grade
10c	IL-CA	f	74	2	0	x	2
11a	normal breast	f	48				
11b	normal breast	f	30				
11c	normal breast	f	39				
11d	normal breast, fibrous tissue	f	21				
11e	normal breast, fibrous tissue	f	61				

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Cervical Carcinoma

Cat.-No.: 401 2203 Sample Datasheet

Slide Label						
	a	b	c	d	e	f
1	●	●	●	●	●	●
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●
6	●	●	●	●	●	●
7	●	●	●	●	●	●
8						
9	●	●	●	●	●	
10	●	●	●	●	●	

Technical Information: 52 spots
 - Spot diameter: 2.0 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2203

Position	Diagnostics	Sex	Age	Stage pT	Stage pN	Stage pM	Grade
1a	SCC	f	48	4	0	X	3
1b	SCC	f	30	2b	0	X	3
1c	SCC	f	31	X	1	1	3
1d	SCC	f	39	1b	0	X	3
1e	ADC	f	46	2b	0	X	2
1f	SCC	f	32	4	0	X	3
2a	SCC	f	69	2	X	X	2
2b	SCC	f	45	1b	0	X	2
2c	SCC	f	61	1b	0	X	2
2d	SCC	f	41	1b	0	X	2
2e	SCC	f	44	1b	0	X	2
2f	SCC	f	52	2b	1	X	3
3a	SCC	f	43	1b	0	X	2
3b	SCC	f	43	2b	0	X	2
3c	SCC	f	38	y1b	0	X	3
3d	SCC	f	36	2b	1	X	2
3e	SCC	f	62	2	0	X	2
3f	SCC	f	25	1b	1	X	3
4a	SCC	f	47	2b	1	1	2
4b	lymph node metastasis	f	47	2b	1	1	2
4c	SCC	f	72	2b	X	X	3
4d	SCC	f	40	1b	0	X	2
4e	SCC	f	38	1 a1	X	x	2
4f	SCC	f	68	1 b1	0	x	2
5a	SCC	f	50	2b	1	X	3
5b	lymph node metastasis	f	50	2b	1	X	3
5c	SCC	f	43	1b	1	X	2

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2203

Position	Diagnostics	Sex	Age	Stage pT	Stage pN	Stage pM	Grade
5d	SCC	f	69	1	X	X	3
5e	SCC	f	56	2b	0	X	3
5f	SCC	f	32	2b	1	X	2
6a	SCC	f	46	2a	0	X	3
6b	SCC	f	70	2b	0	X	2
6c	SCC	f	62	X	X	1	3
6d	Peritumorous inflammatory tissue	f	49	y2b	X	1	3
6e	SCC	f	35	1b2	0	X	2
6f	SCC	f	69	4	0	X	2
7a	SCC	f	42	2b	1	X	2
7b	SCC	f	58	2b	X	X	3
7c	SCC	f	44	1b1	X	X	2
7d	SCC	f	33	1b1	0	X	2
7e	SCC	f	37	1b1	0	X	3
7f	SCC	f	59	1bi	0	X	3
9a	CIN III lesion	f	50				
9b	CIN III lesion	f	63				
9c	Cervix mucosa near CIN III lesion	f	40				
9d	CIN III lesion	f	29				
9e	Cervix mucosa near CIN III lesion	f	26				
10a	normal mucosa	f	30				
10b	normal mucosa	f	32				
10c	normal mucosa	f	35				
10d	normal cervix, fibrous tissue	f	36				
10e	normal mucosa	f	35				

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Lung Carcinoma

Cat.-No.: 401 2204 Sample Datasheet

Slide Label							
	a	b	c	d	e	f	g
1	●	●	●	●			
2	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●
5	●	●	●	●			
6	●	●	●	●	●	●	●
7	●	●	●	●	●	●	●
8	●	●	●	●	●	●	●
9	●	●	●	●			
10		●	●	●	●	●	●

Technical Information: 60 spots

- Spot diameter: 1.5 mm (tumor) & 2.0 mm (normal)
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2204

Position	Diagnostics	Sex	Age	Stage pT	Stage pN	Stage pM	Grade	punching size
1a	SCLC	m	61	1	x	x	x	1.5 mm
1b	SCLC	m	65	1	x	x	x	1.5 mm
1c	SCLC	m	53	2	x	x	3	1.5 mm
1d	SCLC	m	59	2	1	x	4	1.5 mm
2a	SCC	m	54	2	0	x	2	1.5 mm
2b	SCC	m	69	2	0	x	2	1.5 mm
2c	SCC	m	63	2	0	x	2	1.5 mm
2d	SCC	m	61	2	0	x	2	1.5 mm
2e	SCC	m	55	2	0	x	2	1.5 mm
2f	SCC	m	71	2	2	x	2	1.5 mm
2g	SCC	m	66	3	0	x	2	1.5 mm
3a	SCC	m	66	1	0	x	2	1.5 mm
3b	SCC	m	55	2	2	x	3	1.5 mm
3c	SCC	f	60	2	0	x	2	1.5 mm
3d	SCC	f	61	2	0	x	2	1.5 mm
3e	SCC	m	64	2	0	x	2-3	1.5 mm
3f	SCC	m	76	2	0	x	3	1.5 mm
3g	SCC	m	65	2	0	x	2	1.5 mm
4a	SCC	f	58	2	1	x	2	1.5 mm
4b	SCC	m	60	2	2	x	3	1.5 mm
4c	SCC	m	55	2	0	x	3	1.5 mm
4d	SCC	m	67	2	0	x	2	1.5 mm
4e	SCC	m	59	2	2	x	3	1.5 mm
4f	SCC	m	68	2	0	x	2	1.5 mm
4g	SCC	m	50	4	1	x	2-3	1.5 mm
5a	SCC	f	63	2	0	x	2	1.5 mm
5b	SCC	m	76	2	0	x	2	1.5 mm

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2204

Position	Diagnostics	Sex	Age	Stage pT	Stage pN	Stage pM	Grade	punching size
5c	SCC	m	49	3	2	x	2	1.5 mm
5d	SCC	m	56	2	1	x	3	1.5 mm
6a	ADC	m	60	2	2	x	3	1.5 mm
6b	ADC	m	66	3	2	x	3	1.5 mm
6c	ADC	m	66	1	0	x	3	1.5 mm
6d	ADC	m	35	2	1	x	3	1.5 mm
6e	ADC	m	77	2	0	x	2	1.5 mm
6f	ADC	m	47	2	1	x	3	1.5 mm
6g	ADC	m	56	2	3	x	2-3	1.5 mm
7a	ADC	f	72	2	0	x	2	1.5 mm
7b	ADC	f	62	1	1	x	2	1.5 mm
7c	ADC	m	60	2	0	x	3	1.5 mm
7d	ADC	f	57	2	0	x	2	1.5 mm
7e	ADC	f	68	1	0	x	2	1.5 mm
7f	ADC	f	66	1	0	x	2-3	1.5 mm
7g	ADC	f	45	2	1	x	2	1.5 mm
8a	ADC	m	55	2	2	x	3	1.5 mm
8b	ADC	m	51	2	2	x	3	1.5 mm
8c	ADC	m	62	2	0	x	2	1.5 mm
8d	ADC	m	70	2	0	x	3	1.5 mm
8e	ADC	m	60	1	0	x	2	1.5 mm
8f	ADC	f	53	2	0	x	2	1.5 mm
8g	ADC	m	66	3	1	x	3	1.5 mm
9a	ADC	m	65	2	1	x	2-3	1.5 mm
9b	ADC	m	63	3	3	x	3	1.5 mm
9c	ADC	m	63	2	0	x	2	1.5 mm
9d	ADC	m	60	2	1	x	3	1.5 mm

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2204

Position	Diagnostics	Sex	Age	Stage pT	Stage pN	Stage pM	Grade	punching size
10a								
10b	normal lung	m	70					2.0 mm
10c	normal lung with bronchioles	f	46					2.0 mm
10d	normal lung	m	70					2.0 mm
10e	normal lung with bronchioles	m	42					2.0 mm
10f	normal lung with arteria	f	46					2.0 mm
10g	normal lung	m	70					2.0 mm

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Thyroid Carcinoma

Cat.-No.: 401 2205 Sample Datasheet

Slide Label								
	a	b	c	d	e	f	g	h
1	●	●	●	●	●	●	●	●
2	●	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●	●
7	●	●	●	●	●			
8	●	●	●	●	●	●	●	●
9	●	●	●	●	●	●	●	●
10	●	●	●	●	●	●	●	●
11	●	●	●	●	●	●	●	●
12	●	●	●	●	●	●	●	●
13	●	●	●	●	●	●	●	●

Technical Information: 101 spots
 - Spot diameter: 1.5 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.
 Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2205

Position	Diagnostics	Specification	Sex	Age	Stage pT	Stage pN	Remarks
1a	adenoma	predominantly macrofollicular	m	40			
1b	adenoma	predominantly macrofollicular	f	41			
1c	adenoma	predominantly macrofollicular	m	58			
1d	adenoma	predominantly macrofollicular	f	66			
1e	adenoma	predominantly macrofollicular	f	55			
1f	adenoma	predominantly macrofollicular	f	24			
1g	adenoma	predominantly macrofollicular	f	42			
1h	adenoma	predominantly macrofollicular	m	66			
2a	adenoma	predominantly macrofollicular	m	52			
2b	adenoma	predominantly macrofollicular	f	37			
2c	adenoma	predominantly macrofollicular	f	48			
2d	adenoma	predominantly macrofollicular	f	47			
2e	adenoma	predominantly macrofollicular	f	33			
2f	adenoma	predominantly macrofollicular	f	76			
2g	adenoma	predominantly macrofollicular	f	54			
2h	adenoma	predominantly macrofollicular	m	60			
3a	adenoma	predominantly macrofollicular	f	34			
3b	adenoma	predominantly macrofollicular	f	79			
3c	adenoma	follicular	m	41			

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2205

Position	Diagnostics	Specification	Sex	Age	Stage pT	Stage pN	Remarks
3d	adenoma	follicular	m	45			
3e	adenoma	follicular	f	48			
3f	adenoma	follicular	f	35			
3g	adenoma	follicular	f	51			
3h	adenoma	follicular	m	68			
4a	adenoma	follicular	m	40			
4b	adenoma	follicular	f	55			
4c	adenoma	follicular	f	47			
4d	adenoma	follicular	f	50			
4e	adenoma	follicular	f	44			
4f	adenoma	follicular	m	39			
4g	adenoma	oxyphil	f	67			
4h	adenoma	oxyphil	f	46			
5a	carcinoma	follicular	m	39	2	X	Same patient sampel as 4f
5b	carcinoma	follicular	m	34	2	X	
5c	carcinoma	follicular	m	60	2	X	
5d	Regional carcinoma of metastais	follicular	f	59	X	1	
5e	carcinoma	papillary	f	66	(m)2	X	
5f	normal		m	66			
5g	carcinoma	papillary	f	27	1	0	
5h	carcinoma	papillary	f	46	2	X	
6a	carcinoma	papillary	m	67	2	X	
6b	Normal thyroid	papillary	m	56			direct immediately agent to papillary carcinoma
6c	carcinoma, lymph node metastasis	papillary	m	56	4	1b	Same patient sample as 6b

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2205

Position	Diagnostics	Specification	Sex	Age	Stage pT	Stage pN	Remarks
6d	carcinoma	papillary	f	48	1	X	
6e	carcinoma	papillary	m	27	2	X	
6f	carcinoma	medullary	f	48	2	0	
6g	carcinoma	medullary	m	42	y4	y1b	
6h	Carcinoma, lymph node metastasis	medullary	m	42	y4	y1b	Same patient sample as 6g
7a	carcinoma	medullary	m	44	2	1	
7b	carcinoma	undiffernciated (insular)	m	77	4	X	
7c	carcinoma	undiffernciated (anaplastic)	f	42	4a	1	
7d	metastasis renal cell carcinoma	Clear cell	f	69			
7e	Metastasis renal cell carcinoma	Clear cell	m	75			
8a	Normal		m	40			Same patient as sample 1a
8b	Normal		f	41			Same patient as sample 1b
8c	Normal		m	58			Same patient as sample 1c
8d	Normal		f	66			Same patient as sample 1d
8e	Normal		m	52			Same patient as sample 2a
8f	Normal		f	47			Same patient as sample 2d
8g	Normal		m	41			Same patient as sample 3c
8h	Normal		m	45			Same patient as sample 3d
9a	Normal		f	51			Same patient as sample 3g
9b	Normal		m	68			Same patient as sample 3h

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2205

Position	Diagnostics	Specification	Sex	Age	Stage pT	Stage pN	Remarks
9c	Normal		m	40			Same patient as sample 4a
9d	Normal		f	55			Same patient as sample 4b
9e	Normal		f	50			Same patient as sample 4d
9f	Normal		m	39			Same patient as sample 4f
9g	Normal with partially lymphocytic thyroiditis		f	34			Same patient as sample 3a
9h	Normal with partially lymphocytic thyroiditis		f	44			Same patient as sample 4e
10a	Normal with partially lymphocytic thyroiditis		f	46			Same patient as sample 4h
10b	Normal		m	39			Same patient as sample 4f
10c	Normal		m	34			Same patient as sample 5b
10d	Normal		m	60			Same patient as sample 5c
10e	Normal		f	59			Same patient as sample 5d
10f	Normal		f	66			Same patient as sample 5e
10g	Normal		f	27			Same patient as sample 5g
10h	Normal		f	46			Same patient as sample 5h
11a	Normal		m	67			Same patient as sample 6a
11b	Normal		m	56			Same patient as sample 6c
11c	Normal		f	48			Same patient as sample 6d
11d	Normal		m	27			Same patient as sample 6e
11e	Normal		f	48			Same patient as

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2205

Position	Diagnostics	Specification	Sex	Age	Stage pT	Stage pN	Remarks
							sample 6f
11f	Normal		m	44			Same patient as sample 7a
11g	Normal		m	77			Same patient as sample 7b
11h	Normal		f	69			Same patient as sample 7d
12a	Normal		m	75			Same patient as sample 7e
12b	Normal		f	41			
12c	Normal		f	55			
12d	Normal		m	29			
12e	Normal		f	65			
12f	Normal		f	66			
12g	Normal		f	56			
12h	Normal with partially lymphocytic thyroiditis		f	57			
13a	Morbus Basedow (Grave's disease/ diffuse toxic goiter)		f	44			
13b	Morbus Basedow (Grave's disease/ diffuse toxic goiter)		f	59			
13c	Morbus Basedow (Grave's disease/ diffuse toxic goiter)		f	49			
13d	Morbus Basedow (Grave's disease/ diffuse toxic goiter)		f	48			
13e	Morbus Basedow (Grave's disease/ diffuse toxic goiter)		f	37			
13f	Morbus Basedow (Grave's disease/ diffuse toxic goiter)		f	39			
13g	Morbus Basedow (Grave's disease/		f	51			

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
 Cat.-No.: 401 2205

Position	Diagnostics	Specification	Sex	Age	Stage pT	Stage pN	Remarks
	diffuse toxic goiter)						
13h	Morbus Basedow (Grave's disease/ diffuse toxic goiter)		f	38			

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Pancreas Carcinoma

Cat.-No.: 401 2206 Sample Datasheet

Slide Label								
	a	b	c	d	e	f	g	h
1	●	●	●	●	●	●	●	●
2	●	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●	●
6	●	●						
7	●	●	●	●	●	●	●	●
8	●	●	●	●	●			
9	●	●	●	●	●	●	●	●
10	●	●	●	●	●	●	●	●
11	●	●	●	●	●	●	●	●
12	●	●	●	●	●	●	●	
13	●	●	●	●	●	●	●	●
14	●	●						

Technical Information: 96 spots
 - Spot diameter: 1.5 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2206

Position	Diagnosis	Specification	Sex	Age	pT	pN	pM	Grade	Remarks
1a	ADC	ductal	m	69	4	1	X	2	collision carcinoma (ductal/ neuroendocrine)
1b	ADC	ductal	f	67	3	1b	x	3	
1c	ADC	ductal	f	60	3	1b	x	2	
1d	ADC	ductal	m	60	3	1	x	3	
1e	ADC	ductal	m	73	4	1	x	2	
1f	ADC	ductal	m	83	3	1	x	3	
1g	ADC	ductal	f	56	3	1	X	2	
1h	ADC	ductal	f	65	3	1	x	3	
2a	ADC	ductal	f	59	3	1	x	2	
2b	ADC	ductal	m	65	3	1	x	3	
2c	ADC	ductal	m	69	3	1b	x	2	
2d	ADC	ductal	m	59	3	1	x	2	
2e	ADC	ductal	f	84	Tis	x	x	1	
2f	ADC	ductal	m	72	3	1	x	3	
2g	ADC	mucinous	f	55	3	1	x	3	
2h	carcinoma	adenosquamous	f	76	4	1	x	3	
3a	carcinoma	adenosquamous	f	71	3	1a	x	3	
3b	carcinoma	adenosquamous	m	73	3	1	x	3	
3c	carcinoma	adenosquamous	m	71	3	1	X	3	
3d	carcinoma	adenosquamous	m	73	3	1	X	3	
3e	carcinoma	adenosquamous	m	78	3	1	x	X	
3f	carcinoma	ampullary	f	67	4	0	x	2	
3g	carcinoma	ampullary	m	79	3	1	X	3	
3h	carcinoma	ampullary	m	72	3	0	X	3	
4a	carcinoma	ampullary	f	80	3	1	x	3	
4b	carcinoma	ampullary	f	69	4	1	X	2	

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2206

Position	Diagnosis	Specification	Sex	Age	pT	pN	pM	Grade	Remarks
4c	carcinoma	ampullary	f	72	4	1	X	3	
4d	NEC		m	69	3	1	X	2	same patient as sample 1a: collision carcinoma (ductal/ neuroendocrine)
4e	NEC		m	58	3	X	X	1	
4f	NEC		m	38	3	1	X	1	
4g	NEC		m	41	2	1	X	2	
4h	NEC		m	69	4	x	x	1	
5a	NEC		f	65	3	1	X	1	
5b	NEC		f	67	1	0	X	1	
5c	NEC		m	74	3	1	X	3	
5d	NEC		m	44	4	1	X	1	
5e	NEC		f	54	3	1	X	1	
5f	ADC		m	61	3	1	X	2	
5g	ADC		m	72	4	1	x	3	
5h	ADC		m	53	3	1	X	3	
6a	ADC		f	62	3	1	X	2	
6b	ADC		f	73	3	1	X	2	
7a	NEC, lymph node metastasis	NEC	m	69	4	1	X	2	same patient as sample 1a and 4d
7b	ADC, lymph node metastasis	ductal	f	67	3	1b	x	3	same patient as sample 1b
7c	ADC, lymph node metastasis	ductal	f	60	3	1b	X	2	same patient as sample 1c
7d	ADC, lymph node metastasis	ductal	m	60	3	1	X	3	same patient as sample 1d
7e	ADC, lymph node metastasis	ductal	f	56	3	1	X	2	same patient as sample 1g
7f	ADC, lymph node metastasis	ductal	f	59	3	1	X	2	same patient as sample 2a

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2206

Position	Diagnosis	Specification	Sex	Age	pT	pN	pM	Grade	Remarks
7g	ADC, lymph node metastasis	ductal	m	65	3	1	X	3	same patient as sample 2b
7h	ADC, lymph node metastasis	mucinous	f	55	3	1	X	3	same patient as sample 2g
8a	ADC, lymph node metastasis	adenosquamous	m	73	3	1	X	3	same patient as sample 3d
8b	ADC, lymph node metastasis	adenosquamous	m	78	3	1	X	x	same patient as sample 3e
8c	ADC, lymph node metastasis	ampullary	m	79	3	1	X	3	same patient as sample 3g
8d	NEC, lymph node metastasis	NEC	f	54	3	1	X	1	same patient as sample 5e
8e	ADC, lymph node metastasis		f	62	3	1	X	2	same patient as sample 6a
9a	normal		f	67					same patient as sample 1b
9b	normal		f	60					same patient as sample 1c
9c	normal		m	60					same patient as sample 1d
9d	normal		m	73					same patient as sample 1e
9e	normal		m	83					same patient as sample 1f
9f	normal		f	56					same patient as sample 1g
9g	normal		m	55					
9h	normal		f	59					same patient as sample 2a
10a	normal		m	65					same patient as sample 2b & 7g
10b	normal		m	72					same patient as sample 2f
10c	normal		f	76					same patient as sample 2h
10d	normal		f	71					same patient as sample 3a

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2206

Position	Diagnosis	Specification	Sex	Age	pT	pN	pM	Grade	Remarks
10e	normal		m	71					same patient as sample 3c
10f	normal		m	73					same patient as sample 3d & 8a
10g	normal		m	78					same patient as sample 3e & 8b
10h	normal		f	67					same patient as sample 3f
11a	normal		m	79					same patient as sample 3g & 8c
11b	normal		m	51					
11c	normal		f	80					same patient as sample 4a
11d	normal		f	69					same patient as sample 4b
11e	normal		f	67					
11f	normal		f	72					same patient as sample 4c
11g	normal		m	58					same patient as sample 4e
11h	normal		m	38					same patient as sample 4f
12a	normal		m	41					same patient as sample 4g
12b	normal		m	69					same patient as sample 4h
12c	normal		f	67					same patient as sample 5b
12d	normal		m	74					same patient as sample 5c
12e	normal		f	74					
12f	normal		m	72					same patient as sample 5g
12g	normal		m	53					same patient as sample 5h

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2206

Position	Diagnosis	Specification	Sex	Age	pT	pN	pM	Grade	Remarks
13a	pancreatitis (chronic)		m	68					
13b	pancreatitis (chronic)		m	42					mainly sclerosis
13c	pancreatitis (chronic)		m	40					and fibrosis
13d	pancreatitis (chronic)		m	42					and scleroris
13e	pancreatitis (chronic)		f	45					and fibrosis
13f	pancreatitis (chronic)		m	45					
13g	pancreatitis (chronic)		m	64					
13h	pancreatitis (chronic)		m	47					and scleroris
14a	pancreatitis (chronic)		f	45					and scleroris
14b	pancreatitis (chronic)		m	36					and scleroris

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Esophagus Carcinoma

Cat.-No.: 401 2207 Sample Datasheet

Slide Label						
	a	b	c	d	e	f
1	●	●	●	●	●	●
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●
6	●	●	●	●	●	●
7	●	●	●	●	●	●
8	●	●	●	●	●	●
9	●	●	●	●	●	●
10	●	●	●	●	●	●
11	●	●	●			

Technical Information: 63 spots
 - Spot diameter: 2.0 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2207

Position	Organ (specifications)	Sex	Age	Stage pT	Stage pN	Stage pM	Grade	Remarks
1a, b, c	SCC	m	68	3	1	x	3	
1d, e, f	SCC	m	60	3	1	x	2	
2a, b, c	SCC	m	52	3	1	x	3	
2d, e, f	SCC	m	40	3	1	x	3	
3a, b, c	SCC	f	50	3	1	x	2	
3d, e, f	SCC	m	78	4	1	x	2	
4a, b, c	SCC	m	60	3	1	x	2	
4d, e, f	SCC	f	70	3	1	x	3	
5a, b, c	SCC	f	60	3	X	x	2	
5d, e, f	SCC	m	61	3	1	x	2	
6a, b, c	ADC	m	61	3	1	x	3	
6d, e, f	ADC	m	59	2	0	x	3	
7a, b, c	ADC	m	70	2b	0	x	2	
7d, e, f	ADC	f	72	3	1	x	2	
8a, b, c	ADC	m	64	2	0	x	2	
8d, e, f	ADC	f	52	3	1	x	2	
9a, b, c	ADC	m	59	2	0	x	2/3	
9d, e, f	ADC	m	64	3	1	x	3	
10a, b, c	ADC	m	66	3	1	1	1	
10d, e, f	ADC	m	62	3	1	x	2	
11a	Normal mucosa	m	59					same patient as sample 6d, e, f
11b	Normal mucosa	m	59					same patient as sample 9a, b, c
11c	Normal mucosa	m	52					same patient as sample 2a, b, c

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Cholangiocarcinoma

Cat.-No.: 401 2208 Sample Datasheet

Slide Label								
	a	b	c	d	e	f	g	h
1	●	●	●	●	●	●	●	●
2	●	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●	●
7	●	●	●	●	●	●		
8	●	●	●	●	●	●	●	
9	●	●	●	●	●	●	●	●
10		●	●	●	●	●	●	●
11		●	●	●	●	●	●	●
12		●	●	●				

Technical Information: 86 spots
 - Spot diameter: 2.0 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.
 Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2208

Position	Organ	Sex	Age	Stage pT	Stage pN	Stage pM	Remarks
1a	Cholangiocarcinoma	m	75	3	X	X	
1b	Cholangiocarcinoma	m	59	2	1	X	same patient as sample 9h
1c	Cholangiocarcinoma	f	74	1	0		same patient as sample 9g
1d	Cholangiocarcinoma	m	74	1	0	X	same patient as sample 9f
1e	Cholangiocarcinoma	m	81	3	0	X	
1f	Cholangiocarcinoma	m	51	4	1	x	
1g	Cholangiocarcinoma	f	70	2	0	X	same patient as sample 9d
1h	Cholangiocarcinoma	m	65	4			same patient as sample 9c
2a	Cholangiocarcinoma	f	36	4	1	X	same patient as sample 9b
2b	Cholangiocarcinoma	f	35	4	0		same patient as sample 9a
2c	Cholangiocarcinoma	m	72	4	X	X	
2d	Cholangiocarcinoma	m	67	2	X		
2e	Cholangiocarcinoma	f	69				same patient as sample 10d
2f	Cholangiocarcinoma	f	80	2	0	0	
2g	Cholangiocarcinoma	m	71	2			
2h	Cholangiocarcinoma	m	68	3	1	1	
3a	Cholangiocarcinoma	m	62	3	1		same patient as sample 10c
3b	Cholangiocarcinoma	f	64	2a	0	x	
3c	Cholangiocarcinoma	m	63	4	1		
3d	Cholangiocarcinoma	m	55	4	1		
3e	Cholangiocarcinoma	f	66	2	0		
3f	Cholangiocarcinoma	f	54	3	1	1	same patient as sample 8a

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2208

Position	Organ	Sex	Age	Stage pT	Stage pN	Stage pM	Remarks
3g	Cholangiocarcinoma	f	62	3	0		same patient as sample 12d
3h	Cholangiocarcinoma	f	37	2	0		
4a	Cholangiocarcinoma	f	73	3	1		same patient as sample 8b
4b	Cholangiocarcinoma	m	59	3			same patient as sample 10e
4c	Cholangiocarcinoma	m	66	4	0		same patient as sample 10f
4d	Cholangiocarcinoma	m	61	3	1		same patient as sample 8c
4e	Cholangiocarcinoma	m	68	3	0	X	same patient as sample 10g
4f	Cholangiocarcinoma	m	46	3	0		
4g	Cholangiocarcinoma	f	73	3	X	X	
4h	Cholangiocarcinoma	f	67	3	1	X	same patient as sample 10h und 8d
5a	Cholangiocarcinoma	m	61	4	1		same patient as sample 8e
5b	Cholangiocarcinoma	f	65				
5c	Cholangiocarcinoma	f	63	3			
5d	Cholangiocarcinoma	f	51	4	1		
5e	Cholangiocarcinoma	m	81	3	X		same patient as sample 11b
5f	Cholangiocarcinoma	f	73	2	0		
5g	Cholangiocarcinoma	f	83				same patient as sample 11c
5h	Cholangiocarcinoma	f	44	2	0		same patient as sample 11d
6a	Cholangiocarcinoma	f	60	4	0		same patient as sample 11e
6b	Cholangiocarcinoma	f	76				
6c	Cholangiocarcinoma	m	67	2			same patient as sample 11f

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2208

Position	Organ	Sex	Age	Stage pT	Stage pN	Stage pM	Remarks
6d	Cholangiocarcinoma	m	56	4	0		same patient as sample 11g
6e	Cholangiocarcinoma	f	64	3	1		same patient as sample 8f
6f	Cholangiocarcinoma	m	70	3	1		
6g	Cholangiocarcinoma	m	50	4	1		same patient as sample 8g
6h	Cholangiocarcinoma	m	52	4	X		
7a	Cholangiocarcinoma	m	66	4	X	X	same patient as sample 11h
7b	Cholangiocarcinoma	m	58	3			
7c	Cholangiocarcinoma	f	56	3			
7d	Cholangiocarcinoma	f	63	3	1		
7e	Cholangiocarcinoma	f	63	3	X		
7f	Cholangiocarcinoma	f	66	3	1	X	
8a	Lymph node metastasis	f	54	3	1	1	
8b	Lymph node metastasis	f	73	3	1		
8c	Lymph node metastasis	m	61	3	1		
8d	Lymph node metastasis	f	67	3	1	X	
8e	Lymph node metastasis	m	61	4	1		
8f	Lymph node metastasis	f	64	3	1		
8g	Lymph node metastasis	m	50	4	1		
9a	Normal liver	m	35				
9b	Normal liver	f	36				
9c	Normal liver	m	65				
9d	Normal liver	f	70				
9e	Normal liver	m	66				
9f	Normal liver	m	74				
9g	Normal liver	f	74				

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2208

Position	Organ	Sex	Age	Stage pT	Stage pN	Stage pM	Remarks
9h	Normal liver	m	59				
10a							
10b	Normal liver	m	60				same patient as sample 12c
10c	Normal liver	m	62				
10d	Normal liver	f	69				
10e	Normal liver	m	59				
10f	Normal liver	m	66				
10g	Normal liver	m	68				
10h	Normal liver	f	67				
11a							
11b	Normal liver	m	81				
11c	Normal liver	f	83				
11d	Normal liver	f	44				
11e	Normal liver	f	60				
11f	Normal liver	m	67				
11g	Normal liver	m	56				
11h	Normal liver	m	66				
12a							
12b	Bile ducts	m	59				
12c	Liver/gall bladder	m	60				
12d	Gall bladder	f	62				

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Prostate Carcinoma

Cat.-No.: 401 2209

Sample Datasheet

Slide Label								
	a	b	c	d	e	f	g	h
1	●	●	●	●	●	●	●	●
2	●	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●	●
7	●	●	●	●	●	●	●	●
8	●	●	●	●				
9	●	●	●	●	●	●	●	●
10	●	●						
11	●	●	●	●	●	●	●	●
12	●	●						

Technical Information: 80 spots

- Spot diameter: 1.5 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2209

Position	Diagnosis	Sex	Age	Stage pT	Stage pN	Grade	Gleason	Remarks
1a	ADC	m	64	3b	0	2b	4+3	
1b	ADC	m	67	2b	0	3a	3+4	
1c	ADC	m	73	3a	X	X	4+5	
1d	ADC	m	63	3b	0	3a	7	
1e	ADC	m	65	2b	0	2	3+3	
1f	ADC	m	61	3b	X	3a	4+4	
1g	ADC	m	70	3a	0	X	3+4	
1h	ADC	m	72	3a	0	X	4+3	
2a	ADC	m	61	3a	X	2b	3+4	
2b	ADC	m	74	2b	X	2b	4+3	
2c	ADC	m	59	2b	X	2b	2+3	
2d	ADC	m	72	2c	X	X	3+3	
2e	ADC	m	54	2c	X	2b	3+4	
2f	ADC	m	59	2c	0	X	4+3	
2g	ADC	m	58	3a	0	2b	3+4	
2h	ADC	m	67	3a	0	2b	3+4	
3a	ADC	m	57	3a	X	X	3+4	
3b	ADC	m	77	4	0	3a	3+4	
3c	ADC	m	64	2b	0	3a	4+3	
3d	ADC	m	69	3b	0	X	4+3	
3e	ADC	m	50	2b	0	3a	4+3	
3f	ADC	m	53	2b	0	2	3+3	
3g	ADC	m	46	2c	0	X	3+3	
3h	ADC	m	59	3a	0	3	4+5	
4a	ADC	m	70	2b	0	2b	2+3	
4b	ADC	m	65	3a	0	3b	5+4	
4c	ADC	m	67	3a	0	X	3+4	

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2209

Position	Diagnosis	Sex	Age	Stage pT	Stage pN	Grade	Gleason	Remarks
4d	ADC	m	68	2b	0	3a	4+4	
4e	ADC	m	69	3a	X	X	4+3	
4f	ADC	m	59	2c	X	X	3+4	
4g	ADC	m	63	2b	0	2	3+4	
4h	ADC	m	46	2c	0	X	3+3	
5a	ADC	m	70	2c	0	X	3+4	
5b	ADC	m	63	3a	0	3a	5+3	
5c	ADC	m	64	3a	0	3a	3+5	
5d	ADC	m	69	3a	X	X	3+4	
5e	ADC	m	60	3a	0	2a	3+3	
5f	ADC	m	57	2b	0	2b	3+2	
5g	ADC	m	50	2a	0	2a	3+3	
5h	ADC	m	68	3a	0	2	3+3	
6a	ADC	m	65	3b	1	3a	3+4	
6b	ADC	m	69	3a	1	3b	5+5	
6c	ADC	m	63	2b	0	2b	3+4	
6d	ADC	m	51	2b	0	2a	2+3	
6e	ADC	m	62	3a	0	2	3+3	
6f	ADC	m	61	3a	0	2b	3+4	
6g	ADC	m	53	3b	1	3a	4+4	
6h	ADC	m	56	2b	0	2a	4+3	
7a	ADC	m	59	2b	0	2b	2+3	
7b	ADC	m	61	2b	0	3a	3+4	
7c	ADC	m	51	3a	0	2b	3+4	
7d	ADC	m	62	3b	1	2b	3+4	
7e	ADC	m	66	3a	0	2a	3+3	
7f	ADC	m	62	2b	0	2a	3+3	

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2209

Position	Diagnosis	Sex	Age	Stage pT	Stage pN	Grade	Gleason	Remarks
7g	ADC	m	56	2b	0	2a	3+3	
7h	ADC	m	58	3a	0	2b	3+3	
8a	ADC	m	66	3a	0	3b	5+4	
8b	ADC	m	55	3a	0	3a	3+4	
8c	ADC	m	67	2b	0	2a	2+3	
8d	ADC	m	61	2b	0	3a	3+5	
9a	PIN	m	59					Same patient as sample 2c
9b	PIN	m	58					Same patient as sample 2g
9c	PIN	m	62					
9d	PIN	m	51					
9e	PIN	m	58					Same patient as sample 4f
9f	PIN	m	68					
9g	PIN	m	64					Same patient as sample 5c
9h	PIN	m	56					
10a	PIN	m	61					Same patient as sample 5d
10b	PIN	m	51					Same patient as sample 6d
11a	Normal (benign hyperplasia)	m	70					
11b	Normal (benign hyperplasia)	m	63					
11c	Normal (benign hyperplasia)	m	62					
11d	Normal (benign hyperplasia)	m	81					
11e	Normal (benign hyperplasia)	m	67					

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2209

Position	Diagnosis	Sex	Age	Stage pT	Stage pN	Grade	Gleason	Remarks
11f	Normal (benign hyperplasia)	m	76					
11g	Normal (benign hyperplasia)	m	74					
11h	Normal (benign hyperplasia)	m	69					
12a	Normal (benign hyperplasia)	m	63					
12b	Normal (benign hyperplasia)	m	71					

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Endometrium Carcinoma

Cat.-No.: 401 2210 Sample Datasheet

Slide Label						
	a	b	c	d	e	f
1	●	●	●	●	●	●
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●
6	●	●	●	●	●	●
7	●	●	●	●		
8	●	●	●	●	●	●
9	●	●	●	●		
10	●	●	●	●	●	●
11	●	●	●	●		

Technical Information: 60 spots
 - Spot diameter: 2.0 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.
 Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2210

Position	Diagnosis	Specification	Material/Localization	Sex	Age	pT	pN	pM	Grade	Remarks
1a	endometrium ca	clear cell	hysterectomy/ corpus uteri	f	72	x	0	x	3	
1b	endometrium ca in situ	endometrioid	hysterectomy/ corpus uteri	f	51	1a	x	x	2	
1c	endometrium ca	endometrioid	hysterectomy/ corpus uteri	f	69	1b	x	x	2	
1d	endometrium ca	endometrioid	curettage/ corpus uteri	f	53	1b	x	x	2	
1e	endometrium ca	Adeno- squamous	curettage/ corpus uteri	f	57	1b	0	x	2	
1f	endometrium ca	endometrioid	hysterectomy/ corpus uteri	f	76	1c	x	x	2	
2a	endometrium ca	endometrioid partially squamous	hysterectomy/ corpus uteri	f	55	2	x	x	2	
2b	endometrium ca	serous- papillary	uterus/ tube	f	60	3a	1	1	2	
2c	endometrium ca	tubulary	hysterectomy/ corpus uteri	f	82	1w	x	x	1	
2d	endometrium ca	tubulary	hysterectomy/ corpus uteri	f	64	1	x	x	1	
2e	endometrium ca	papillary, partially clear cell	hysterectomy/ corpus uteri	f	76	3	x	x	3	
2f	endometrium ca, early stage	tubulary	hysterectomy/ corpus uteri	f	54	1b	x	x	1	
3a	endometrium ca	tubulo- papillary	hysterectomy/ corpus uteri	f	33	1c	x	x	1	
3b	endometrium ca	tubulary, glandular	curettage/ corpus uteri	f	50	2b	0	x	3	
3c	endometrium ca	tubulo- papillary- serous	curettage/ corpus uteri	f	69	1a	x	x	1	
3d	endometrium ca	tubulo- papillary	hysterectomy/ corpus uteri	f	52	1a	x	x	1	
3e	endometrium ca	endometrioid	hysterectomy/ corpus uteri	f	72	1b	x	x	2	

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2210

Position	Diagnosis	Specification	Material/ Localization	Sex	Age	pT	pN	pM	Grade	Remarks
3f	endometrium ca	glandular	hysterectomy/ corpus uteri	f	70	1b	0	x	1	
4a	endometrium ca	tubular	hysterectomy/ corpus uteri	f	67	1c	0	x	1	
4b	endometrium ca	Adeno- squamous	curettage/ cervix uteri	f	53	1b	x	x	2	
4c	endometrium ca	tubulo- papillary	hysterectomy/ corpus uteri	f	62	1b	x	x	2	
4d	endometrium ca	endometrioid	hysterectomy/ corpus uteri	f	61	1b	x	x	1	
4e	endometrium ca	tubulo- papillary	hysterectomy/ corpus uteri	f	88	1c	x	x	1	
4f	endometrium ca	clear cell	hysterectomy/ corpus uteri	f	82	1b	x	x	3	
5a	endometrium ca	tubular	hysterectomy/ corpus uteri	f	67	1c	x	x	1	
5b	endometrium ca	tubulo- papillary	hysterectomy/ corpus uteri	f	39	1a	x	x	2	
5c	endometrium ca	tubulo- papillary	hysterectomy/ corpus uteri	f	69	2	1	x	2	
5d	endometrium ca	tubulo- papillary	hysterectomy/ corpus uteri	f	74	1c	x	x	1	
5e	endometrium ca	partially clear cell	hysterectomy/ corpus uteri	f	58	3	1	x	3	
5f	endometrium ca	adeno- cancroid	hysterectomy/ corpus uteri	f	87	1b	x	x	2	
6a	endometrium ca	tubulo- papillary	hysterectomy/ corpus uteri	f	58	1b	x	x	1	
6b	endometrium ca	papillary	hysterectomy/ corpus uteri	f	52	3a	x	x	1	
6c	endometrium ca	tubulo- secretory	hysterectomy/ corpus uteri	f	82	1b	x	x	3	
6d	endometrium ca	tubulo- papillary	curettage/ corpus uteri	f	75	1a	x	x	1	
6e	endometrium ca	tubulo- papillary, serous-	hysterectomy/ corpus uteri	f	76	1b	x	x	2	

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2210

Position	Diagnosis	Specification	Material/ Localization	Sex	Age	pT	pN	pM	Grade	Remarks
		papillary								
6f	endometrium ca	tubulo-papillary	hysterectomy/ corpus uteri	f	62	1c	1	x	2	
7a	endometrium ca	Adeno-squamous	hysterectomy/ corpus uteri	f	67	3a	1	x	2	
7b	endometrium ca	glandular	hysterectomy/ corpus uteri	f	58	1b	x	x	1	
7c	endometrium ca	Adeno-squamous (adeno-carcinoid)	hysterectomy/ corpus uteri	f	57	1b	x	x	2	
7d	endometrium ca	tubulo-papillary	curettage/ corpus uteri	f	60	1	x	x	1	
8a	endometriosis		tube	f	55					
8b	endometriosis		ovary	f	21					
8c	endometriosis		ovary	f	40					
8d	endometriosis	stroma at adjacent to endometrium	adnexa	f	39					
8e	endometriosis		endocervix	f	44					
8f	endometriosis	stroma at adjacent to endometrium	ovary	f	29					
9a	endometriosis		uterus	f	52					
9b	endometriosis		ovary	f	51					
9c	endometriosis		tube	f	39					
9d	endometriosis		adnexa	f	41					
10a	normal myometrium		hysterectomy/ corpus uteri	f	82					same patient as sample 9
10b	normal endometrium		hysterectomy/ corpus uteri	f	54					same patient as sample 12
10c	normal endometrium		hysterectomy/ corpus uteri	f	68					
10d	normal endometrium		hysterectomy/ corpus uteri	f	48					

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2210

Position	Diagnosis	Specification	Material/ Localization	Sex	Age	pT	pN	pM	Grade	Remarks
10e	normal endometrium		hysterectomy/ corpus uteri	f	45					
10f	normal endometrium		hysterectomy/ corpus uteri	f	52					same patient as sample 16
11a	normal endometrium		hysterectomy/ corpus uteri	f	44					same patient as sample 48
11b	normal endometrium		hysterectomy/ corpus uteri	f	50					
11c	normal endometrium		hysterectomy/ corpus uteri	f	39					same patient as sample 26
11d	normal endometrium		hysterectomy/ corpus uteri	f	58					

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Colon UICC

Cat.-No.: 401 2211 Sample Datasheet

Slide Label		a	b	c	d	e	f	g	h	i	j	k	
	1	●	●	●	●	●	●	●	●	●	●	●	
	2	●	●	●	●	●	●	●	●	●	●	●	
	3	●	●	●	●	●	●	●	●	●	●	●	
	4	●	●	●	●	●	●	●	●	●	●	●	
	5	●	●	●	●	●	●	●	●	●	●	●	
	6	●	●	●	●	●	●	●	●	●	●	●	
	7	●	●	●	●	●	●	●	●	●	●	●	●

Technical Information: 71 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2211

Position	Diagnosis	UICC Stage	Sex	Age	Remarks
1a	ADC	I	m	73	
1b	ADC	I	f	61	
1c	ADC	I	f	67	
1d	ADC	I	m	75	
1e	ADC	I	f	60	
1f	ADC	I	f	79	
1g	ADC	I	m	61	
1h	ADC	I	m	67	
1i	ADC	I	m	62	
1j	ADC	I	f	84	
2a	ADC	II	f	73	
2b	ADC	II	f	75	
2c	ADC	II	f	77	
2d	ADC	II	f	96	
2e	ADC	II	m	68	
2f	ADC	II	f	60	
2g	ADC	II	f	75	
2h	ADC	II	f	77	
2i	ADC	II	f	75	
2j	ADC	II	m	78	
3a	ADC	III	f	83	
3b	ADC	III	m	55	
3c	ADC	III	m	76	
3d	ADC	III	f	84	
3e	ADC	III	m	80	
3f	ADC	III	m	75	
3g	ADC	III	m	63	

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2211

Position	Diagnosis	UICC Stage	Sex	Age	Remarks
3h	ADC	III	f	65	
3i	ADC	III	m	70	
3j	ADC	III	f	72	
4a	ADC	IV	f	74	
4b	ADC	IV	m	73	
4c	ADC	IV	m	61	
4d	ADC	IV	m	67	
4e	ADC	IV	f	36	
4f	ADC	IV	f	66	
4g	ADC	IV	f	73	
4h	ADC	IV	f	41	
4i	ADC	IV	m	73	
4j	ADC	IV	f	57	
5a	Adenoma		f	67	
5b	Adenoma		m	70	
5c	Adenoma		f	79	
5d	normal		m	28	
5e	Adenoma		f	68	
5f	Adenoma		m	73	Same patient as 4i
5g	Adenoma		m	58	
5h	Adenoma		m	67	
5i	Adenoma		f	66	
5j	Adenoma		f	64	
6a	normal (colon mucosa)		m	59	
6b	normal		m	89	
6c	normal (colon mucosa)		m	65	
6d	normal (colon mucosa)		m	61	

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2211

Position	Diagnosis	UICC Stage	Sex	Age	Remarks
6e	normal (colon mucosa)		f	79	
6f	normal (colon mucosa)		f	87	
6g	normal (colon mucosa)		m	68	
6h	normal (colon mucosa)		f	75	
6i	normal (colon mucosa)		f	43	
6j	normal (colon mucosa)		m	60	
7°	ADC, liver metastasis		f	74	Same Patient as 4a
7b	ADC, liver metastasis		m	73	Same Patient as 4b
7c	ADC, liver metastasis		m	61	Same Patient as 4c
7d	ADC, liver metastasis		m	67	Same Patient as 4d
7e	ADC, liver metastasis		f	36	Same Patient as 4e
7f	ADC, liver metastasis		m	86	
7g	ADC, liver metastasis		m	72	
7h	ADC, liver metastasis		f	58	
7i	ADC, liver metastasis		m	60	
7j	ADC, liver metastasis		m	68	
7k	ADC, liver metastasis		f	44	

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Skeletal Carcinoma

Cat.-No.: 401 2212 Sample Datasheet

Slide Label						
	a	b	c	d	e	f
1	●	●	●	●	●	●
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●		
6	●	●	●	●	●	●
7	●	●	●	●	●	●
8	●	●	●	●	●	●
9	●	●	●	●		
10	●	●	●	●		

Technical Information: 54 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2212

Position	Diagnosis	Localization	Tissue	Sex	Age
1a	Fibrosarcoma	thorax	adult	m	51
1b	Fibrosarcoma	thorax	adult	m	51
1c	Fibrosarcoma	skin	adult	m	65
1d	Fibrosarcoma	skin	adult	m	65
1e	Fibrosarcoma	skin	adult	m	65
1f	Fibrosarcoma	skin	adult	m	65
2a	Osteosarcoma	pelvis	adult	f	47
2b	Osteosarcoma	pelvis	adult	f	47
2c	Osteosarcoma	maxilla	adult	f	28
2d	Osteosarcoma	maxilla	adult	f	28
2e	Chondrosarcoma	akromion	adult	m	54
2f	Chondrosarcoma	akromion	adult	m	54
3a	Chondrosarcoma	maxilla	adult	m	25
3b	Chondrosarcoma	maxilla	adult	m	25
3c	Chondrosarcoma	pelvis	adult	m	44
3d	Chondrosarcoma	pelvis	adult	m	44
3e	solitary bone cyst	tibia	adolescent	f	14
3f	solitary bone cyst	tibia	adolescent	f	14
4a	aneurysmatic bone cyst	tibia	adult	m	38
4b	aneurysmatic bone cyst	tibia	adult	m	38
4c	aneurysmatic bone cyst	tibia	adult	m	38
4d	aneurysmatic bone cyst	tibia	adult	m	38
4e	Bone tissue - border area of aneurysmatic bone cyst	pelvis	adolescent	f	13
4f	Bone tissue - border area of aneurysmatic bone cyst	processus coracoideus	adult	f	38
5a	fibr. Dysplasia	maxilla	adult	m	60
5b	fibr. Dysplasia	maxilla	adult	m	60

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2212

Position	Diagnosis	Localization	Tissue	Sex	Age
5c	Enchondroma	humerus	adult	f	48
5d	Enchondroma	humerus	adult	f	48
6a	perisotal chondroma	os metacarpale I	adult	f	65
6b	perisotal chondroma	os metacarpale I	adult	f	65
6c	Chondroma	os metacarpale I	adult	f	81
6d	Chondroma	os metacarpale I	adult	f	81
6e	Chondroma	femur	adult	f	54
6f	Chondroma	femur	adult	f	54
7a	Chondroma	os metacarpale I	adult	f	81
7b	Chondroma	os metacarpale I	adult	f	81
7c	Osteoma	ethmoid	adult	m	79
7d	Osteoma	ethmoid	adult	m	79
7e	Osteoma	mandible	adolescent	f	13
7f	Osteoma	mandible	adolescent	f	13
8a	Osteoma	ethmoid	adult	f	19
8b	Osteoma	ethmoid	adult	f	19
8c	Osteoma	maxillary sinus	adult	m	40
8d	Osteoma	maxillary sinus	adult	m	40
8e	Osteoma	anconoid	adult	m	53
8f	Osteoma	anconoid	adult	m	53
9a	Osteochondroma	os metacarpale V	adult	m	35
9b	Osteochondroma	os metacarpale V	adult	m	35
9c	Osteochondroma	tibia	adult	f	22
9d	Osteochondroma	tibia	adult	f	22
10a	Osteochondroma	shoulder	adult	f	22
10b	Osteochondroma	shoulder	adult	f	22
10c	Osteochondroma	fibula	adolescent	f	17

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
 Cat.-No.: 401 2212

Position	Diagnosis	Localization	Tissue	Sex	Age
10d	Osteochondroma	fibula	adolescent	f	17

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Ovarian Carcinoma

Cat.-No.: 401 2213 Sample Datasheet

Slide Label								
	a	b	c	d	e	f	g	h
1	●	●	●	●	●	●	●	●
2	●	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●	●
5	●	●	●			●	●	●
6	●	●	●	●	●	●	●	
7	●	●	●	●	●	●	●	●
8	●	●	●	●	●	●	●	●
9	●	●	●	●		●	●	●
10	●	●	●	●	●	●	●	
11	●	●	●	●	●			
12	●	●	●	●	●			

Technical Information: 85 spots
 - Spot diameter: 1.5 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.
 Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2213

same patient as position	Diagnosis	subtype	Organ	Sex	Age	pT	pN	pM	Grade	Remarks
1a	ADC	endometrioid	Ovary	f	69	3c	1	X	3	
1b	ADC	endometrioid	Ovary	f	78	3c	X	X	1	
1c	ADC	endometrioid	Ovary	f	65	1c	0	X	3	
1d	ADC	endometrioid	Ovary	f	46	3c	1	X	2	
1e	ADC	endometrioid	Ovary	f	61	3c	X	X	3	
1f	ADC	endometrioid	Ovary	f	67	2b	X	X	3	
1g	ADC	endometrioid	Ovary	f	54	2b	0	X	3	
1h	ADC	endometrioid	Ovary	f	56	1a	X	X	3	
2a	ADC	endometrioid	Ovary	f	64	1a	1	X	3	
2b	ADC	endometrioid	Ovary	f	62	2	0	X	3	partial clear cell
2c	ADC	mucinous	Ovary	f	86	3a	X	X	X	
2d	ADC	mucinous	Ovary	f	56	1c	0	X	2	
2e	ADC	mucinous	Ovary	f	68	1c	X	X	1	
2f	ADC	mucinous	Ovary	f	50	1a	X	X	1	
2g	ADC	mucinous	Ovary	f	33	1a	X	X	2	
2h	ADC	clear cell	Ovary	f	81	2b	0	X	X	
3a	ADC	clear cell	Ovary	f	65	1a	0	X	2	
3b	ADC	clear cell	Ovary	f	46	3c	0	X	3	
3c	ADC	clear cell	Ovary	f	79	2a	X	X	3	
3d	ADC	clear cell	Ovary	f	55	3c	1	X	2	
3e	ADC	serous	Ovary	f	79	3c	X	X	2	High Grade
3f	ADC	serous	Ovary	f	56	1c	X	X	3	High Grade
3g	ADC	serous	Ovary	f	76	3c	X	X	3	High Grade
3h	ADC	serous	Ovary	f	50	3b	0	X	3	High Grade
4a	ADC	serous	Ovary	f	53	3c	0	X	3	High Grade
4b	ADC	serous	Ovary	f	67	3c	X	X	2	High Grade

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2213

same patient as position	Diagnosis	subtype	Organ	Sex	Age	pT	pN	pM	Grade	Remarks
4c	ADC	serous	Ovary	f	54	2b	0	X	3	High Grade
4d	ADC	serous	Ovary	f	49	3c	1	X	2	High Grade
4e	ADC	serous	Ovary	f	48	3c	X	X	3	High Grade
4f	ADC	serous	Ovary	f	39	X	X	X	3	High Grade
4g	ADC	serous	Ovary	f	75	3c	X	X	3	High Grade
4h	ADC	serous	Ovary	f	75	3b	0	X	2	High Grade
5a	ADC	serous	Ovary	f	74	3c	0	X	3	High Grade
5b	ADC	serous	Ovary	f	66	3b	1	X	3	High Grade
5c	ADC	serous	Ovary	f	59	3c	1	X	2	High Grade
5d										
5e										
5f	ADC	serous	Ovary	f	69	3b	1	X	1	Low Grade
5g	ADC	serous	Ovary	f	27	3c	1	X	1	Low Grade
5h	ADC	serous	Ovary	f	35	2c	1	X	1	Low Grade
6a	ADC	serous	Ovary	f	65	3c	1	X	1	Low Grade
6b	ADC	serous	Ovary	f	58	3c	X	X	1	Low Grade
6c	ADC	serous	Ovary	f	34	3c	1	X	1	Low Grade
6d	ADC	serous	Ovary	f	18	3a	1	X	1	Low Grade
6e	ADC	serous	Ovary	f	32	3c	1	X	1	Low Grade
6f	ADC	serous	Ovary	f	55	1c	X	X	1	Low Grade
6g	ADC	serous	Ovary	f	37	3c	1	X	1	Low Grade
7a	Normal		Tube	f	69					same patient as sample 1a
7b	Normal		Tube	f	78					same patient as sample 1b
7c	Normal		Tube	f	65					same patient as sample 1c

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2213

same patient as position	Diagnosis	subtype	Organ	Sex	Age	pT	pN	pM	Grade	Remarks
7d	Normal		Tube	f	86					same patient as sample 2c
7e	Normal		Tube	f	56					same patient as sample 2d
7f	Normal		Tube	f	68					same patient as sample 2e, 9f, 11d
7g	Normal		Tube	f	50					same patient as sample 2f, 9g
7h	Normal		Tube	f	33					same patient as sample 2g, 9h
8a	Normal		Tube	f	79					same patient as sample 3e
8b	Normal		Tube	f	56					same patient as sample 3f, 12a
8c	Normal		Tube	f	50					same patient as sample 3h, 10a
8d	Normal		Tube	f	53					same patient as sample 4a
8e	Normal		Tube	f	54					same patient as sample 4c, 10b
8f	Normal		Tube	f	48					same patient as sample 4e, 10c
8g	Normal		Tube	f	39					same patient as sample 4f, 11b
8h	Normal		Tube	f	75					same patient as sample 4g, 10d
9a	Normal		Tube	f	75					same patient as sample 4h, 11c
9b	Normal		Tube	f	74					same patient as sample 5a
9c	Normal		Tube	f	66					same patient as sample 5b, 10e
9d	Normal		Tube	f	59					same patient as sample 5c

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2213

same patient as position	Diagnosis	subtype	Organ	Sex	Age	pT	pN	pM	Grade	Remarks
9e										
9f	Normal		Fimbria	f	68					same patient as sample 2e, 7f, 11d
9g	Normal		Fimbria	f	50					same patient as sample 2f, 7g
9h	Normal		Fimbria	f	33					same patient as sample 2g, 7h
10a	Normal		Fimbria	f	50					same patient as sample 3h, 8c
10b	Normal		Fimbria	f	54					same patient as sample 4c, 8e
10c	Normal		Fimbria	f	48					same patient as sample 4e, 8f
10d	Normal		Fimbria	f	75					same patient as sample 4g, 8h
10e	Normal		Fimbria	f	66					same patient as sample 5b, 9c
10f	Normal		Fimbria	f	34					same patient as sample 5d, 9e
10g	Normal		Fimbria	f	55					same patient as sample 6f, 12d
11a	Normal	Inclusion cyst	Ovary	f	78					same patient as sample 5e, 11f
11b	Normal	Inclusion cyst	Ovary	f	39					same patient as sample 4f, 8g, 11g
11c	Normal	Inclusion cyst	Ovary	f	75					same patient as sample 1a, 9a
11d	Normal	Inclusion cyst	Ovary	f	68					same patient as sample 2e, 7f, 9f
11e	Normal	Inclusion cyst	Ovary	f	54					same patient as sample 1g
12a	Normal	Inclusion cyst	Ovary	f	56					same patient as sample 3f, 8b

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2213

same patient as position	Diagnosis	subtype	Organ	Sex	Age	pT	pN	pM	Grade	Remarks
12b	Normal	Inclusion cyst	Ovary	f	76					same patient as sample 3g
12c	Normal	Inclusion cyst	Ovary	f	32					same patient as sample 6e
12d	Normal	Inclusion cyst	Ovary	f	55					same patient as sample 6f, 10g
12e	Normal	Inclusion cyst	Ovary	f	37					same patient as sample 6g, 10h

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Multi Tumor: 4 organs

Cat.-No.: 401 2401

Sample Datasheet

Slide Label				
	a	b	c	d
1	●	●	●	●
2	●	●	●	●
3	●	●		
4	●	●		

Technical Information: 12 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2401

Position	Diagnosis	Organ	Sex	Age	pT	pN	pM	Grade	Remarks
1a	ADC	lung	m	63	2	0	X	2	
1b	ADC	lung	m	66	3	1	X	3	
1c	Peritumerous fibromuscular tissue	colon	f	78	2	0	X	3	
1d	ADC	colon	m	68	3	2	X	2	
2a	ADC	prostate	m	73	3a	0	X	3a	
2b	ADC	prostate	m	66	2b	0	X	2a	
2c	ADC	breast	f	65	2	3a	X	2	
2d	ADC	breast	f	65	y4b	y1a	1	2	
3a	normal	lung	f	47					
3b	normal	colon	m	68					Same patient as sample 1d
4a	Normal (hyperplasia)	prostate	m	62					
4b	normal	breast	f	31					

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Multi Tumor: 10 organs

Cat.-No.: 401 2402

Sample Datasheet

Slide Label				
	a	b	c	d
1	●	●	●	●
2	●	●	●	●
3	●	●	●	
4	●	●	●	●
5	●	●	●	●
6	●	●		●

Technical Information: 22 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 2402

Position	Diagnosis	Organ	Sex	Age	pT	pN	pM	Grade	Remarks
1a	ADC (CCC)	Liver	f	38	3	1	X	2	
1b	ADC (HCC)	Liver	m	68	2	X	X	3	
1c	ADC (NCC)	Kidney	f	73	1a	X	X	2	
1d	ADC	Ovary	f	53	3c	0	X	3	
2a	ADC	Pancreas	m	70	2	0	X	2	
2b	ADC	Prostate	m	62	2b	1	X	3a	
2c	ADC	Esophagus	f	82	3	1	x	3	Same patient as sample 5c
2d	ADC	Stomach	m	71	3	3	X	3	
3a	ADC	Colon	f	59	3	2	X	3	
3b	ADC	Lung	f	74	3	0	x	2	
3c	ADC	Breast	f	92	3	1a	X	3	
4a	Normal (with portal inflammation and bile duct proliferation)	Liver	f	38					Same patient as sample 1a
4b	Normal	Liver	f	60					
4c	Normal	Kidney	m	74					
4d	Normal	Ovary	f	33					
5a	Normal	Pancreas	f	74					
5b	Normal (hyperplasia)	Prostate	m	73					
5c	Normal mucosa	Esophagus	f	82					
5d	Normal mucosa	Stomach	m	71					Same patient as sample 2d
6a	Normal mucosa	Colon	f	59					Same patient as sample 3a
6b	Normal	Lung	m	42					
6c									
6d	Normal	Breast	f	31					

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Multi Tumor: 12 organs

Cat.-No.: 401 2403 Sample Datasheet

Slide Label					
	a	b	c	d	e
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●			
4	●	●	●	●	
5	●	●	●	●	
6	●	●	●	●	

Technical Information: 24 spots
 - Spot diameter: 2.0 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.
 Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 2403

Position	Diagnosis	Organ	Sex	Age	pT	pN	pM	Grade	Remarks
1a	SCC	vulva	f	81	3	2	x	2	
1b	SCC	cervix	f	59	2b	1	x	2	
1c	SCC	penis (scrotum)	m	91	2	x	x	2	
1d	SCC	anus/anorectal	f	74	3	0	x	3	
1e	SCC	lung	f	61	1	0	x	3	
2a	SCC	dermis (nose)	m	82	1	x	x	2	
2b	SCC	oral (floor of the mouth)	m	46	2	0	x	2	
2c	SCC	oral (tongue)	f	64	1	0	x	2	
2d	SCC	larynx	m	45	4a	x	x	2	
2e	SCC	oropharynx	m	68	1	0	x	2	
3a	SCC	hypopharynx	f	69	4	2b	x	3	
3b	SCC	esophagus	m	60	3	1	x	2	
4a	normal	vulva	f	68					
4b	normal	cervix	f	50					
4c	normal	penis (scrotum)	m	56					
4d	normal	anus/anorectal	m	63					
5a	normal	bronchus	f	61					same patient as sample 1e
5b	normal	dermis (nose)	m	82					same patient as sample 2a
5c	normal	oral (floor of the mouth)	f	54					
5d	normal	oral (tongue)	f	64					same patient as sample 2c
6a	normal	larynx	m	45					same patient as sample 2d
6b	normal	oropharynx	m	68					same patient as sample 2e
6c	normal	hypopharynx	f	69					same patient as sample 3a
6d	normal	esophagus	m	60					same patient as sample 3b

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Colitis Tissue

Cat.-No.: 401 3101

Sample Datasheet

Slide Label				
	a	b	c	d
1	●	●	●	●
2	●	●	●	●
3	●	●	●	●
4	●	●	●	●
5	●	●	●	●
6	●	●	●	●
7	●	●	●	●
8	●	●	●	●
9	●	●	●	●
10	●			

Technical Information: 36 spots (+ 1 spot for orientation)

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 3101

Position	Localisation	Diagnostics	Sex	Age
1a	mucosa	colitis ulcerosa	m	38
1b	mucosa	colitis ulcerosa	m	38
1c	muscularis	colitis ulcerosa	m	38
1d	muscularis	colitis ulcerosa	m	38
2a	mucosa /submucosa	colitis ulcerosa	f	43
2b	mucosa /submucosa	colitis ulcerosa	f	43
2c	muscularis	colitis ulcerosa	f	43
2d	muscularis	colitis ulcerosa	f	43
3a	mucosa	colitis ulcerosa	f	24
3b	mucosa	colitis ulcerosa	f	24
3c	muscularis	colitis ulcerosa	f	24
3d	muscularis	colitis ulcerosa	f	24
4a	mucosa	Morbus Crohn	f	41
4b	mucosa	Morbus Crohn	f	41
4c	muscularis	Morbus Crohn	f	41
4d	muscularis	Morbus Crohn	f	41
5a	mucosa	Morbus Crohn	f	39
5b	mucosa	Morbus Crohn	f	39
5c	muscularis	Morbus Crohn	f	39
5d	muscularis	Morbus Crohn	f	39
6a	mucosa	Morbus Crohn	f	57
6b	mucosa	Morbus Crohn	f	57
6c	muscularis	Morbus Crohn	f	57
6d	muscularis	Morbus Crohn	f	57
7a	mucosa	appendicitis	m	73
7b	mucosa	appendicitis	m	73
7c	muscularis	appendicitis	m	73

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 3101

Position	Localisation	Diagnostics	Sex	Age
7d	muscularis,mucosa	appendicitis	m	73
8a	mucosa	normal ileum mucosa	m	73
8b	mucosa	normal ileum mucosa	m	73
8c	muscularis	normal ileum mucosa	m	73
8d	muscularis	normal ileum mucosa	m	73
9a	mucosa	normal colon mucosa	f	86
9b	mucosa	normal colon mucosa	f	86
9c	muscularis	normal colon mucosa	f	86
9d	muscularis	normal colon mucosa	f	86
10a	Liver tissue	Control position for TMA orientation		

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Synovitis Tissue

Cat.-No.: 401 3201 Sample Datasheet

Slide Label						
	a	b	c	d	e	f
1	●	●	●	●	●	●
2	●	●	●	●		
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●

Technical Information: 28 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry /classified according to synovitis score by Krenn (Pathol Res Pract. 2002)

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 3201

Position	Tissue	Diagnosis	Score	Sex	Age
1a	wrist	RA	6 / 9	f	65
1b	wrist	RA	6 / 9	f	65
1c	ankle	RA	6 / 9	m	70
1d	ankle	RA	6 / 9	m	70
1e	shoulder	RA	8 / 9	f	32
1f	shoulder	RA	8 / 9	f	32
2a	knee	RA	8 / 9	m	62
2b	knee	RA	8 / 9	m	62
2c	joint	RA	7 / 9	f	59
2d	joint	RA	7 / 9	f	59
3a	knee	PSA	5 / 9	m	45
3b	knee	PSA	5 / 9	m	45
3c	knee	normal tissue	0 / 9	m	56
3d	knee	normal tissue	0 / 9	m	56
3e	SCC III	normal tissue	1 / 9	f	79
3f	SCC III	normal tissue	1 / 9	f	79
4a	hip	OA	5 / 9	f	76
4b	hip	OA	5 / 9	f	76
4c	joint	OA	4 / 9	f	88
4d	joint	OA	4 / 9	f	88
4e	knee	OA	3 / 9	m	64
4f	knee	OA	3 / 9	m	64
5a	hip	OA	6 / 9	f	77
5b	hip	OA	6 / 9	f	77
5c	hip	OA	4 / 9	f	73
5d	hip	OA	4 / 9	f	73
5e	joint	OA	3 / 9	f	63
5f	joint	OA	3 / 9	f	63

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Autoimmune Tissue

Cat.-No.: 401 3301 Sample Datasheet

Slide Label						
	a	b	c	d	e	f
1	●	●	●	●	●	●
2	●	●	●	●	●	●
3	●	●	●	●		
4	●	●	●	●		
5	●	●	●	●		
6	●	●	●			
7	●	●	●	●	●	●
8	●	●	●	●	●	●
9	●	●	●	●		

Technical Information: 43 spots
 - Spot diameter: 2.0 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.
 Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 3301

Position	Diagnosis	Tissue	Sex	Age
1a	Hashimoto-Thyreoiditis	Thyroid	f	37
1b	Hashimoto-Thyreoiditis	Thyroid	f	37
1c	Hashimoto-Thyreoiditis	Thyroid	f	13
1d	Hashimoto-Thyreoiditis	Thyroid	f	13
1e	Hashimoto-Thyreoiditis	Thyroid	f	49
1f	Hashimoto-Thyreoiditis	Thyroid	f	49
2a	Primäre biliäre Zirrhose	Liver	m	47
2b	Primäre biliäre Zirrhose	Liver	m	47
2c	Sjögren	Submandibularis	f	72
2d	Sjögren	Submandibularis	f	72
2e	Sjögren	Labium oris	f	47
2f	Sjögren	Labium oris	f	47
3a	Sinusitis & Eosinophilie	Nasal mucosa	m	62
3b	Sinusitis & Eosinophilie	Nasal mucosa	m	62
3c	Sinusitis & Eosinophilie	Nasal mucosa	m	62
3d	Sinusitis & Eosinophilie	Nasal mucosa	m	62
4a	Rheumatoide Arthritis	Synovial	f	59
4b	Rheumatoide Arthritis	Synovial	f	59
4c	Psoriasis	Synovial	m	46
4d	Psoriasis	Synovial	m	46
5a	Morbus Crohn	Sigma (muscularis)	f	17
5b	Morbus Crohn	Sigma (mucosa)	f	17
5c	Sarkoidose	Lung	f	67
5d	Sarkoidose	Lung	f	67
6a	Granulomat. Thyreoiditis de Quervain	Thyroid	f	52
6b	Granulomat. Thyreoiditis de Quervain	Thyroid	f	52

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 3301

Position	Diagnosis	Tissue	Sex	Age
6c	Lupus erythematoses	Dermis	f	65
7a	normal	Thyroid	m	53
7b	normal	Thyroid	m	53
7c	normal	Liver	m	61
7d	normal	Liver	m	61
7e	normal	Salivary gland	m	40
7f	normal	Salivary gland	m	40
8a	normal	Dermis	m	41
8b	normal	Dermis	m	41
8c	normal (Sinusitis w/o. Eosinophilie)	Nasal mucosa	m	36
8d	normal (Sinusitis w/o. Eosinophilie)	Nasal mucosa	m	36
8e	normal	Sigma	m	58
8f	normal	Sigma	m	58
9a	normal	Lung	m	47
9b	normal	Lung	m	47
9c	normal	Synovial	m	30
9d	normal	Synovial	m	30

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Myocardial Infarction

Cat.-No.: 401 4101 Sample Datasheet

Slide Label					
	a	b	c	d	e
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●
6	●	●	●	●	●
7	●	●	●	●	
8	●	●	●	●	
9	●	●			
10	●	●	●	●	●
11	●	●	●	●	●

Technical Information: 50 spots
 - Spot diameter: 2.0 mm
 - Fixation in 4% neutral buffered formaldehyde solution
 - Paraffin embedded
 Tissue type validated by immunohistochemistry

In vitro laboratory use only.
 Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 4101

Position	Diagnosis	Localisation	Sex	Age
1a	acute infarction	anterior	m	50
1b	acute infarction	anterior	m	50
1c	acute infarction	posterior	m	81
1d	acute infarction	posterior	m	81
1e	acute infarction	posterior	f	49
2a	acute infarction	posterior	f	49
2b	acute infarction + focal fibrosis	posterior	m	71
2c	acute infarction + focal fibrosis	posterior	m	71
2d	acute infarction	septal	m	76
2e	acute infarction	septal	m	76
3a	acute infarction	septal	m	65
3b	acute infarction	septal	m	65
3c	acute infarction	septal	m	56
3d	acute infarction + focal fibrosis	septal	m	56
3e	acute infarction + focal fibrosis	septal	m	81
4a	acute infarction	septal	m	81
4b	acute infarction	posterior	m	58
4c	acute infarction	posterior	m	58
4d	acute infarction	posterior	m	57
4e	acute infarction	posterior	m	57
5a	old granulation tissue + transition into myocardial scar	anterior	f	71
5b	old granulation tissue + transition into myocardial scar	anterior	f	71
5c	old granulation tissue + myocardial scar	anterior	m	89
5d	old granulation tissue + myocardial scar	anterior	m	89
5e	old granulation tissue + myocardial scar	posterior	m	60

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 4101

Position	Diagnosis	Localisation	Sex	Age
6a	old granulation tissue + myocardial scar	posterior	m	60
6b	old granulation tissue + myocardial scar	posterior	m	71
6c	old granulation tissue + myocardial scar	posterior	m	71
6d	myocardial scar	septal	m	67
6e	myocardial scar	septal	m	67
7a	myocardial scar	septal	m	71
7b	myocardial scar	septal	m	71
7c	myocardial scar	septal	m	59
7d	myocardial scar	septal	m	59
8a	myocardial infarction	posterior	m	81
8b	myocardial scar (25-30%) matched Pos. 8a	posterior	m	81
8c	myocardial scar	anterior	m	60
8d	myocardial scar	anterior	m	60
9a	myocardial scar	posterior	m	66
9b	myocardial scar	posterior	m	66
10a	normal tissue	left vertricle	m	69
10b	normal tissue	left vertricle	f	77
10c	normal tissue	left vertricle	f	70
10d	normal tissue	left vertricle	f	57
10e	normal tissue	left vertricle	m	55
11a	normal tissue	right ventricle	m	69
11b	normal tissue	right ventricle	f	77
11c	normal tissue	right ventricle	f	70
11d	normal tissue	right ventricle	f	57
11e	normal tissue	right ventricle	m	55

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Left Heart Tissue Myocardial Hypertrophy I

Cat.-No.: 401 4102 Sample Datasheet

Slide Label				
	a	b	c	d
1	●	●	●	●
2	●	●	●	●
3	●	●	●	●
4	●	●	●	●
5	●	●	●	
6	●	●	●	

Technical Information: 22 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

* Hypertrophy was determined by heart weight analysis and histologic grading (nucleus size and filament gauge). Detailed data are available on request.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 4102

Position	Localisation	Heart disease	left ventricle wall thickness in mm	Hypertrophy diagnostic by heart weight *	Hypertrophy histologic grading* nucleus size	Hypertrophy histologic grading* fibre thickness	Sex	Age
1a	septal	multiple metachronous myocardial infarctions, abacterial endocarditis of mitral valve	14	normal	2 3 1	2 1 3	f	52
1b	septal	Fibrosis and lipomatosis of the left ventricle	20	hypertroph	2 3 1	2 1 3	m	62
1c	septal	Myocardial infarctions, dilatation of both ventricles, coronary heart disease, arrhythmia, 4 fold bypass	18	hypertroph	2 3 1	1 2	m	80
1d	septal	mechanical mitral valve, decompensated restrictive cardiomyopathy	15	hypertroph	2 3 1	2 1 3	m	62
2a	septal	Dilatation of left ventricle, calcification of the base of mitral valve	7	normal	2 3 4	2 1 3	m	62
2b	septal	Dilatation of left ventricle with rounded apex cordis	15	normal	2 1 3	2 1	m	54
2c	left ventricle		20	normal	2 1 3	2 1 3	m	76
2d	left ventricle	cardiogenic shock, aortal valve replacement, 3 fold coronary bypass, myocardial infarction (ventral left ventricle)	20	hypertroph	2 1 3	2 1 3	m	62
3a	left ventricle	Hypertensive heart disease	17	normal	2 3 1	2 1 3	m	62
3b	left ventricle	decompensated chronic ischemic heart disease, Dilatation of left atrium, left and right ventricles, Mitral valve insufficiency	16	hypertroph	2 1 3	1 2	m	70
3c	left ventricle		12	normal	2 1 3	2 3 4	f	65
3d	left ventricle	Dilatation and lipomatous transformation of left ventricle, calcification of mitral and aortic valves	18	normal with fibrosis	2 3 1	3 4 2	f	76

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 4102

Position	Localisation	Heart disease	left ventricle wall thickness in mm	Hypertrophy diagnostic by heart weight *	Hypertrophy histologic grading* nucleus size	Hypertrophy histologic grading* fibre thickness	Sex	Age
4a	left ventricle	Dilatation of left and right ventricles	16	hypertroph	2 3	1 2	f	53
4b	left ventricle	chronic ischemic heart disease, infarction of ventral left ventricle, Dilatation of both ventricles	16	normal	2 3 1	1 2	f	93
4c	left ventricle		15	normal	2 1 3	2 1 3	m	43
4d	left ventricle	Cardiac failure, Ischemia, myocardial infarction of posterior left ventricle, Dilatation of both ventricles, tricuspid valve insufficiency	14	normal	2 3 1	2 3 1	m	64
5a	left ventricle	myocardial sclerosis and dilatation of left ventricle	16	normal	2 1 3	2 1 3	m	63
5b	septal	chronic Cor pulmonale, myocardial sclerosis of left ventricle, Dilatation of right ventricle	16	hypertroph	2 1 3	2 1	m	68
5c	septal	Dilatation of both ventricles	14	normal	2 3 1	1 2	m	66
6a	left ventricle	hypertensive heart disease, myocardial infarction of left posterior ventricle, lipomatosis of left ventricle, Dilatation of right ventricle	20	hypertroph	2 3 1	3 2 1	m	84
6b	left ventricle	Myocardial infarction with acute reinfarction of left ventricle (anterior, posterior and septum) Dilatation of both ventricles	20	hypertroph	2 3	2 3 1	m	72
6c	left ventricle	ulceropolypous aortic valve endocarditis with valve perforation and rupture	14	normal	2 1	3 2 4	m	38

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Right Heart Tissue Myocardial Hypertrophy II (tissue matched to 401 4102, left heart)

Cat.-No.: 401 4103 Sample Datasheet

Slide Label				
	a	b	c	d
1	●	●	●	●
2	●	●	●	●
3	●	●	●	●
4	●	●	●	●
5	●	●		
6	●	●		
7	●	●		

Technical Information: 22 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

* Hypertrophy was determined by heart weight analysis and histologic grading (nucleus size and filament gauge). Detailed data are available on request.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 4103

Position	Localisation	Heart disease	ventricle wall thickness in mm	Hypertrophy diagnostic by heart weight *	Sex	Age
1a	right ventricle	multiple metachronous myocardial infarctions, abacterial endocarditis of mitral valve	14 left	normal	f	52
1b	right ventricle	Fibrosis and lipomatosis of the left ventricle	20 left/ 5 right	hypertroph	m	62
1c	right ventricle	Myocardial infarctions, dilatation of both ventricles, coronary heart disease, arrhythmia, 4 fold bypass	18 left/ 7 right	hypertroph	m	80
1d	right ventricle	Endocarditis, mechancial mitral valve, decompensated restrictive cardiomyopathy	15 left	hypertroph	m	62
2a	right ventricle	Dilatation of left ventricle, calcification of the base of mitral valve	16 left/ 7 right	normal	m	62
2b	right ventricle	Dilatation of left ventricle with rounded apex cordis	15 left	normal	m	54
2c	right ventricle		20 left	normal	m	76
2d	right ventricle	cardiogenic shock, aortal valve replacement, 3 fold coronary bypass, myocardial infarction (ventral left ventricle)	20 left/ 5 right	hypertroph	m	62
3a	right ventricle	Hypertensive heart disease	17 left	normal	m	62
3b	right ventricle	decompensated chronic ischemic heart disease, Dilatation of left atrium, left and right ventricles, Mitral valve insufficiency	16 left/ 6 right	hypertroph	m	70
3c	right ventricle		12 left/ 4 right	normal	f	65
3d	right ventricle	Dilatation and lipomatous transformation of left ventricle, calcification of mitral and aortic valves	18 left	normal	f	76
4a	right ventricle	Dilatation of left and right ventricles	16 left	hypertroph	f	53
4b	right ventricle	chronic ischemic heart disease, infarction of ventral left ventricle, Dilatation of both ventricles	16 left/ 5 right	normal	f	93
4c	right ventricle		15 left/ 4 right	normal	m	43
4d	right ventricle	Cardiac failure, Ischemia, myocardial infarction of posterior left ventricle, Dilatation of both ventricles, tricuspid valve insufficiency	14 left/ 4 right	normal	m	64

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

📖 Sample Datasheet
Cat.-No.: 401 4103

Position	Localisation	Heart disease	ventricle wall thickness in mm	Hypertrophy diagnostic by heart weight *	Sex	Age
5a	right ventricle	myocardial sclerosis and dilatation of left ventricle	16 left/ 4-5 right	normal	m	63
5b	right ventricle	chronic Cor pulmonale, myocardial sclerosis of left ventricle, Dilatation of right ventricle	16 left/ 7 right	hypertroph	m	68
6a	right ventricle	Dilatation of both ventricles	14 left/ 6 right	normal	m	66
6b	right ventricle	hypertensive heart disease, myocardial infarction of left posterior ventricle, lipomatosis of left ventricle, Dilatation of right ventricle	20 left/ 6 right	hypertroph	m	84
7a	right ventricle	Myocardial infarction with acute reinfarction of left ventricle (anterior, posterior and septum) Dilatation of both ventricles	20 left/ 6 right	hypertroph	m	72
7b	right ventricle	ulceropolypous aortic valve endocarditis with valve perforation and rupture	14 left/ 4 right	normal	m	38

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Tissue Microarray - Human Vascular Tissue

Cat.-No.: 401 4201 Sample Datasheet

Slide Label						
	a	b	c	d	e	f
1	●	●	●	●		
2	●	●	●	●		
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●
6	●	●	●	●	●	●
7	●	●	●	●	●	●
8	●	●	●	●	●	●
9	●	●	●	●	●	●

Technical Information: 50 spots

- Spot diameter: 2.0 mm
- Fixation in 4% neutral buffered formaldehyde solution
- Paraffin embedded

Tissue type validated by immunohistochemistry

* Histological Classification according to Atherosclerotic Lesions Types by H.C.Stary (1995 American Heart Association)

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 4201

Position	Tissue	Diagnosis score	Sex	Age
1a	aorta	2	m	63
1b	aorta	2	m	63
1c	aorta	2	m	63
1d	aorta	2	m	63
2a	renal artery	3	f	76
2b	renal artery	3	f	76
2c	atheroma- aorta	3	m	67
2d	atheroma- aorta	3	m	67
3a	atheroma- carotis	3/4	f	56
3b	atheroma- carotis	3/4	f	56
3c	aorta	4	f	51
3d	aorta	4	f	51
3e	atheroma-aorta	5	m	61
3f	atheroma-aorta	5	m	61
4a	coronary artery	5	f	76
4b	coronary artery	5	f	76
4c	atheroma	5/6	m	55
4d	atheroma	5/6	m	55
4e	atheroma-aorta	5/6	f	65
4f	atheroma-aorta	5/6	f	65
5a	coronary artery	6	m	67
5b	coronary artery	6	m	67
5c	Atheroma/ Riva.nod	6	f	73
5d	atheroma / Riva.nod	6	f	73
5e	vena cava	normal	m	74
5f	vena cava	normal	m	74
6a	vena cava	normal	m	69

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

 Sample Datasheet
Cat.-No.: 401 4201

Position	Tissue	Diagnosis score	Sex	Age
6b	vena cava	normal	m	69
6c	vena cava	normal	f	64
6d	vena cava	normal	f	64
6e	vena cava	normal	m	45
6f	vena cava	normal	m	45
7a	aorta	normal	m	69
7b	aorta	normal	m	69
7c	aorta	normal	f	64
7d	aorta	normal	f	64
7e	coronary artery	normal	m	70
7f	coronary artery	normal	m	70
8a	aorta	normal	m	45
8b	aorta	normal	m	45
8c	left groin	granulation tissue	f	48
8d	left groin	granulation tissue	f	48
8e	intestine	granulation tissue	f	31
8f	intestine	granulation tissue	f	31
9a	left hip	granulation tissue	f	68
9b	left hip	granulation tissue	f	68
9c	ovary	granulation tissue	f	33
9d	ovary	granulation tissue	f	33
9e	abdominal wall	granulation tissue	f	65
9f	abdominal wall	granulation tissue	f	65

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

iCon (internal control) TMA

Human Tissue Microarray

iCon (internal control) TMA[®]

Her2

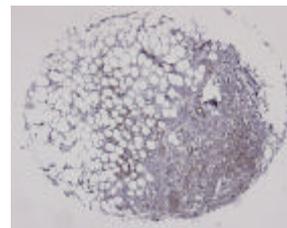
It is a useful tool for the identification of overexpression of cerbB-2 oncoprotein in a variety of epithelial neoplasms, for example subsets of breast carcinomas, pulmonary adenocarcinomas, colorectal adenocarcinomas, pulmonary squamous and gastric adenocarcinomas , transitional cell carcinomas of the urinary bladder , and endometrial adenocarcinomas.

Cat.-No.: 401 5101

Lot: 009iC

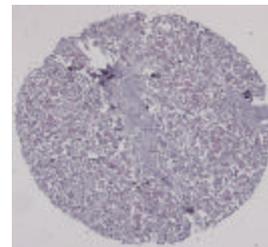
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

ID-CA Score +0



negative

ID-CA Score +3



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray - iCon (internal control) TMA® Her-2

REF / Cat.-No.: 401 5201

iConTMA® Label			
●	●	●	●
1	2	3	4
Free Space for your tissue under investigation			

spot 1: positive score 3+
spot 2: positive score 2+
spot 3: positive score 1+
spot 4: negative score 0

tissue type:
mamma

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost® Plus.
- Tissue type validated by immunohistochemistry (antibody: HER-2neu (4b5) REF 790-4493 [Ventana]).

For Handling Instruction please see our iCon® TMA Product Sheet or contact our customer service.

Antibody / Marker description:

Her-2/neu (also known as ErbB-2) is a useful tool for the identification of overexpression of cerbB-2 oncoprotein in a variety of epithelial neoplasms, for example subsets of breast carcinomas, pulmonary adenocarcinomas, colorectal adenocarcinomas, pulmonary squamous and gastric adenocarcinomas, transitional cell carcinomas of the urinary bladder, and endometrial adenocarcinomas. It is a cell membrane surface-bound receptor tyrosine kinase and is normally involved in the signal transduction pathways leading to cell growth and differentiation. HER2 is thought to be an orphan receptor, with none of the EGF family of ligands able to activate it. However, ErbB receptors dimerise on ligand binding, and HER2 is the preferential dimerisation partner of other members of the ErbB family. The *HER2* gene is a proto-oncogene located at the long arm of human chromosome 17(17q11.2-q12). Scoring according to the guidelines of the American Society of Clinical Oncology and the College of American Pathologists (ASCO/CAP).

Literature:

- Olajoye MA (2001). "Update on HER-2 as a target for cancer therapy: intracellular signaling pathways of ErbB2/HER-2 and family members". *Breast Cancer Res* 3 (6): 385–389
- Hurtado A, Holmes KA, Geistlinger TR, Hutcheson IR, Nicholson RI, Brown M, Jiang J, Howat WJ, Ali S, Carroll JS (November 2008). "Regulation of ERBB2 by oestrogen receptor-PAX2 determines response to tamoxifen". *Nature*.
- XF Le, Franz Pruefer, Robert Bast. (2005). "HER2-targeting antibodies modulate the cyclin-dependent kinase inhibitor p27Kip1 via multiple signaling pathways". *Cell Cycle* 4 (1): 87–95.
- Ménard S, Casalini P, Campiglio M, et al. (2005). "Role of HER2/neu in tumor progression and therapy". *Cell. Mol. Life Sci.* 61 (23): 2965–78.

FOR INTERNAL QUALITY CONTROL. RESEARCH USE ONLY.

Intended for any human or animal in vitro research use only.

Version: 2.0 Stand: 09/20

 Data Sheet

Human Tissue Microarray

iCon (internal control) TMA[®]

CK7

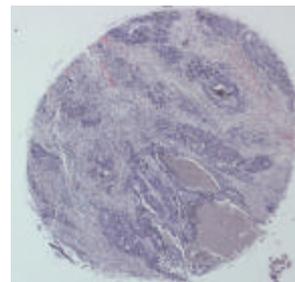
The antibody labels glandular and transitional epithelial cells and is a useful tool for the identification of adenocarcinomas of the lung, breast and endometrium, thyroid gland and ovary, as well as transitional cell (urothelial) carcinomas, and chromophobe renal cell carcinomas. Cells labelled by the antibody display a cytoplasmic staining pattern.

Cat.-No.: 401 5102

Lot: 001iC

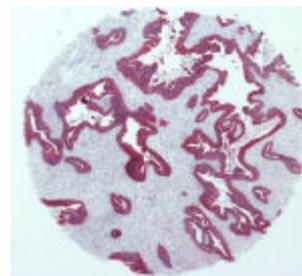
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Colon



negative

Pancreas



positive

Technical Information:

- Spot diameter: 2,0 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

iCon (internal control) TMA[®]

BCL2

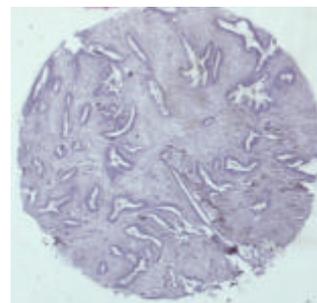
Positive results aid in the classification of follicular lymphomas and various diffuse lymphoproliferative diseases. The cellular staining pattern for this antibody is cytoplasmic.

Cat.-No.: 401 5103

Lot: 007iC

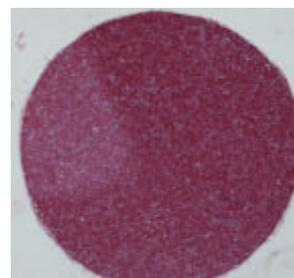
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Pancreas



negative

Non-Hodgkin-Lymphom



positive

Technical Information:

- Spot diameter: 2,0 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

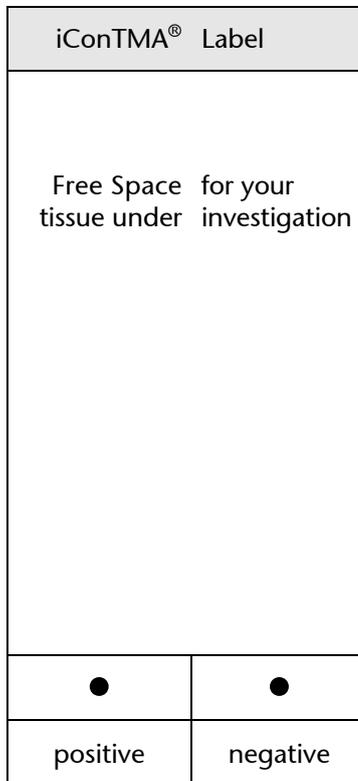
iCon (internal control) TMA[®]

CD20

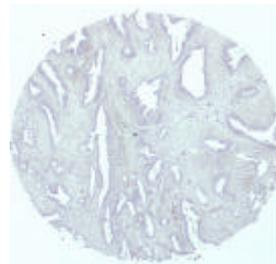
CD20 is used to identify qualitatively by light microscopy B-cells in normal and neoplastic tissues. Positive results aid in the classification of lymphomas as B-cell in origin.

Cat.-No.: 401 5104

Lot: 007iC

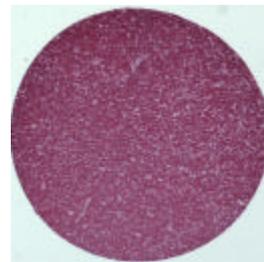


Pancreas



negative

Non-Hodgkin-Lymphom



positive

Technical Information:

- Spot diameter: 2,0 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

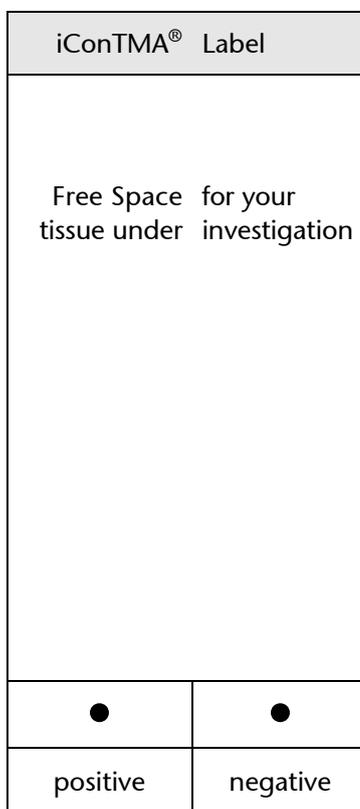
iCon (internal control) TMA[®]

CD117

The antibody labels the transmembrane tyrosine kinase receptor CD117/c-kit, located in hematopoietic stem cells, melanocytes, mast cells, cajal cells, germ cells, basal cells of skin, and mammary ductal epithelial. The antibody is useful for the identification of several cancers expressing c-kit.

Cat.-No.: 401 5105

Lot: 002iC

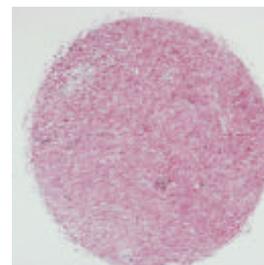


Neurinom/
Esophagus



negative

Stromacarcinom/
Stomach



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

provitro AG Charitéplatz 1 tel +49.30.450 578 352 office@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 952 www.provitro.de

Human Tissue Microarray

iCon (internal control) TMA[®]

S100

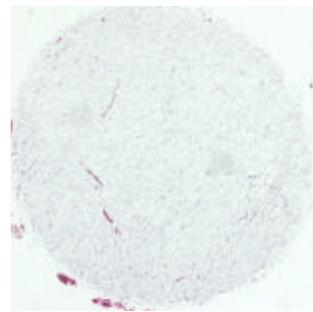
Positive results aid in the differential diagnosis of melanomas and nerve sheath tumors from carcinomas.

Cat.-No.: 401 5106

Lot: 002iC

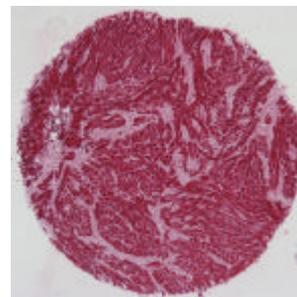
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Stromacarcinom/
Stomach



negative

Neurinom/
Esophagus



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

iCon (internal control) TMA[®]

p16

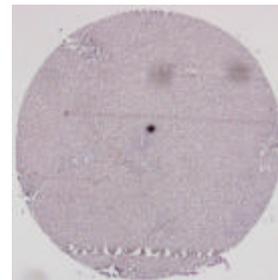
The p16 gene is a tumour suppressor gene that has been found to be functionally inactivated in many tumour entities, either by gene mutation or promotor hypermethylation. A strong nuclear and cytoplasmic overexpression of p16 protein has been reported for some cancer entities, including cervical cancer.

Cat.-No.: 401 5107

Lot: 003iC

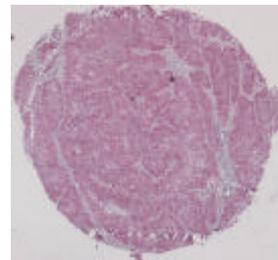
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Liver



negative

Cervix-CA



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

iCon (internal control) TMA[®]

p53

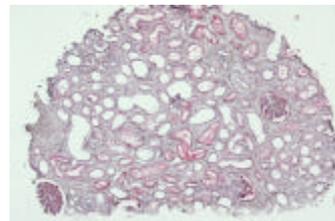
The antibody is used for the identification of p53 accumulation in human neoplasias. Cells labelled by the antibody generally display a nuclear staining pattern, but cytoplasmic staining has been reported in some cases.

Cat.-No.: 401 5108

Lot: 004iC

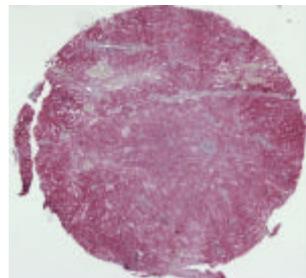
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Kidney



negative

Ovarial-CA



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

iCon (internal control) TMA[®]

p63

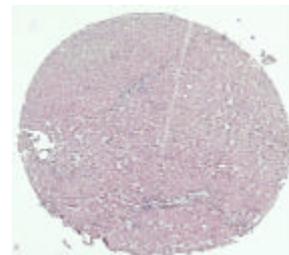
p63 is a homolog of p53, which is consistently expressed by basal /stem cells of stratified epithelium and myoepithelial cells of breast and salivary glands.

Cat.-No.: 401 5109

Lot: 005iC

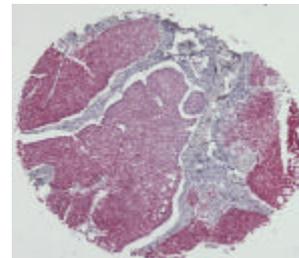
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Liver



negative

Larynx/ Epiglottis SCC



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

iCon (internal control) TMA[®]

ER

The antibody labels estrogen receptor positive cells and is useful in the assessment of estrogen receptor status in human breast carcinomas.

Cat.-No.: 401 5110

Lot: i 04-05

iConTMA [®] Label			
Free Space for your tissue under investigation		Kidney	negative
		Myometrium	
●	●		positive
positive	negative		

Technical Information:

- Spot diameter: 2,0 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

iCon (internal control) TMA[®]

PgR

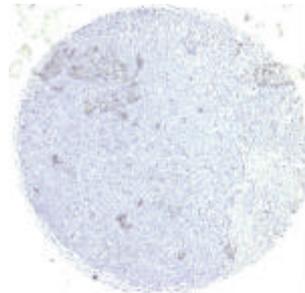
The antibody labels progesteron receptor positive cells and is useful in the assessment of progesteron receptor status in human breast carcinomas.

Cat.-No.: 401 5111

Lot: 006iC

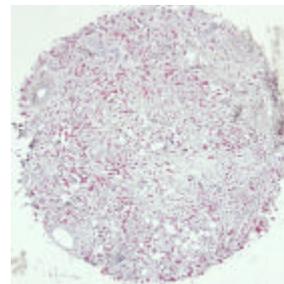
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

ID-CA



negative

ID-CA



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

iCon (internal control) TMA[®]

CK20

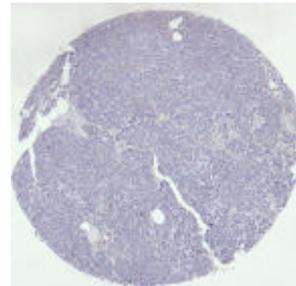
Cytokeratin 20 is valuable as a histodiagnostic tool for the subtyping of various carcinomas, including adenocarcinomas. It is an aid for a more precise classification of many epithelial tumors whose differential diagnosis is otherwise difficult. Positivity was seen in the majority of adenocarcinomas of colon, transitional-cell and Merkel-cell carcinomas and frequently also in adenocarcinoma of stomach.

Cat.-No.: 401 5112

Lot: 010iC

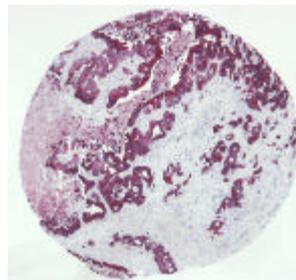
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Pancreas



negative

Liver



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

provitro AG Charitéplatz 1 tel +49.30.450 578 352 office@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 952 www.provitro.de

Human Tissue Microarray

iCon (internal control) TMA[®]

CK5/6

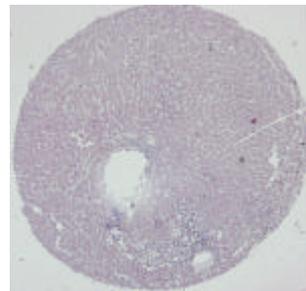
Antibodies to cytokeratin 5/6 have been found valuable for the distinction between low differentiated squamous cell carcinoma and adenocarcinoma. Anti-CK 5/6 has also been found useful in the differential diagnosis of atypical proliferations of the breast.

Cat.-No.: 401 5113

Lot: 015iC

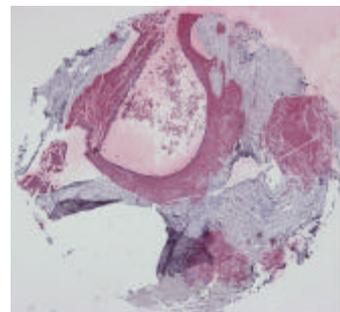
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Liver



negative

Basaliom



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

iCon (internal control) TMA[®]

FLI

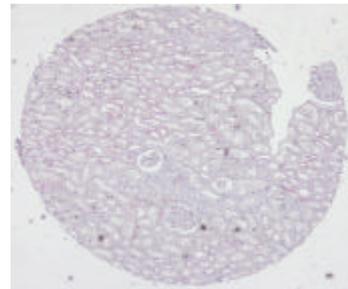
FLI-1 nuclear transcription factor has been proposed as a useful tool in the differential diagnosis of small round cell sarcomas. FLI-1 has been reported as the first nuclear marker of endothelial differentiation.

Cat.-No.: 401 5114

Lot: 011iC

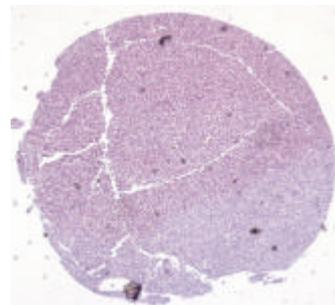
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Kidney



negative

Ewing-Sarkoms



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray

iCon (internal control) TMA[®]

Actin

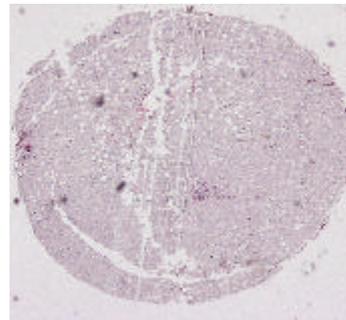
The antibody labels smooth muscle cells, myofibroblasts and myoepithelial cells, and it is a useful tool for the identification of leiomyomas, leiomyosarcomas and pleomorphic adenomas.

Cat.-No.: 401 5115

Lot: 012iC

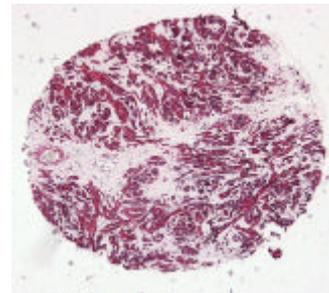
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Liver



negative

Leiomyom



positive

Technical Information:

- Spot diameter: 2,0 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

provitro AG Charitéplatz 1 tel +49.30.450 578 352 office@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 952 www.provitro.de

Human Tissue Microarray

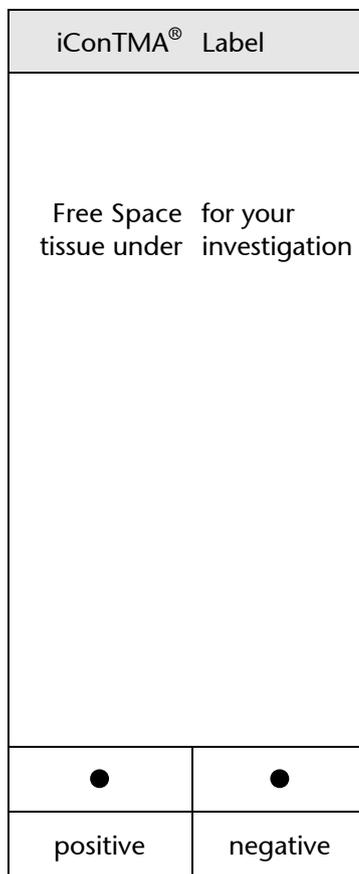
iCon (internal control) TMA[®]

PSA

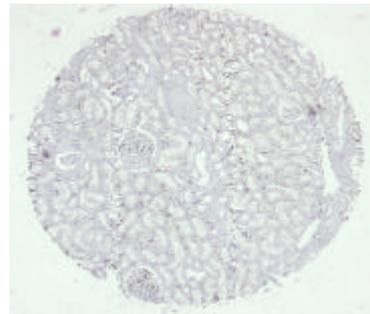
Monoclonal mouse anti-prostatic specific antigen (PSA), is intended use to identify qualitatively prostate specific antigen (PSA) positive cells in normal and neoplastic tissues. Positive results aid in the classification of neoplastic tissue, i.e. metastatic carcinomas of prostate origin.

Cat.-No.: 401 5116

Lot: 013iC

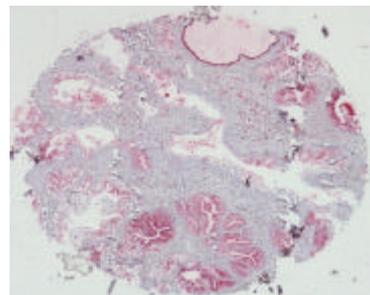


Kidney



negative

Prostate adenoma



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

provitro AG Charitéplatz 1 tel +49.30.450 578 352 office@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 952 www.provitro.de

Human Tissue Microarray

iCon (internal control) TMA[®]

EGFR

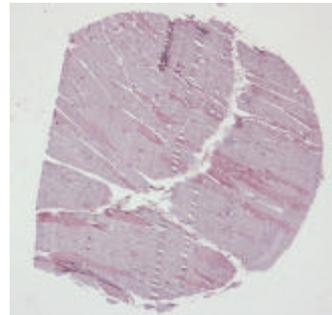
Monoclonal Mouse Anti-Human Epidermal Growth Factor Receptor (EGFR) labels subtypes of human carcinomas expressing high levels of EGFR . EGFR overexpression has been associated with cancer progression.

Cat.-No.: 401 5117

Lot: 014iC

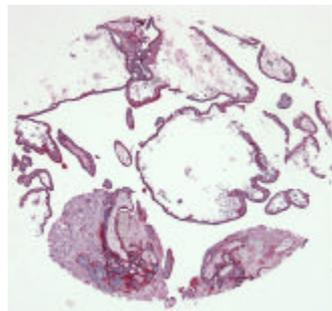
iConTMA [®] Label	
Free Space for your tissue under investigation	
●	●
positive	negative

Fasciated muscle



negative

Placenta



positive

Technical Information:

- Spot diameter: 1,5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded

Tissue type validated by immunohistochemistry

In Vitro Laboratory Use Only

Not intended for any human or animal diagnostic or therapeutic use.

Your expert in target validation



Vorstandsvorsitzender: Dr. Manrico Paulitschke
 Aufsichtsratsvorsitzender: Bernd Hartmann
 Bankverbindung: Weberbank
 IBAN: DE82 1012 0100 1003 0775 82
 BIC: WELADED1WBB

Steuer-Nr.: 37/164/21415
 USt-ID-Nr.: DE 218 804 519
 Handelsregister: HRB 82258
 AG Berlin-Charlottenburg

Human Tissue Microarray - iCon (internal control) TMA[®] MUC-1

REF / Cat.-No.: 401 5222



Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry.
- For details, please contact our customer service.

For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

This gene is a member of the mucin family and encodes a membrane bound, glycosylated phosphoprotein. The protein is anchored to the apical surface of many epithelia by a transmembrane domain (EMA-epithelial membrane antigen), with the degree of glycosylation varying with cell type. It also includes a 20 aa variable number tandem repeat (VNTR) domain, with the number of repeats varying from 20 to 120 in different individuals. The protein serves a protective function by binding to pathogens and also functions in a cell signaling capacity. Overexpression, aberrant intracellular localization, and changes in glycosylation of this protein have been associated with carcinomas. Multiple alternatively spliced transcript variants that encode different isoforms of this gene have been reported, but the full-length nature of only some has been determined.

Literature:

- Peterson JA, Scallan CD, Ceriani RL, Hamosh M (2002). "Structural and functional aspects of three major glycoproteins of the human milk fat globule membrane". *Adv. Exp. Med. Biol.* **501**: 179-87
- Leroy X, Buisine MP, Leteurtre E, *et al.* (2007). "[MUC1 (EMA): A key molecule of carcinogenesis?]". *Annales de pathologie* **26** (4): 257-66.

FOR INTERNAL QUALITY CONTROL AND IVD CALLIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 2.0 Stand: 05/16

 **Product Data Sheet**

Human Tissue Microarray - iCon (internal control) TMA® ki-67 (MIB-1)

REF / Cat.-No.: 401 5223



Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost® Plus.
- Tissue type validated by immunohistochemistry.
- For details, please contact our customer service.

For Handling Instruction please see our iCon® TMA Product Sheet or contact our customer service.

Antibody / Marker description:

The Ki-67 protein (also known as antigen identified by monoclonal antibody MIB-1) is a cellular marker for proliferation. It is strictly associated with cell proliferation. During the interphase, the Ki-67 antigen can be exclusively detected within the cell nucleus, whereas in mitosis most of the protein is relocated to the surface of the chromosomes. Ki-67 protein is present during all active phases of the cell cycle (G1, S, G2, and mitosis), but is absent from resting cells (G0). Ki-67 is an excellent marker to determine the growth fraction of a given cell population. The fraction of Ki-67-positive tumor cells (the *Ki-67 labelling index*) is often correlated with the clinical course of cancer. The best-studied examples in this context are carcinomas of the prostate and the breast. For these types of tumors, the prognostic value for survival and tumor recurrence have repeatedly been proven in uni- and multivariate analysis.

Literature:

- Scholzen T, Gerdes J (2000). "The Ki-67 protein: from the known and the unknown". *J. Cell. Physiol.* **182** (3): 311–22
- Gerdes J, Schwab U, Lemke H, Stein H (1983). "Production of a mouse monoclonal antibody reactive with a human nuclear antigen associated with cell proliferation". *Int. J. Cancer* **31** (1): 13–20.
- Bullwinkel J, Baron-Lühr B, Lüdemann A, Wohlenberg C, Gerdes J, Scholzen T (March 2006). "Ki-67 protein is associated with ribosomal RNA transcription in quiescent and proliferating cells". *J. Cell. Physiol.* **206** (3): 624–35.

FOR INTERNAL QUALITY CONTROL AND IVD CALLIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 2.0 Stand: 05/16

 **Product Data Sheet**

Human Tissue Microarray - iCon (internal control) TMA[®]

Survivin

REF / Cat.-No.: 401 5224



Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry.
- For details, please contact our customer service.

For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

● ● ● ●
 1 2 3 4
 Spot 1: positive
 Spot 2: positive
 Spot 3: negative
 Spot 4: negative

Antibody / Marker description:

Survivin, also called Baculoviral IAP repeat-containing 5 (BIRC5), is a human gene that is part of the inhibitor of apoptosis family (IAP). The Survivin protein functions to inhibit caspase activation therefore leading to negative regulation of apoptosis or programmed cell death. This has been shown by disruption of Survivin induction pathways leading to increase in apoptosis and decrease in tumor growth. Survivin expression is also highly regulated by the cell cycle and is only expressed in the G2-M phase. It is known that Survivin localizes to the mitotic spindle by interaction with tubulin during mitosis and may play a contributing role in regulating mitosis.

Literature:

- Sah NK, Khan Z, Khan GJ, Bisen PS. (2006) Structural, functional and therapeutic biology of survivin. *Cancer Lett.* 244(2):164-71
- Olie RA, Simões-Wüst AP, Baumann B, Leech SH, Fabbro D, Stahel RA, Zangemeister-Wittke U. (2000). A novel antisense oligonucleotide targeting survivin expression induces apoptosis and sensitizes lung cancer cells to chemotherapy. *Cancer Research* 60(11):2805-9

FOR INTERNAL QUALITY CONTROL AND IVD CALLIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 2.0 Stand: 05/16

 **Product Data Sheet**

Human Tissue Microarray - iCon (internal control) TMA® HLA-1

REF / Cat.-No.: 401 5225



Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost® Plus.
- Tissue type validated by immunohistochemistry.
- For details, please contact our customer service.

For Handling Instruction please see our iCon® TMA Product Sheet or contact our customer service.

- Spot 1: positive
- Spot 2: positive
- Spot 3: negative
- Spot 4: negative

Antibody / Marker description:

The **human leukocyte antigen** system (HLA) is the name of the major histocompatibility complex (MHC) in humans. This group of genes resides on chromosome 6 and encodes cell-surface antigen-presenting proteins and many other genes. The major HLA antigens are essential elements in immune function. Different classes have different functions. The **class I** antigens (**A, B & C**) - present peptides from inside the cell (including viral peptides if present). **MHC class I** molecules are found on almost every nucleated cell of the body. Because MHC class I molecules present peptides derived from cytosolic proteins, the pathway of MHC class I presentation is often called the *cytosolic or endogenous pathway*. HLAs also have a role in disease defense, reproduction (may be involved in mate selection), cancer (may be protective or fail to protect), in autoimmunity (known to mediate many autoimmune diseases), as antigens (responsible for organ transplant rejection).

Literature:

- P. Parham and T. Ohta (1996). "Population Biology of Antigen Presentation by MHC class I Molecules.". *Science* **272**
- Erlich HA, Geraghty DE, Hansen JA, Hurley CK, Mach B, Mayr WR, Parham P, Petersdorf EW, Sasazuki T, Schreuder GM, Strominger JL, Svejgaard A, Terasaki PI, and Trowsdale J. (2005). "Nomenclature for factors of the HLA System, 2004.". *Tissue antigens* **65**: 301-369
- Noble J, Valdes A, Bugawan T, Apple R, Thomson G, Erlich H (2002). "The HLA class I A locus affects susceptibility to type 1 diabetes.". *Hum Immunol* **63** (8): 657-64

FOR INTERNAL QUALITY CONTROL AND IVD CALLIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 2.0, Stand: 05/16

 **Product Data Sheet**



Provitro AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitro.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] Her-2

REF / Cat.-No.: 402 5101

Lot: iC

iConTMA [®] Label	
●	●
1	2
Free Space for your tissue under investigation	

spot 1: positive score 3+
spot 2: negative score 0

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details, please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

Her-2/neu (also known as ErbB-2) is a useful tool for the identification of overexpression of cerbB-2 oncoprotein in a variety of epithelial neoplasms, for example subsets of breast carcinomas, pulmonary adenocarcinomas, colorectal adenocarcinomas, pulmonary squamous and gastric adenocarcinomas, transitional cell carcinomas of the urinary bladder, and endometrial adenocarcinomas. It is a cell membrane surface-bound receptor tyrosine kinase and is normally involved in the signal transduction pathways leading to cell growth and differentiation. HER2 is thought to be an orphan receptor, with none of the EGF family of ligands able to activate it. However, ErbB receptors dimerise on ligand binding, and HER2 is the preferential dimerisation partner of other members of the ErbB family. The *HER2* gene is a proto-oncogene located at the long arm of human chromosome 17(17q11.2-q12). Scoring according to the guidelines of the American Society of Clinical Oncology and the College of American Pathologists (ASCO/CAP).

Literature:

- Olayioye MA (2001). "Update on HER-2 as a target for cancer therapy: intracellular signaling pathways of ErbB2/HER-2 and family members". *Breast Cancer Res* **3** (6): 385–389
- Hurtado A, Holmes KA, Geistlinger TR, Hutcheson IR, Nicholson RI, Brown M, Jiang J, Howat WJ, Ali S, Carroll JS (November 2008). "Regulation of ERBB2 by oestrogen receptor-PAX2 determines response to tamoxifen". *Nature*.
- XF Le, Franz Pruefer, Robert Bast. (2005). "HER2-targeting antibodies modulate the cyclin-dependent kinase inhibitor p27Kip1 via multiple signaling pathways.". *Cell Cycle* **4** (1): 87–95.
- Ménard S, Casalini P, Campiglio M, *et al.* (2005). "Role of HER2/neu in tumor progression and therapy.". *Cell. Mol. Life Sci.* **61** (23): 2965–78.

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 2.2 Stand: 01/22

 **Product Data Sheet**





Provitra AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

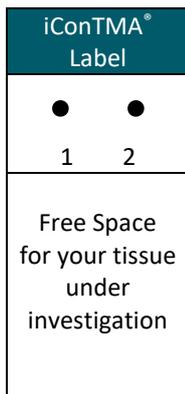
tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitra.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] CK7

REF / Cat.-No.: 402 5102

Lot: iC



spot 1: positive
spot 2: negative

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

The CK7 antibody labels glandular and transitional epithelial cells and is a useful tool for the identification of adenocarcinomas of the lung, breast and endometrium, thyroid gland and ovary, as well as transitional cell (urothelial) carcinomas, and chromophobe renal cell carcinomas. Cells labelled by the antibody display a cytoplasmic staining pattern.

Literature:

- Moll, Franke, Schiller et al.: "The catalog of human cytokeratins: patterns of expression in normal epithelia, tumors and cultured cells." In: **Cell**, Vol. 31, Issue 1, pp. 11-24, 1983
- Gown, Vogel: "Monoclonal antibodies to human intermediate filament proteins. II. Distribution of filament proteins in normal human tissues." In: **The American journal of pathology**, Vol. 114, Issue 2, pp. 309-21, 1984
- Yang XJ, Lecksell K, Gaudin P et al.: "Rare expression of high-molecular-weight cytokeratin in adenocarcinoma of the prostate gland: a study of 100 cases of metastatic and locally advanced prostate cancer." In: **Am J Surg Pathol**, Vol. 23, Issue 2, pp. 147-52, 1999

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 1.2 Stand: 01/22

 **Product Data Sheet**





Provipro AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

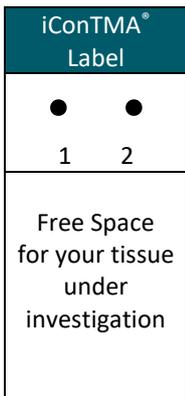
tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provipro.de
www.provipro.de

Human Tissue Microarray - iCon (internal control) TMA[®] CD20

REF / Cat.-No.: 402 5104

Lot: iC



spot 1: positive
spot 2: negative

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

CD20 (Bp35) is a 33-37 kDa non-glycosylated membrane receptor with four transmembrane domains, expressed on B lymphocytes (it is lost on plasma cells), follicular dendritic cells, and at low levels on peripheral blood T lymphocytes. HLDA V, WS Code B CD20.9 CD20 is used to identify qualitatively by light microscopy B-cells in normal and neoplastic tissues. Positive results aid in the classification of lymphomas as B-cell in origin.

Literature:

- Ishii, Takami, Yuasa et al.: "Two distinct antigen systems in human B lymphocytes: identification of cell surface and intracellular antigens using monoclonal antibodies." In: **Clinical and experimental immunology**, Vol. 58, Issue 1, pp. 183-92, 1984
- Smith MR. Rituximab (monoclonal anti-CD20 antibody): mechanisms of action and resistance. **Oncogene**. 2003 Oct 20;22(47):7359-68. Review.

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 1.2 Stand: 01/22

 **Product Data Sheet**





Provitra AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

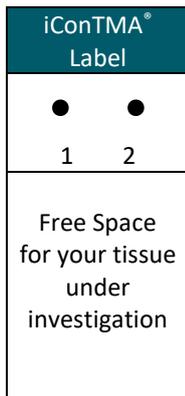
tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitra.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] ER

REF / Cat.-No.: 402 5110

Lot: iC



spot 1: positive
spot 2: negative

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

Estrogen receptor (ER) refers to a group of receptors which are activated by the hormone 17 β -estradiol (estrogen). There are two different forms of the estrogen receptor, usually referred to as α and β each encoded by a separate gene (*ESR1* and *ESR2* respectively). Estrogen receptors are over-expressed in around 70% of breast cancer cases, referred to as "ER positive". Estrogen and the Estrogen Receptor have also been implicated in ovarian cancer, colon cancer, prostate cancer and endometrial cancer.

Literature:

- Jensen EV, Jordan VC (2003). "The estrogen receptor: a model for molecular medicine". *Clin. Cancer Res.* **9** (6): 1980–9
- Dahlman-Wright K, Cavailles V, Fuqua SA, Jordan VC, Katzenellenbogen JA, Korach KS, Maggi A, Muramatsu M, Parker MG, Gustafsson JA (2006). "International Union of Pharmacology. LXIV. Estrogen receptors". *Pharmacol. Rev.* **58** (4): 773–81.
- Deroo BJ, Korach KS (2006). "Estrogen receptors and human disease". *J. Clin. Invest.* **116** (3): 561–70.
- Fabian CJ, Kimler BF (2005). "Selective estrogen-receptor modulators for primary prevention of breast cancer". *J. Clin. Oncol.* **23** (8): 1644–55.
- Ascenzi P, Bocedi A, Marino M (August 2006). "Structure-function relationship of estrogen receptor alpha and beta: impact on human health". *Mol Aspects Med* **27** (4): 299–402.
- Harris HA, Albert LM, Leathurby Y, Malamas MS, Mewshaw RE, Miller CP, Kharode YP, Marzolf J, Komm BS, Winneker RC, Frail DE, Henderson RA, Zhu Y, Keith JC (2003). "Evaluation of an estrogen receptor-beta agonist in animal models of human disease". *Endocrinology* **144** (10): 4241–9

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 2.2 Stand: 01/22

 **Product Data Sheet**





Provitro AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

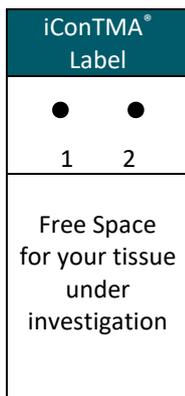
tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitro.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] PgR

REF / Cat.-No.: 402 5111

Lot: iC



spot 1: positive
spot 2: negative

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

The progesterone receptor (PgR) also known as NR3C3 (nuclear receptor subfamily 3, group C, member 3), is an intracellular steroid receptor that specifically binds progesterone. It is encoded by a single gene residing on chromosome 11q22. Progesterone is a C-21 steroid hormone involved in the female menstrual cycle, pregnancy (supports *gestation*) and embryogenesis of humans and other species. progesterone antibody labels progesterone receptor (PgR) positive cells and is useful in the assessment of progesterone receptor status in human breast and endometrial cancers.

Literature:

- Terry KL, De Vivo I, Titus-Ernstoff L, Sluss PM, Cramer DW (March 2005). "Genetic variation in the progesterone receptor gene and ovarian cancer risk". *Am. J. Epidemiol.* **161** (5): 442–51.
- De Vivo I, Huggins GS, Hankinson SE, Lescault PJ, Boezen M, Colditz GA, Hunter DJ (September 2002). "A functional polymorphism in the promoter of the progesterone receptor gene associated with endometrial cancer risk". *Proc. Natl. Acad. Sci. U.S.A.* **99** (19): 12263–8.
- Richer JK, Lange CA, Wierman AM, *et al.* (1998). "Progesterone receptor variants found in breast cells repress transcription by wild-type receptors.". *Breast Cancer Res. Treat.* **48** (3): 231–41.
- Butnor KJ, Burchette JL, Robboy SJ (2002). "Progesterone receptor activity in leiomyomatosis peritonealis disseminata.". *Int. J. Gynecol. Pathol.* **18** (3): 259–64.
- Gadkar-Sable S, Shah C, Rosario G, Sachdeva G, Puri C (2005). "Progesterone receptors: various forms and functions in reproductive tissues". *Front. Biosci.* **10**: 2118–30.

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 2.3 Stand: 01/22

 **Product Data Sheet**





Provitra AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

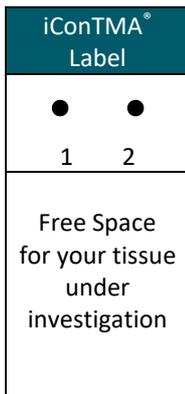
tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitra.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] CK20

REF / Cat.-No.: 402 5112

Lot: iC



spot 1: positive
spot 2: negativ

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

Cytokeratin 20 is valuable as a histodiagnostic tool for the subtyping of various carcinomas, including adenocarcinomas. It is an aid for a more precise classification of many epithelial tumors whose differential diagnosis is otherwise difficult. Positivity was seen in the majority of adenocarcinomas of colon, transitional-cell and Merkel-cell carcinomas and frequently also in adenocarcinoma of stomach.

Literature:

- Angus, Kiberu, Purvis et al.: "Cytokeratins in cervical dysplasia and neoplasia: a comparative study of immunohistochemical staining using monoclonal antibodies NCL-5D3, CAM 5.2, and PKK1." In: **The Journal of pathology**, Vol. 155, Issue 1, pp. 71-5, 1988
- Gatter, Abdulaziz, Beverley et al.: "Use of monoclonal antibodies for the histopathological diagnosis of human malignancy." In: **Journal of clinical pathology**, Vol. 35, Issue 11, pp. 1253-67, 1983
- Tulunay, Goegue?, Baltaci et al.: "Clear cell adenocarcinoma of the tunica vaginalis of the testis with an adjacent uterus-like tissue." In: **Pathology international**, Vol. 54, Issue 8, pp. 641-7, 2004

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 1.2 Stand: 01/22

 **Product Data Sheet**





Provitra AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

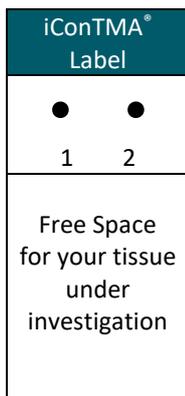
tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitra.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] CK5

REF / Cat.-No.: 402 5113

Lot: iC



spot 1: positive
spot 2: negative

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

Cytokeratin 5 (58 kD) is a high molecular weight, basic type of cytokeratin expressed in basal, the intermediate and the superficial cell layers of stratified epithelia as well as transitional epithelia, complex epithelia and in mesothelial cells and mesothelioma. Cytokeratin 6 (56 kD) is also a high molecular weight, basic type cytokeratin expressed by proliferating squamous epithelium often paired with cytokeratin 16.

Antibodies to cytokeratin 5/6 have been found valuable for the distinction between low differentiated squamous cell carcinoma and adenocarcinoma. Anti-CK 5/6 has also been found useful in the differential diagnosis of atypical proliferations of the breast.

Literature:

- Clover, Oates, Edwards: "Anti-cytokeratin 5/6: a positive marker for epithelioid mesothelioma." In: **Histopathology**, Vol. 31, Issue 2, pp. 140-3, 1997
- Cury, Butcher, Fisher et al.: "Value of the mesothelium-associated antibodies thrombomodulin, cytokeratin 5/6, calretinin, and CD44H in distinguishing epithelioid pleural mesothelioma from adenocarcinoma metastatic to the pleura." In: **Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc**, Vol. 13, Issue 2, pp. 107-12, 2000
- Otterbach, Buankfalvi, Bergner et al.: "Cytokeratin 5/6 immunohistochemistry assists the differential diagnosis of atypical proliferations of the breast." In: **Histopathology**, Vol. 37, Issue 3, pp. 232-40, 2000

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 1.2 Stand: 01/22

 **Product Data Sheet**





Provitro AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

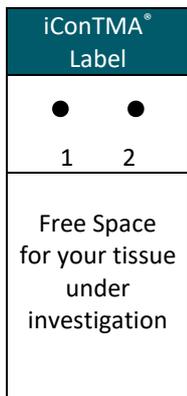
tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitro.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] MUC-1 (EMA)

REF / Cat.-No.: 402 5122

Lot: iC



spot 1: positive
spot 2: negative

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

This gene is a member of the mucin family and encodes a membrane bound, glycosylated phosphoprotein. The protein is anchored to the apical surface of many epithelia by a transmembrane domain (EMA-epithelial membrane antigen), with the degree of glycosylation varying with cell type. It also includes a 20 aa variable number tandem repeat (VNTR) domain, with the number of repeats varying from 20 to 120 in different individuals. The protein serves a protective function by binding to pathogens and also functions in a cell signaling capacity. Overexpression, aberrant intracellular localization, and changes in glycosylation of this protein have been associated with carcinomas. Multiple alternatively spliced transcript variants that encode different isoforms of this gene have been reported, but the full-length nature of only some has been determined.

Literature:

- Peterson JA, Scallan CD, Ceriani RL, Hamosh M (2002). "Structural and functional aspects of three major glycoproteins of the human milk fat globule membrane." *Adv. Exp. Med. Biol.* **501**: 179-87
- Leroy X, Buisine MP, Leteurtre E, *et al.* (2007). "[MUC1 (EMA): A key molecule of carcinogenesis?]" *Annales de pathologie* **26** (4): 257-66.
- Li Y, Cozzi PJ (2007). "MUC1 is a promising therapeutic target for prostate cancer therapy." *Current cancer drug targets* **7** (3): 259-71
- Leroy X, Buisine MP, Leteurtre E, *et al.* (2007). "[MUC1 (EMA): A key molecule of carcinogenesis?]" *Annales de pathologie* **26** (4): 257-66

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 3.2 Stand: 01/22

 **Product Data Sheet**





Provitro AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

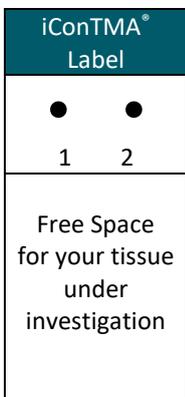
tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitro.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] ki-67 (MIB-1)

REF / Cat.-No.: 402 5123

Lot: iC



spot 1: positive
spot 2: negative

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

The Ki-67 protein (also known as antigen identified by monoclonal antibody MIB-1) is a cellular marker for proliferation. It is strictly associated with cell proliferation. During the interphase, the Ki-67 antigen can be exclusively detected within the cell nucleus, whereas in mitosis most of the protein is relocated to the surface of the chromosomes. Ki-67 protein is present during all active phases of the cell cycle (G1, S, G2, and mitosis), but is absent from resting cells (G0). Ki-67 is an excellent marker to determine the growth fraction of a given cell population. The fraction of Ki-67-positive tumor cells (the *Ki-67 labelling index*) is often correlated with the clinical course of cancer. The best-studied examples in this context are carcinomas of the prostate and the breast. For these types of tumors, the prognostic value for survival and tumor recurrence have repeatedly been proven in uni- and multivariate analysis.

Literature:

- Scholzen T, Gerdes J (2000). "The Ki-67 protein: from the known and the unknown". *J. Cell. Physiol.* **182** (3): 311–22
- Gerdes J, Schwab U, Lemke H, Stein H (1983). "Production of a mouse monoclonal antibody reactive with a human nuclear antigen associated with cell proliferation". *Int. J. Cancer* **31** (1): 13–20.

Bullwinkel J, Baron-Lühr B, Lüdemann A, Wohlenberg C, Gerdes J, Scholzen T (March 2006). "Ki-67 protein is associated with ribosomal RNA transcription in quiescent and proliferating cells". *J. Cell. Physiol.* **206** (3): 624–35

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 3.2 Stand: 01/22

 **Product Data Sheet**





Provitra AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

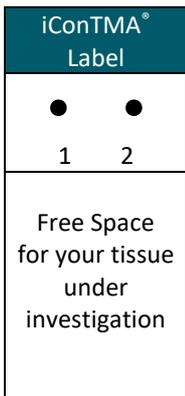
tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitra.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] Survivin

REF / Cat.-No.: 402 5124

Lot: iC



spot 1: positive
spot 2: negative

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

Survivin, also called Baculoviral IAP repeat-containing 5 (BIRC5), is a human gene that is part of the inhibitor of apoptosis family (IAP). The survivin protein functions to inhibit caspase activation therefore leading to negative regulation of apoptosis or programmed cell death. This has been shown by disruption of survivin induction pathways leading to increase in apoptosis and decrease in tumour growth. . Survivin expression is also highly regulated by the cell cycle and is only expressed in the G2-M phase. It is known that survivin localizes to the mitotic spindle by interaction with tubulin during mitosis and may play a contributing role in regulating mitosis. .

Literature:

- Sah NK, Khan Z, Khan GJ, Bisen PS. (2006) Structural, functional and therapeutic biology of survivin. *Cancer Lett.* 244(2):164-71
- Olie RA, Simões-Wüst AP, Baumann B, Leech SH, Fabbro D, Stahel RA, Zangemeister-Wittke U. (2000). A novel antisense oligonucleotide targeting survivin expression induces apoptosis and sensitizes lung cancer cells to chemotherapy. *Cancer Research* 60(11):2805-9
- Ingo Tamm, Yan Wang, Ed Sausville, Dominic A. Scudiero, Nicole Vigna, Tilman Oltersdorf and John C. Reed. (1998) IAP-Family Protein Survivin Inhibits Caspase Activity and Apoptosis Induced by Fas (CD95), Bax, Caspases, and Anticancer Drugs. *Cancer Research* 58, 5315-5320.

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 3.2 Stand: 01/22

 **Product Data Sheet**





Provitro AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitro.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] W6/32 (HLA-1, MHC-1)

REF / Cat.-No.: 402 5125

Lot: iC

iConTMA [®] Label	
●	●
1	2
Free Space for your tissue under investigation	

spot 1: positive
spot 2: negative

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

The **human leukocyte antigen system (HLA)** is the name of the major histocompatibility complex (MHC) in humans. This group of genes resides on chromosome 6, and encodes cell-surface antigen-presenting proteins and many other genes. The major HLA antigens are essential elements in immune function. Different classes have different functions. The **class I** antigens (**A, B & C**) - Present peptides from inside the cell (including viral peptides if present). **MHC class I** molecules are found on almost every nucleated cell of the body. Because MHC class I molecules present peptides derived from cytosolic proteins, the pathway of MHC class I presentation is often called the *cytosolic* or *endogenous pathway*. HLAs also have a role in disease defense, reproduction cancer, in autoimmunity in transplant rejection, as antigens.

Literature:

- P. Parham and T. Ohta (1996). "Population Biology of Antigen Presentation by MHC class I Molecules.". *Science* **272**
- Erlich HA, Geraghty DE, Hansen JA, Hurley CK, Mach B, Mayr WR, Parham P, Petersdorf EW, Sasazuki T, Schreuder GM, Strominger JL, Svejgaard A, Terasaki PI, and Trowsdale J. (2005). "Nomenclature for factors of the HLA System, 2004.". *Tissue antigens* **65**: 301-369
- Noble J, Valdes A, Bugawan T, Apple R, Thomson G, Erlich H (2002). "The HLA class I A locus affects susceptibility to type 1 diabetes.". *Hum Immunol* **63** (8): 657-64

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 3.2 Stand: 01/22

 **Product Data Sheet**





Provitra AG
Charité Campus Mitte

Charitéplatz 1
10117 Berlin

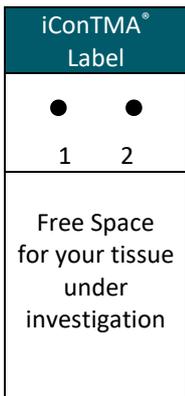
tel +49.30.450 578 358
fax +49.30.450 578 919

sales@provitro.de
www.provitro.de

Human Tissue Microarray - iCon (internal control) TMA[®] CD3

REF / Cat.-No.: 402 5127

Lot: iC



spot 1: positive
spot 2: negative

Technical Information:

- Spot diameter: 1.5 mm
- Fixation in 4% paraformaldehyde in PBS
- Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus.
- Tissue type validated by immunohistochemistry. For details please contact our customer service.



For Handling Instruction please see our iCon[®] TMA Product Sheet or contact our customer service.

Antibody / Marker description:

The human CD3 antigen is present on mature human T cells, thymocytes, and a subset of NK cells. CD3 is associated with the T cell receptor (TCR) and is responsible for its signal transduction. The CD3 antigen is a complex of five invariable chains. The CD3 antibody recognizes all T cells, i.e. it reacts with 70–80% of human peripheral blood lymphocytes and with 65–85% of all thymocytes.

Literature:

- Stefanovua, Saville, Peters et al.: "HIV infection--induced posttranslational modification of T cell signaling molecules associated with disease progression." In: **The Journal of clinical investigation**, Vol. 98, Issue 6, pp. 1290-7, 1996
- Brdicka, Imrich, Angelisovua et al.: "Non-T cell activation linker (NTAL): a transmembrane adaptor protein involved in immunoreceptor signaling." In: **The Journal of experimental medicine**, Vol. 196, Issue 12, pp. 1617-26, 2002
- Mason, Cordell, Brown et al.: "Detection of T cells in paraffin wax embedded tissue using antibodies against a peptide sequence from the CD3 antigen." In: **Journal of clinical pathology**, Vol. 42, Issue 11, pp. 1194-200, 1990
- Campana, Thompson, Amlot et al.: "The cytoplasmic expression of CD3 antigens in normal and malignant cells of the T lymphoid lineage." In: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 138, Issue 2, pp. 648-55, 1987

FOR INTERNAL QUALITY CONTROL AND IVD CALIBRATION ONLY.

Intended for any human or animal in vitro diagnostic use.

Version: 1.2 Stand: 01/22

 **Product Data Sheet**





iCon[®] TMA Tissue Microarray (TMA) for internal quality control

PRODUCT DESCRIPTION

iCon[®] TMA are an ideal tool for internal quality control of immunohistological in vitro diagnostics. The slides contain a specific positive and negative tissue spots providing enough space to add your tissue under investigation. The specificity of the immunoreaction can be determined, and the reactivity can be scored by comparing your sample with the iCon[®] TMA spots, i.e., it serves for quality control and/or calibration of the specific antibody test kit used. In Standard the iCon[®] TMA spots are located directly under the label area of the Superfrost[®] Plus slide to allow adding your tissue under investigation to the slide.

Take care: To get another area/spot orientation on the slide or different slide material (e.g., for some special staining techniques in staining automates using capillary effects) please contact our customer support in advance.

For specific details please see our LOT dependent product data sheet.

PRODUCT QUALITY CONTROL

iCon[®] TMA manufacturing is conducted by certificated and skilful technologists using SOP (standard operating procedure) by use of regularly checked instruments and top-quality materials.

- Correct tissue sampling, area mapping and target tissue core punching using standardised and strict protocol supervised by certificated and examined pathologists
- Consistent labelling (batch number) during manufacturing process to secure retrace ability
- Examination of the first and each following 50th TMA block serial section by independent certificated pathologists following standard protocol
- Quality Control guarantees spot existence at min.70% area level
- provistro is certified according to ISO 9001:2015 and EN ISO 13485:2016
-

DATA SHEET INFORMATION

Detailed pathological and clinical information on supplied batch specific data sheet

Technical Information:

- Spot diameter and orientation. **Preferring a special construction please contact our customer service in advance.**
- Tissue Pretreatment: Fixation in 4% paraformaldehyde in PBS, Paraffin embedded
- Slide Material: Standard: Superfrost[®] Plus. **Preferring other slides please contact our customer service in advance.**
- Tissue type validation

HANDLING INSTRUCTION

This product is supposed to be used in a laboratory environment by trained technical personal. Be aware that increased mechanical stress during iCon[®] TMA slide treatment may cause dislodging of spots! Do not touch the tissue material at all. All wash solutions and reagents should be applied gently to the slide.

Optional: Adding your tissue under investigation to the slide:

- Add your tissue under investigation on the free area of the slide.
- Take care not to remove the iCon[®] TMA spots by mechanical stress or dipping the iCon[®] TMA spots area into the water bath.

Pre-treatment of iCon[®] TMA slide for IHC:

- Incubate the slide over night at 37-58°C
- Remove paraffin wax carefully (standard protocols of descending alcohol sequence) and rehydrate
- Unmask if necessary (follow the instruction in the datasheet of your application kit / antibody specifications)

Staining Kit:

- Each commercially available staining kit for Formalin Fixed Paraffin embedded tissue. Please follow the instructions in the Kit

Storage:

We recommend storing the iCon[®] TMA slides in its original packaging at room temperature, in the dark and dry to maintain the antigenicity of iCon[®] TMA until the expiry date (see outer packaging label).

To get more detailed information please contact us.

FOR INTERNAL QUALITY CONTROL AND IVD CALLIBRATION ONLY.

Intended for any human in vitro diagnostic use.



Symbol description: - Expiry Date; Read Manual Instruction/Product sheet before using this product



iCon[®] TMA (Tissue-Microarrays) für die interne Qualitätskontrolle

PRODUKTBEschREIBUNG

iCon[®] TMA sind ein ideales Werkzeug für die interne Qualitätskontrolle der Immunhistologie im Rahmen der In-Vitro-Diagnostik. Die Objektträger verfügen über spezifisch positive und negative Gewebeslots und bieten ausreichend Raum zum Aufziehen Ihrer Gewebeprobe. Die Spezifität der Immunreaktion lässt sich bestimmen und die Beurteilung des Reaktionsvermögens erfolgt durch den direkten Vergleich Ihrer Probe mit denen der iCon[®] TMA-Slots. Sie eignen sich so zur Qualitätskontrolle und/oder Kalibrierung des jeweils verwendeten Antikörper-Testkits. Standardmäßig sind die iCon[®] TMA-Slots direkt unter dem Label der Superfrost[®] Plus-Objektträger aufgebracht, damit Sie Ihre Gewebeprobe auf die Objektträger aufziehen können.

Achtung: Falls Sie eine andere Gewebeschnitt/Spotanordnung bzw. einen anderen Objektträger (z. B. für besondere Verfahren in Färbearmaturen, die die Kapillarwirkung ausnutzen) vorziehen, wenden Sie sich bitte an unseren Kundendienst.

Nähere Angaben können Sie auch unserem chargenspezifischen Produktdatenblatt entnehmen.

PRODUKTQUALITÄTSKONTROLLE

iCon[®] TMA werden von qualifizierten und versierten Mitarbeitern in Übereinstimmung mit Standard-Arbeitsanweisungen (SOP) unter Nutzung regelmäßig gewarteter Instrumente und hochwertiger Materialien hergestellt:

- Korrekte Entnahme der Gewebeprobe, Auswahl der Geweberegion und Ausstanzen des Gewebezylinders gemäß einem standardisierten und strengen Protokoll, das von zertifizierten und zugelassenen Pathologen überwacht wird
- Einheitliche Kennzeichnung (Chargennummer) während der Herstellung zur Sicherung der Rückverfolgbarkeit
- Untersuchung des ersten und danach jedes 50. Schnitts aus dem Gewebeblock durch zertifizierte Pathologen gemäß einem Standardprotokoll
- Qualitätskontrolle garantiert einen hohen Gewebeanteil in den jeweiligen Slots (mind. 70 % im ausgewählten Bereich)
- provitro ist zertifiziert gemäß ISO 9001:2015 und EN ISO 13485:2016

HINWEISE ZUM DATENBLATT

Das im Lieferumfang enthaltene chargenspezifische Datenblatt enthält wichtige pathologische und klinische Hinweise.

Technische Hinweise:

- Durchmesser/Anordnung der Slots: **Bei besonderen Anforderungen wenden Sie sich bitte an unseren Kundendienst.**
- Gewebevorbehandlung: Fixierung in 4 %-iger Paraformaldehydlösung in phosphatgepufferter Kochsalzlösung (PBS), Einbettung in Paraffin
- Objektträger: standardmäßig Superfrost[®] Plus. **Wenn Sie einen anderen Objektträger bevorzugen, wenden Sie sich bitte an unseren Kundendienst.**
- Überprüfung des Gewebetyps

NUTZUNGSHINWEISE

Das Produkt ist für die Verwendung durch qualifiziertes technisches Laborpersonal bestimmt. Beachten Sie, dass eine erhöhte mechanische Belastung beim Umgang mit den iCon[®] TMA-Objektträgern zur Ablösung der Gewebeslots führen kann! Berühren Sie unter keinen Umständen das Gewebematerial! Tragen Sie alle Waschlösungen und Reagenzien vorsichtig auf den Objektträger auf!

Aufziehen Ihrer Gewebeprobe (optional möglich):

- Ziehen Sie Ihre Gewebeprobe im freien Bereich des Objektträgers auf.
- Achten Sie darauf, dass sich die iCon[®] TMA-Gewebeslots durch mechanische Belastung bzw. beim Eintauchen ins Wasserbad nicht ablösen.

Vorbehandlung des iCon[®] TMA-Objektträgers für die Immunohistochemie:

- Inkubieren Sie den Objektträger über Nacht bei 37–58 °C.
- Entfernen Sie das Paraffin (Standardprotokolle für absteigende Alkoholreihe) und rehydratisieren Sie das Gewebe.
- Demaskieren Sie bei Bedarf die Antigene (vgl. Anweisungen im Datenblatt des Anwendungskits/Antikörper-Testkits).

Färbekit:

- Jedes gebrauchsfertige Färbekit für Formalin-fixiertes Paraffin-eingebettetes Gewebe. Bitte folgen Sie den im Färbekit angegebenen Anweisungen.

Lagerung:

Wir empfehlen, die iCon[®] TMA-Objektträger in der Originalverpackung an einem dunklen und trockenen Ort bei Zimmertemperatur aufzubewahren, um ihre Antigenität bis zum Verfallsdatum zu erhalten (siehe Umverpackung).

Für weitere Informationen stehen wir Ihnen gern zu Verfügung.

NUR FÜR DIE INTERNE QUALITÄTSKONTROLLE UND DIE IVD-KALIBRIERUNG ZU VERWENDEN!

Bestimmt für die humanmedizinische In-Vitro-Diagnostik (IVD).



Symbolerklärung:  - Verfallsdatum;  Vor der Verwendung des Produkts Produktblatt/Bedienungsanleitung sorgfältig durchlesen.

primary cell cultures

human endothelial cells	157
human chondrocytes	179
human osteoblasts	181
human fibroblasts	183
human keratinocytes	187
human melanocytes	191
human myocytes	193
human epithelial cells	209
human mesenchymial stem cells	221
miscellaneous mammalian cells	223

Human umbilical vein endothelial cells, (HUVEC), vital

Cat.-No.: 111 0111 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HUVEC

1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis).
2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C.
3. Prepare fresh medium (please observe provitro's medium product instructions).
4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid.
5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place.
6. The cells are ready for sub-culturing after reaching 75 % confluence.
7. Recommended seeding density of
8. HUVEC: > 6,000 cells per cm²

Description:

Following provitro's standard operating procedures, the HUVEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.

Proliferative capacity of HUVEC:

Provitro's HUVEC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited *in-vitro* lifespan. All HUVEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.

Quality control:

All HUVEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.

Warning note:

Concerning use of biological material:
Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Human umbilical vein endothelial cells (HUVEC), cryo

Cat.-No.: 121 0111 (500,000 cells / cryovial)

<p>Maintenance of HUVEC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HUVEC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HUVEC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HUVEC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HUVEC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HUVEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HUVEC:</p> <p>Provitro's HUVEC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HUVEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HUVEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human umbilical artery endothelial cells, (HUAEC), vital

Cat.-No.: 111 0112 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HUAEC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of 8. HUAEC: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HUAEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HUAEC:
Provitro's HUAEC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HUAEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HUAEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human umbilical artery endothelial cells (HUAEC), cryo

Cat.-No.: 121 0112 (500,000 cells / cryovial)

Maintenance of HUAEC Check the cryovial for signs of damage during dispatch. Since the cryopreserved HUAEC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).
Thawing of cryopreserved HUAEC: <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HUAEC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HUAEC: > 6,000 cells per cm²
Description: Following provitro's standard operating procedures, the HUAEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HUAEC: Provitro's HUAEC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HUAEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control: All HUAEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note: Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human umbilical vein endothelial cells, pooled (HUVEC-p), vital

Cat.-No.: 111 0113 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HUVEC-p
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of 8. HUVEC-p: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HUVEC-P cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HUVEC-p:
Provitro's HUVEC-p cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HUVEC-P batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HUVEC-p cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human umbilical vein endothelial cells, pooled (HUVEC-p), cryo

Cat.-No.: 121 0113 (500,000 cells / cryovial)

Maintenance of HUVEC-p
Check the cryovial for signs of damage during dispatch. Since the cryopreserved HUVEC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).
Thawing of cryopreserved HUVEC-p:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HUVEC-p suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HUVEC-p: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HUVEC-p cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HUVEC-p:
Provistro's HUVEC-p cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HUVEC-p batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HUVEC-p cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provistro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human saphenous vein endothelial cells, (HSVEC), vital

Cat.-No.: 111 0121 (subconfluent proliferating cells / 25 cm² flask)

<p>Maintenance of HSVEC</p> <ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HSVEC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HSVEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HSVEC:</p> <p>Provitro's HSVEC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HSVEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HSVEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human saphenous vein endothelial cells (HSVEC), cryo

Cat.-No.: 121 0121 (500,000 cells / cryovial)

<p>Maintenance of HSVEC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HSVEC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HSVEC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HSVEC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HSVEC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HSVEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HSVEC:</p> <p>Provitro's HSVEC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HSVEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HSVEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human coronary artery endothelial cells, (HCAEC), vital

Cat.-No.: 111 0131 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HCAEC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of 8. HCAEC: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HCAEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HCAEC:
Provitro's HCAEC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HCAEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HCAEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human coronary artery endothelial cells (HCAEC), cryo

Cat.-No.: 121 0131 (500,000 cells / cryovial)

<p>Maintenance of HCAEC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HCAEC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HCAEC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HCAEC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HCAEC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HCAEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HCAEC:</p> <p>Provitro's HCAEC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HCAEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HCAEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human pulmonary artery endothelial cells, (HPAEC), vital

Cat.-No.: 111 0132 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HPAEC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of 8. HPAEC: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HPAEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HPAEC:
Provitro's HPAEC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HPAEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HPAEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human pulmonary artery endothelial cells (HPAEC), cryo

Cat.-No.: 121 0132 (500,000 cells / cryovial)

Maintenance of HPAEC
Check the cryovial for signs of damage during dispatch. Since the cryopreserved HPAEC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).
Thawing of cryopreserved HPAEC:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HPAEC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HPAEC: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HPAEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HPAEC:
Provitro's HPAEC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HPAEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HPAEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human aortic endothelial cells, (HAOEC), vital

Cat.-No.: 111 0151 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HAOEC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of 8. HAOEC: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HAOEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HAOEC:
Provitro's HAOEC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HAOEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HAOEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human aortic endothelial cells (HAOEC), cryo

Cat.-No.: 121 0151 (500,000 cells / cryovial)

<p>Maintenance of HAOEC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HAOEC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HAOEC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HAOEC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HAOEC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HAOEC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HAOEC:</p> <p>Provitro's HAOEC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HAOEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HAOEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human microvascular endothelial cells, foreskin (HMVEC-F), vital

Cat.-No.: 111 0141 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HMVEC-F
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh microvascular endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of 8. HMVEC-F: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HMVEC-F cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HMVEC-F:
Provitro's HMVEC-F cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMVEC-F batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HMVEC-F cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human microvascular endothelial cells, foreskin (HMVEC-F), cryo

Cat.-No.: 121 0141 (500,000 cells / cryovial)

Maintenance of HMVEC-F
Check the cryovial for signs of damage during dispatch. Since the cryopreserved HMVEC-F arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).
Thawing of cryopreserved HMVEC-F:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of microvascular endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's microvascular endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HMVEC-F suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of loosing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HMVEC-F: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HMVEC-F cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HMVEC-F:
Provitro's HMVEC-F cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMVEC-F batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HMVEC-F cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human microvascular endothelial cells, dermis, juvenile (HMVEC-Dj), vital

Cat.-No.: 111 0142 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HMVEC-Dj
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh microvascular endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of 8. HMVEC-Dj: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HMVEC-Dj cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HMVEC-Dj:
Provitro's HMVEC-Dj cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMVEC-Dj batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HMVEC-Dj cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human microvascular endothelial cells, dermis, juvenile (HMVEC-Dj), cryo Cat.-No.: 121 0142 (500,000 cells / cryovial)

Maintenance of HMVEC-Dj
Check the cryovial for signs of damage during dispatch. Since the cryopreserved HMVEC-Dj arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).
Thawing of cryopreserved HMVEC-Dj:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of microvascular endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's microvascular endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HMVEC-Dj suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HMVEC-Dj: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HMVEC-Dj cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HMVEC-Dj:
Provitro's HMVEC-Dj cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMVEC-Dj batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HMVEC-Dj cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human microvascular endothelial cells, dermis, adult (HMVEC-Da), vital

Cat.-No.: 111 0143 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HMVEC-Da
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell “islands” should be visible on the flask bottom. Determine the cell density by estimating the “confluence” in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator’s temperature of 37°C. 3. Prepare fresh medium (please observe provitro’s medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh microvascular endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of 8. HMVEC-Da: > 6,000 cells per cm²
Description:
Following provitro’s standard operating procedures, the HMVEC-Da cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HMVEC-Da:
Provitro’s HMVEC-Da cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMVEC-Da batches are tested by provitro for their proliferative capacity using provitro’s culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HMVEC-Da cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro’s primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human microvascular endothelial cells, dermis, adult

(HMVEC-Da), cryo Cat.-No.: 121 0143 (500,000 cells / cryovial)

Maintenance of HMVEC-Da
<p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HMVEC-Da arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
Thawing of cryopreserved HMVEC-Da:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of microvascular endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's microvascular endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HMVEC-Da suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HMVEC-Da: > 6,000 cells per cm²
Description:
<p>Following provitro's standard operating procedures, the HMVEC-Da cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
Proliferative capacity of HMVEC-Da:
<p>Provitro's HMVEC-Da cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMVEC-Da batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
Quality control:
<p>All HMVEC-Da cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
Warning note:
<p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
In vitro laboratory use only.
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human microvascular endothelial cells, lung (HMVEC-L), vital

Cat.-No.: 111 0144 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HMVEC-L
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell “islands” should be visible on the flask bottom. Determine the cell density by estimating the “confluence” in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator’s temperature of 37°C. 3. Prepare fresh medium (please observe provitro’s medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh microvascular endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of 8. HMVEC-L: > 6,000 cells per cm²
Description:
Following provitro’s standard operating procedures, the HMVEC-L cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HMVEC-L:
Provitro’s HMVEC-L cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMVEC-L batches are tested by provitro for their proliferative capacity using provitro’s culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HMVEC-L cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro’s primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human microvascular endothelial cells, lung

(HMVEC-L), cryo Cat.-No.: 121 0144 (500,000 cells / cryovial)

<p>Maintenance of HMVEC-L</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HMVEC-L arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HMVEC-L:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of microvascular endothelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's microvascular endothelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HMVEC-L suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of loosing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HMVEC-L: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HMVEC-L cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HMVEC-L:</p> <p>Provitro's HMVEC-L cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMVEC-L batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HMVEC-L cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human chondrocytes (HCHON), vital

Cat.-No.: 111 0211 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HCHON
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh chondrocyte growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HCHON: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HCHON cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HCHON:
Provitro's HCHON cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HCHON batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HCHON cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human chondrocytes (HCHON), cryo

Cat.-No.: 121 0211 (500,000 cells / cryovial)

<p>Maintenance of HCHON</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HCHON arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HCHON:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of chondrocyte growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's chondrocyte growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HCHON suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the chondrocyte growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HCHON: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HCHON cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HCHON:</p> <p>Provitro's HCHON cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HCHON batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HCHON cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human osteoblasts (HOB), vital

Cat.-No.: 111 0311 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HOB
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh osteoblast growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HOB: > 2,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HOB cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HOB:
Provitro's HOB cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HOB batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HOB cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human osteoblasts (HOB), cryo

Cat.-No.: 121 0311 (500,000 cells / cryovial)

<p>Maintenance of HOB</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HOB arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HOB:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of osteoblast growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's osteoblast growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HOB suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the osteoblast growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HOB: > 2,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HOB cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HOB:</p> <p>Provitro's HOB cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HOB batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HOB cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human fibroblasts, dermis (HFIB-D), vital

Cat.-No.: 111 0411 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HFIB-D
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh fibroblast growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HFIB-D: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HFIB-D cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HFIB-D:
Provitro's HFIB-D cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HFIB-D batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HFIB-D cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human fibroblasts, dermis (HFIB-D), cryo

Cat.-No.: 121 0411 (500,000 cells / cryovial)

<p>Maintenance of HFIB-D</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HFIB-D arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HFIB-D:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of fibroblast growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's fibroblast growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HFIB-D suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the fibroblast growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HFIB-D: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HFIB-D cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HFIB-D:</p> <p>Provitro's HFIB-D cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HFIB-D batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HFIB-D cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human fibroblasts, gingiva (HFIB-G), vital

Cat.-No.: 111 0412 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HFIB-G
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh fibroblast growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HFIB-G: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HFIB-G cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HFIB-G:
Provitro's HFIB-G cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HFIB-G batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HFIB-G cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human fibroblasts, gingiva (HFIB-G), cryo

Cat.-No.: 121 0412 (500,000 cells / cryovial)

<p>Maintenance of HFIB-G</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HFIB-G arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HFIB-G:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of fibroblast growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's fibroblast growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HFIB-G suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the fibroblast growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HFIB-G: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HFIB-G cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HFIB-G:</p> <p>Provitro's HFIB-G cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HFIB-G batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HFIB-G cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human keratinocytes, dermis (HKER-D), vital

Cat.-No.: 111 0512 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HKER-D
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh keratinocyte growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HKER-D: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HKER-D cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HKER-D:
Provitro's HKER-D cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HKER-D batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HKER-D cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human keratinocytes, dermis (HKER-D), cryo

Cat.-No.: 121 0512 (500,000 cells / cryovial)

<p>Maintenance of HKER-D</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HKER-D arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HKER-D:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of keratinocyte growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's keratinocyte growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HKER-D suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the keratinocyte growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HKER-D: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HKER-D cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HKER-D:</p> <p>Provitro's HKER-D cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HKER-D batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HKER-D cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human keratinocytes, foreskin (HKER-F), vital

Cat.-No.: 111 0511 (subconfluent proliferating cells / 25 cm² flask)

<p>Maintenance of HKER-F</p> <ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell “islands” should be visible on the flask bottom. Determine the cell density by estimating the “confluence” in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator’s temperature of 37°C. 3. Prepare fresh medium (please observe provitro’s medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh keratinocyte growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HKER-F: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro’s standard operating procedures, the HKER-F cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HKER-F:</p> <p>Provitro’s HKER-F cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HKER-F batches are tested by provitro for their proliferative capacity using provitro’s culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HKER-F cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro’s primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human keratinocytes, foreskin (HKER-F), cryo

Cat.-No.: 121 0511 (500,000 cells / cryovial)

Maintenance of HKER-F
Check the cryovial for signs of damage during dispatch. Since the cryopreserved HKER-F arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).
Thawing of cryopreserved HKER-F:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of keratinocyte growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's keratinocyte growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HKER-F suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the keratinocyte growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HKER-F: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HKER-F cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HKER-F:
Provitro's HKER-F cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HKER-F batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HKER-F cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human melanocytes, foreskin (HMEL-F), vital

Cat.-No.: 111 0522 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HMEL-F
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh melanocyte growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HMEL-F: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HMEL-F cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HMEL-F:
Provitro's HMEL-F cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMEL-F batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HMEL-F cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human melanocytes, foreskin (HMEL-F), cryo

Cat.-No.: 121 0522 (500,000 cells / cryovial)

<p>Maintenance of HMEL-F</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HMEL-F arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HMEL-F:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of melanocyte growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's melanocyte growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HMEL-F suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the melanocyte growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HMEL-F: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HMEL-F cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HMEL-F:</p> <p>Provitro's HMEL-F cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMEL-F batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HMEL-F cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human umbilical artery smooth muscle cells, (HUASMC), vital

Cat.-No.: 111 0611 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HUASMC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh smooth muscle cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HUASMC: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HUASMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HUASMC:
Provitro's HUASMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HUASMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HUASMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human umbilical artery smooth muscle cells (HUASMC), cryo

Cat.-No.: 121 0611 (500,000 cells / cryovial)

<p>Maintenance of HUASMC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HUASMC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HUASMC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of smooth muscle cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's smooth muscle cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HUASMC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HUASMC: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HUASMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HUASMC:</p> <p>Provitro's HUASMC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HUASMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HUASMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human coronary artery smooth muscle cells, (HCASMC), vital

Cat.-No.: 111 0612 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HCASMC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh smooth muscle cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HCASMC: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HCASMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HCASMC:
Provitro's HCASMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HCASMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HCASMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human coronary artery smooth muscle cells (HCASMC), cryo

Cat.-No.: 121 0612 (500,000 cells / cryovial)

Maintenance of HCASMC
<p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HCASMC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
Thawing of cryopreserved HCASMC:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of smooth muscle cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's smooth muscle cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HCASMC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HCASMC: > 4,000 cells per cm²
Description:
<p>Following provitro's standard operating procedures, the HCASMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
Proliferative capacity of HCASMC:
<p>Provitro's HCASMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HCASMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
Quality control:
<p>All HCASMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
Warning note:
<p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
In vitro laboratory use only.
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human coronary artery smooth muscle cells, (HPASMC), vital

Cat.-No.: 111 0613 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HPASMC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh smooth muscle cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HPASMC: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HPASMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HPASMC:
Provitro's HPASMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HPASMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HPASMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human pulmonary artery smooth muscle cells (HPASMC), cryo

Cat.-No.: 121 0613 (500,000 cells / cryovial)

<p>Maintenance of HPASMC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HPASMC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HPASMC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of smooth muscle cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's smooth muscle cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HPASMC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HPASMC: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HPASMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HPASMC:</p> <p>Provitro's HPASMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HPASMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HPASMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human aortic smooth muscle cells, (HAOSMC), vital

Cat.-No.: 111 0614 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HAOSMC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh smooth muscle cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HAOSMC: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HAOSMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HAOSMC:
Provitro's HAOSMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HAOSMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HAOSMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human aortic smooth muscle cells (HAOSMC), cryo

Cat.-No.: 121 0614 (500,000 cells / cryovial)

Maintenance of HAOSMC
<p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HAOSMC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
Thawing of cryopreserved HAOSMC:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of smooth muscle cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's smooth muscle cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HAOSMC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HAOSMC: > 4,000 cells per cm²
Description:
<p>Following provitro's standard operating procedures, the HAOSMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
Proliferative capacity of HAOSMC:
<p>Provitro's HAOSMC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HAOSMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
Quality control:
<p>All HAOSMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
Warning note:
<p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
In vitro laboratory use only.
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human urothelial smooth muscle cells, (HUSMC), vital

Cat.-No.: 111 0631 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HUSMC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh smooth muscle cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HUSMC: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HUSMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HUSMC:
Provitro's HUSMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HUSMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HUSMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human urothelial smooth muscle cells (HUSMC), cryo

Cat.-No.: 121 0631 (500,000 cells / cryovial)

<p>Maintenance of HUSMC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HUSMC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HUSMC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of smooth muscle cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's smooth muscle cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HUSMC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HUSMC: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HUSMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HUSMC:</p> <p>Provitro's HUSMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HUSMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HUSMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human bronchial smooth muscle cells, (HBSMC), vital

Cat.-No.: 111 0632 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HBSMC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh smooth muscle cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HBSMC: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HBSMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HBSMC:
Provitro's HBSMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HBSMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HBSMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human bronchial smooth muscle cells (HBSMC), cryo

Cat.-No.: 121 0632 (500,000 cells / cryovial)

<p>Maintenance of HBSMC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HBSMC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HBSMC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of smooth muscle cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's smooth muscle cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HBSMC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HBSMC: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HBSMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HBSMC:</p> <p>Provitro's HBSMC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HBSMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HBSMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human tracheal smooth muscle cells, (HTSMC), vital

Cat.-No.: 111 0633 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HTSMC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh smooth muscle cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HTSMC: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HTSMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HTSMC:
Provitro's HTSMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HTSMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HTSMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human tracheal smooth muscle cells (HTSMC), cryo

Cat.-No.: 121 0633 (500,000 cells / cryovial)

<p>Maintenance of HTSMC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HTSMC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HTSMC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of smooth muscle cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's smooth muscle cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HTSMC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HTSMC: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HTSMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HTSMC:</p> <p>Provitro's HTSMC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HTSMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HTSMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human skeletal muscle cells, (HSKMC), vital

Cat.-No.: 111 0691 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HSKMC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh skeletal muscle cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HSKMC: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HSKMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HSKMC:
Provitro's HSKMC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HSKMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HSKMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human skeletal muscle cells (HSKMC), cryo

Cat.-No.: 121 0691 (500,000 cells / cryovial)

<p>Maintenance of HSKMC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HSKMC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HSKMC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of skeletal muscle cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's skeletal muscle cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HSKMC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the skeletal muscle cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HSKMC: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HSKMC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HSKMC:</p> <p>Provitro's HSKMC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HSKMC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HSKMC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human nasal epithelial cells, (HNEPC), vital

Cat.-No.: 111 0711 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HNEPC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh epithelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HNEPC: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HNEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HNEPC:
Provitro's HNEPC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HNEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HNEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human nasal epithelial cells (HNEPC), cryo

Cat.-No.: 121 0711 (500,000 cells / cryovial)

Maintenance of HNEPC
Check the cryovial for signs of damage during dispatch. Since the cryopreserved HNEPC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).
Thawing of cryopreserved HNEPC:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of epithelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's epithelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HNEPC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the epithelial cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HNEPC: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HNEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HNEPC:
Provitro's HNEPC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HNEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HNEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human bronchial epithelial cells, (HBEPC), vital

Cat.-No.: 111 0712 (subconfluent proliferating cells / 25 cm² flask)

<p>Maintenance of HBEPC</p> <ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh epithelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HBEPC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HBEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HBEPC:</p> <p>Provitro's HBEPC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HBEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HBEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human bronchial epithelial cells (HBEPC), cryo

Cat.-No.: 121 0712 (500,000 cells / cryovial)

<p>Maintenance of HBEPC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HBEPC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HBEPC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of epithelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's epithelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HBEPC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the epithelial cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HBEPC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HBEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HBEPC:</p> <p>Provitro's HBEPC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HBEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HBEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human tracheal epithelial cells, (HTEPC), vital

Cat.-No.: 111 0713 (subconfluent proliferating cells / 25 cm² flask)

<p>Maintenance of HTEPC</p> <ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh epithelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HTEPC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HTEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HTEPC:</p> <p>Provitro's HTEPC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HTEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HTEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human tracheal epithelial cells (HTEPC), cryo

Cat.-No.: 121 0713 (500,000 cells / cryovial)

<p>Maintenance of HTEPC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HTEPC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HTEPC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of epithelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's epithelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HTEPC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the epithelial cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HTEPC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HTEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HTEPC:</p> <p>Provitro's HTEPC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HTEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HTEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human small airway epithelial cells, (HSAEPC), vital

Cat.-No.: 111 0714 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HSAEPC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh epithelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HSAEPC: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HSAEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HSAEPC:
Provitro's HSAEPC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HSAEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HSAEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human small airway epithelial cells (HSAEPC), cryo

Cat.-No.: 121 0714 (500,000 cells / cryovial)

Maintenance of HSAEPC
Check the cryovial for signs of damage during dispatch. Since the cryopreserved HSAEPC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).
Thawing of cryopreserved HSAEPC:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of epithelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's epithelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HSAEPC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of loosing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the epithelial cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HSAEPC: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HSAEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HSAEPC:
Provitro's HSAEPC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HSAEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HSAEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Human urothelial epithelial cells, (HUEPC), vital

Cat.-No.: 111 0721 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of HTEPC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh epithelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HTEPC: > 6,000 cells per cm²
Description:
<p>Following provitro's standard operating procedures, the HTEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
Proliferative capacity of HTEPC:
<p>Provitro's HTEPC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HTEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
Quality control:
<p>All HTEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
Warning note:
<p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
In vitro laboratory use only.
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human urothelial epithelial cells (HUEPC), cryo

Cat.-No.: 121 0721 (500,000 cells / cryovial)

<p>Maintenance of HUEPC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HUEPC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HUEPC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of epithelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's epithelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HUEPC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the epithelial cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HUEPC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HUEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HUEPC:</p> <p>Provitro's HUEPC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HUEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HUEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human mammary epithelial cells, (HMEPC), vital

Cat.-No.: 111 0731 (subconfluent proliferating cells / 25 cm² flask)

<p>Maintenance of HMEPC</p> <ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh epithelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HMEPC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HMEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HMEPC:</p> <p>Provitro's HMEPC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HMEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human mammary epithelial cells (HMEPC), cryo

Cat.-No.: 121 0731 (500,000 cells / cryovial)

<p>Maintenance of HMEPC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved HMEPC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved HMEPC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of epithelial cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's epithelial cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HMEPC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the epithelial cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HMEPC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HMEPC cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HMEPC:</p> <p>Provitro's HMEPC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMEPC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HMEPC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human mesenchymal stem cells, bone marrow (HMSC-bm), vital

Cat.-No.: 111 0911 (subconfluent proliferating cells / 25 cm² flask)

<p>Maintenance of HMSC-bm</p> <ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh mesenchymal stem cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of HMSC-bm: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the HMSC-bm cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of HMSC-bm</p> <p>Provitro's HMSC-bm cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMSC-bm batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All HMSC-bm cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Human mesenchymal stem cells, bone marrow (HMSC-bm), cryo

Cat.-No.: 121 0911 (500,000 cells / cryovial)

Maintenance of HMSC-bm
Check the cryovial for signs of damage during dispatch. Since the cryopreserved HMSC-bm arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).
Thawing of cryopreserved HMSC-bm:
<ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of mesenchymal stem cell growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's mesenchymal stem cell growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of HMSC-bm suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the mesenchymal stem cell growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of HMSC-bm: > 4,000 cells per cm²
Description:
Following provitro's standard operating procedures, the HMSC-bm cultures are isolated from human tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of HMSC-BM:
Provistro's HMSC-bm cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All HMSC-bm batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All HMSC-bm cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provistro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Bovine aortic endothelial cells (BAEC), vital

Cat.-No.: 112 0133 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of BAEC
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh endothelial cell growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of BAEC: > 6,000 cells per cm²
Description:
Following provitro's standard operating procedures, the BAEC cultures are isolated from bovine tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of BAEC:
Provitro's BAEC cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All BAEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All BAEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Bovine aortic endothelial cells (BAEC), cryo

Cat.-No.: 122 0133 (500,000 cells / cryovial)

<p>Maintenance of BAEC</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved BAEC arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved BAEC:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of endothelial cellgrowth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's endothelial cellgrowth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of BAEC suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the endothelial cellgrowth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of BAEC: > 6,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the BAEC cultures are isolated from bovine tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of BAEC:</p> <p>Provitro's BAEC cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All BAEC batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All BAEC cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Bovine chondrocytes (BCHON), vital

Cat.-No.: 112 0211 (subconfluent proliferating cells / 25 cm² flask)

<p>Maintenance of BCHON</p> <ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell “islands” should be visible on the flask bottom. Determine the cell density by estimating the “confluence” in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator’s temperature of 37°C. 3. Prepare fresh medium (please observe provitro’s medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh chondrocyte growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of BCHON: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro’s standard operating procedures, the BCHON cultures are isolated from bovine tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of BCHON:</p> <p>Provitro’s BCHON cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All BCHON batches are tested by provitro for their proliferative capacity using provitro’s culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All BCHON cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro’s primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Bovine chondrocytes (BCHON), cryo

Cat.-No.: 122 0211 (500,000 cells / cryovial)

<p>Maintenance of BCHON</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved BCHON arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved BCHON:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of chondrocyte growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's chondrocyte growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of BCHON suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the chondrocyte growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of BCHON: > 4,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the BCHON cultures are isolated from bovine tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of BCHON:</p> <p>Provitro's BCHON cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All BCHON batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All BCHON cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Ovine osteoblasts (OOB), vital

Cat.-No.: 113 0311 (subconfluent proliferating cells / 25 cm² flask)

Maintenance of OOB
<ol style="list-style-type: none"> 1. Check the proliferating culture for signs of damage during dispatch (e.g. cell layer detached from the culture flask, atypical morphology). Under the microscope, many cell "islands" should be visible on the flask bottom. Determine the cell density by estimating the "confluence" in %. Note that there are always some loose cells (e.g. during mitosis). 2. Incubate the sealed flask 4 hours in a steam saturated incubator with 5 % (V/V) CO₂ to reach the incubator's temperature of 37°C. 3. Prepare fresh medium (please observe provitro's medium product instructions). 4. Having transferred the flask into a laminar flow cabinet, decontaminate the tube lid with 70 % ethanol and wait until the alcohol has evaporated before opening the tube. Do not touch the tube opening with fingers. Remove the medium using a pipette without touching the cell monolayer. Replace the transport medium with 5 ml of pre-warmed fresh osteoblast growth medium. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck before closing it with the screw lid. 5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lid on the culture flask by half a turn only to allow gas exchanges to take place. 6. The cells are ready for sub-culturing after reaching 75 % confluence. 7. Recommended seeding density of OOB: > 2,000 cells per cm²
Description:
Following provitro's standard operating procedures, the OOB cultures are isolated from ovine tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.
Proliferative capacity of OOB:
Provitro's OOB cultures are derived from original tissue (in vivo state) using careful methods. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All OOB batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.
Quality control:
All OOB cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.
Warning note:
Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.
In vitro laboratory use only.
Not intended for any human or animal diagnostic or therapeutic use.

Ovine osteoblasts (OOB), cryo

Cat.-No.: 123 0311 (500,000 cells / cryovial)

<p>Maintenance of OOB</p> <p>Check the cryovial for signs of damage during dispatch. Since the cryopreserved OOB arrived on dry ice, they have to be transferred immediately to a deep freezer (-80°C) for a storage time of up to one week or to be thawed according to the procedure stated below. For In the case of longer storage, transfer the vial directly to liquid nitrogen (-196°C).</p>
<p>Thawing of cryopreserved OOB:</p> <ol style="list-style-type: none"> 1. Transfer the cryovial straight to a water bath with a temperature of 37°C. To achieve a rapid thawing, gently stir the cryovial repeatedly. Few seconds before thawing is completed transfer the vial into a laminar flow hood. Decontaminate the outer surface of the cryovial, and proceed immediately with the following steps under sterile conditions. 2. Within in a laminar flow hood, transfer aseptically the thawed cell suspension into a 15 ml centrifuge tube. Add 10 ml of osteoblast growth medium, seal the tube with its screw cap, and centrifuge it at 250xg for 5 min. 3. Remove aseptically the supernatant, and re-suspend the cell pellet in 10 ml of provitro's osteoblast growth medium using a serological pipette. Check cell number and viability. 4. Transfer the entire volume of OOB suspension into two 25 cm² culture flasks (5 ml each). The advantage of using two 25 cm² flasks instead of one larger flask is that it helps to reduce the risk of losing all cells. So, if you experience difficulties in passaging the first 25 cm² flask, there is still another flask left for further use. In order to prevent contamination make sure that there are no traces of medium left on the inner/outer part of the flask neck. 5. Place the cell culture flasks in an incubator at 37°C, steam saturated and 5 % (V/V) CO₂. Close the screw lids on each culture flask by half a turn only to allow gas exchanges to take place. 6. Change the osteoblast growth medium after the first 24 hrs to remove unattached cells, then every 48-72hrs. Feed the cells only with culture medium that has been warmed up. 7. The cells are ready for sub-culturing having reached a confluence of 75 %. If the cell layer is allowed to grow too dense they will suffer irreversible contact inhibition leading to ceased proliferation. For subculturing, use the reagents recommended in the accompanying analysis certificate, only. 8. Recommended seeding density of OOB: > 2,000 cells per cm²
<p>Description:</p> <p>Following provitro's standard operating procedures, the OOB cultures are isolated from ovine tissue, then transferred into a primary cell culture, and finally aliquoted and frozen.</p>
<p>Proliferative capacity of OOB:</p> <p>Provitro's OOB cultures are derived from original tissue (in vivo state) using careful methods,. They are not transformed or mutated and have a limited <i>in-vitro</i> lifespan. All OOB batches are tested by provitro for their proliferative capacity using provitro's culture reagents as outlined in the accompanying certificate of analysis.</p>
<p>Quality control:</p> <p>All OOB cultures from provitro are subject to comprehensive quality tests, summarized in the accompanying certificate of analysis.</p>
<p>Warning note:</p> <p>Concerning use of biological material: Provitro's primary cell cultures are of human or animal origin, and no known test procedures can ensure the total absence of infectious agents. All products should therefore be handled following safety precautions as if they were infectious.</p>
<p>In vitro laboratory use only.</p>
<p>Not intended for any human or animal diagnostic or therapeutic use.</p>

culture media

endothelial cell growth media	230
chondrocyte cell growth media	256
osteoblast cell growth media	262
fibroblast growth media	266
keratinocyte growth media	272
melanocyte growth media	274
smooth muscle cell growth media	277
skeletal muscle cell growth and differentiation media	285
epithelial cell growth media	291
mesenchymal stem cell media	297
cell culture handling	311

Endothelial cell proliferation medium, basal

Cat.-Nr.: 200 0001

contains of:

Basal media	Supplements
200 0001 500 ml Endothelial cell proliferation medium, basal	-

Maintenance of endothelial cell proliferation medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro endothelial cell proliferation medium, complete is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered a basal medium and is suitable for culturing Provitro human endothelial cells **after adding optional available essential supplements**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented endothelial cell proliferation medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell proliferation h medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell proliferation medium, phenol red free, basal

Cat.-Nr.: 200 0001-prf

contains of:

Basal media	Supplements
2000001-prf 500 ml Endothelial cell proliferation medium, basal, phenol red free	-

Maintenance of endothelial cell proliferation medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro endothelial cell proliferation medium, complete is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered a basal medium and is suitable for culturing Provitro human endothelial cells **after adding optional available essential supplements**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented endothelial cell proliferation medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell proliferation h medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell proliferation medium, FCS

Cat.-Nr.: 201 0001

contains of:

Basal media		Supplements	
200 0001	500 ml Endothelial cell proliferation medium, basal	218 0001	Endothelial cell proliferation medium Supplement-Mix, FCS
		236 0350	Antibiotics (optional)

Maintenance of endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro endothelial cell proliferation medium is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered as a basal medium and is suitable for culturing Provitro human endothelial cells after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented endothelial cell proliferation medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell proliferation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell proliferation medium, phenol red free, FCS

Cat.-Nr.: 201 0001-prf

contains of:

Basal media	Supplements
200 0001-prf 500 ml Endothelial cell proliferation medium, basal, phenol red free	218 0001 Endothelial cell proliferation medium Supplement-Mix, FCS 236 0350 Antibiotics (optional)

Maintenance of endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro endothelial cell proliferation medium is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered as a basal medium and is suitable for culturing Provitro human endothelial cells after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented endothelial cell proliferation medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell proliferation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell proliferation medium, FCS-kit

Cat.-Nr.: 211 0001

contains of:

Basal media		Supplements	
200 0001	500 ml Endothelial cell proliferation medium, basal	222 1000	L-Glutamine
		231 3500	FCS (foetal calf serum)
		226 0500	Heparin
		244 0500	human rec. EGF (epidermal growth factor)
		245 0250	human rec. bFGF (basic fibroblast growth factor)
		241 0025	human rec. VEGF
		242 0500	human rec. Long R3 IGF-1
		223 0005	Ascorbic acid
		224 0010	Hydrocortisone
		236 0350	Antibiotics (optional)

Maintenance of endothelial cell proliferation medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro endothelial cell proliferation medium is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered as a basal medium and is suitable for culturing Provitro human endothelial cells after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented endothelial cell proliferation medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell proliferation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell proliferation medium, phenol red free

FCS-kit-prf

Cat.-Nr.: 211 0001-prf

contains of:

Basal media	Supplements
2000001-prf 500 ml Endothelial cell proliferation medium, basal, phenol red free	222 1000 L-Glutamine 231 3500 FCS (foetal calf serum) 226 0500 Heparin 244 0500 human rec. EGF (epidermal growth factor) 245 0250 human rec. bFGF (basic fibroblast growth factor) 241 0025 human rec. VEGF 242 0500 human rec. Long R3 IGF-1 223 0005 Ascorbic acid 224 0010 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of endothelial cell proliferation medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro endothelial cell proliferation medium is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered as a basal medium and is suitable for culturing Provitro human endothelial cells after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented endothelial cell proliferation medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell proliferation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell growth medium, FCS, advanced

Cat.-Nr.: 201 1101

contains of:

Basal media		Supplements	
200 0101	500 ml Endothelial cell growth medium, basal	218 1101	Endothelial cell growth Supplement-Mix, FCS, advanced
		236 0350	Antibiotics (optional)

Maintenance of endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro endothelial cell growth medium, advanced is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered as a basal medium and is suitable for culturing Provitro human endothelial cells after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell growth medium, FCS, advanced, phenol red free

Cat.-Nr.: 201 1101-prf

contains of:

Basal media		Supplements	
2000101-prf	500 ml Endothelial cell growth medium, basal, phenol red free	218 1101	Endothelial cell growth Supplement-Mix, FCS, advanced
		236 0350	Antibiotics (optional)

Maintenance of endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro endothelial cell growth medium, advanced is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered as a basal medium and is suitable for culturing Provitro human endothelial cells after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell growth medium, FCS-kit, advanced

Cat.-Nr.: 211 1101

contains of:

Basal media		Supplements	
200 0101	500 ml Endothelial cell growth medium, basal	222 1000	L-Glutamine
		231 1000	FCS (foetal calf serum)
		226 1125	Heparin
		244 0250	human rec. EGF (epidermal growth factor)
		245 0500	human rec. bFGF (basic fibroblast growth factor)
		241 0025	human rec. VEGF
		242 1000	human rec. Long R3 IGF-1
		223 0005	Ascorbic acid
		224 0010	Hydrocortisone
		236 0350	Antibiotics (optional)

Maintenance of endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro endothelial cell growth medium, advanced is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered as a basal medium and is suitable for culturing Provitro human endothelial cells after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell growth medium, FCS-kit, advanced, prf

Cat.-Nr.: 211 1101-prf (phenol red free)

contains of:

Basal media	Supplements
2000101-prf 500 ml Endothelial cell growth medium, basal, phenol red free	222 1000 L-Glutamine 231 1000 FCS (foetal calf serum) 226 1125 Heparin 244 0250 human rec. EGF (epidermal growth factor) 245 0500 human rec. bFGF (basic fibroblast growth factor) 241 0025 human rec. VEGF 242 1000 human rec. Long R3 IGF-1 223 0005 Ascorbic acid 224 0010 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro endothelial cell growth medium, advanced is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered as a basal medium and is suitable for culturing Provitro human endothelial cells after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell growth medium, HuS-kit, advanced

Cat.-Nr.: 212 1101

contains of:

Basal media	Supplements
200 0101 500 ml Endothelial cell growth medium, basal	222 1000 L-Glutamine
	232 1000 HuS (human serum AB)
	226 1125 Heparin
	244 0250 human rec. EGF (epidermal growth factor)
	245 0500 human rec. bFGF (basic fibroblast growth factor)
	241 0025 human rec. VEGF
	242 1000 human rec. Long R3 IGF-1
	223 0005 Ascorbic acid
	224 0010 Hydrocortisone
	236 0350 Antibiotics (optional)

Maintenance of endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro endothelial cell growth medium, advanced is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered as a basal medium and is suitable for culturing Provitro human endothelial cells after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Endothelial cell growth medium, HuS-kit, advanced, phenol red free

Cat.-Nr.: 212 1101-prf

contains of:

Basal media		Supplements	
2000101-prf	500 ml Endothelial cell growth medium, basal, phenol red free	222 1000	L-Glutamine
		232 1000	HuS (human serum AB)
		226 1125	Heparin
		244 0250	human rec. EGF (epidermal growth factor)
		245 0500	human rec. bFGF (basic fibroblast growth factor)
		241 0025	human rec. VEGF
		242 1000	human rec. Long R3 IGF-1
		223 0005	Ascorbic acid
		224 0010	Hydrocortisone
		236 0350	Antibiotics (optional)

Maintenance of endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro endothelial cell growth medium, advanced is a sterile liquid culture medium for culturing endothelial cells. The medium is delivered as a basal medium and is suitable for culturing Provitro human endothelial cells after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, basal

Cat.-Nr.: 200 0102

contains of:

Basal media	Supplements
200 0102 500 ml Microvascular endothelial cell growth medium, basal	-

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro microvascular endothelial cell growth medium is a sterile liquid culture medium for culturing human microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing HMVEC **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, basal, phenol red free

Cat.-Nr.: 200 0102-prf

contains of:

Basal media	Supplements
200 0102-prf 500 ml Microvascular endothelial cell growth medium, basal, phenol red free	-

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro microvascular endothelial cell growth medium is a sterile liquid culture medium for culturing human microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing HMVEC **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, FCS

Cat.-Nr.: 201 0102 (old Cat-Nr.: 201 0112)

contains of:

Basal media		Supplements	
200 0102	500 ml Microvascular endothelial cell growth medium, basal	218 0102	Microvascular endothelial cell growth Supplement-Mix, FCS
		236 0350	Antibiotics (optional)

Maintenance of microvasclar endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro microvascular endothelial cell growth medium, complete is a sterile liquid culture medium for culturing microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, phenol red free, FCS

Cat.-Nr.: 201 0102-prf

contains of:

Basal media		Supplements	
2000102-prf	500 ml Microvascular endothelial cell growth medium, basal, phenol red free	218 0102	Microvascular endothelial cell growth Supplement-Mix, FCS
		236 0350	Antibiotics (optional)

Maintenance of microvasclar endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provistro microvascular endothelial cell growth medium, complete is a sterile liquid culture medium for culturing microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provistro HMVEC after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provistro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, FCS-kit

Cat.-Nr.: 211 0102

contains of:

Basal media		Supplements	
200 0102	500 ml Microvascular endothelial cell growth medium, basal	222 1000	L-Glutamine
		231 2500	FCS (foetal calf serum)
		233 0600	ECGS/H (endothelial cell growth supplement / Heparin)
		243 0050	human rec. EGF (epidermal growth factor)
		224 0050	Hydrocortisone
		236 0350	Antibiotics (optional)

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**

Characteristics:

The Provitro microvascular endothelial cell growth medium is a sterile liquid culture medium for culturing human microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, phenol red free, FCS-kit

Cat.-Nr.: 211 0102-prf

contains of:

Basal media	Supplements
2000102-prf 500 ml Microvascular endothelial cell growth medium, basal, phenol red free	222 1000 L-Glutamine 231 2500 FCS (foetal calf serum) 233 0600 ECGS/H (endothelial cell growth supplement / Heparin) 243 0050 human rec. EGF (epidermal growth factor) 224 0050 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**

Characteristics:

The Provitro microvascular endothelial cell growth medium is a sterile liquid culture medium for culturing human microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, HuS-kit

Cat.-Nr.: 212 0102

Basal media		Supplements	
200 0102	500 ml Microvascular endothelial cell growth medium, basal	222 1000	L-Glutamine
		232 2500	HuS (human serum AB)
		233 0600	ECGS/H (endothelial cell growth supplement / Heparin)
		243 0050	human rec. EGF (epidermal growth factor)
		224 0050	Hydrocortisone
		236 0350	Antibiotics (optional)

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**

Characteristics:

The Provitro microvascular endothelial cell growth medium is a sterile liquid culture medium for culturing human microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, phenol red free, HuS-kit

Cat.-Nr.: 212 0102-prf

Basal media	Supplements
2000102-prf 500 ml Microvascular endothelial cell growth medium, basal, phenol red free	222 1000 L-Glutamine 232 2500 HuS (human serum AB) 233 0600 ECGS/H (endothelial cell growth supplement / Heparin) 243 0050 human rec. EGF (epidermal growth factor) 224 0050 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**

Characteristics:

The Provitro microvascular endothelial cell growth medium is a sterile liquid culture medium for culturing human microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, FCS, advanced

Cat.-Nr.: 201 1102

contains of:

Basal media		Supplements	
200 0102	500 ml Microvascular endothelial cell growth medium, basal	218 1102	Microvascular endothelial cell growth Supplement-Mix, FCS, advanced
		236 0350	Antibiotics (optional)

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro microvascular endothelial cell growth medium, advanced is a sterile liquid culture medium for culturing human microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, FCS, advanced, phenol red free

Cat.-Nr.: 201 1102-prf

contains of:

Basal media		Supplements	
2000102-prf	500 ml Microvascular endothelial cell growth medium, basal, phenol red free	218 1102	Microvascular endothelial cell growth Supplement-Mix, FCS, advanced
		236 0350	Antibiotics (optional)

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro microvascular endothelial cell growth medium, advanced is a sterile liquid culture medium for culturing human microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, FCS-kit, advanced

Cat.-Nr.: 211 1102

contains of:

Basal media		Supplements	
200 0102	500 ml Microvascular endothelial cell growth medium, basal	222 1000	L-Glutamine
		231 2500	FCS (foetal calf serum)
		244 0250	human rec. EGF (epidermal growth factor)
		245 0500	human rec. bFGF (basic fibroblast growth factor)
		242 1000	human rec. Long R3 IGF-1
		223 0005	Ascorbic acid
		241 0025	human rec. VEGF
		224 0010	Hydrocortisone
		236 0350	Antibiotics (optional)

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro microvascular endothelial cell growth medium, advanced is a sterile liquid culture medium for culturing microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, advanced, phenol red free, FCS-kit

Cat.-Nr.: 211 1102-prf

contains of:

Basal media	Supplements
200 0102-prf 500 ml Microvascular endothelial cell growth medium, basal, phenol red free	222 1000 L-Glutamine 231 2500 FCS (foetal calf serum) 244 0250 human rec. EGF (epidermal growth factor) 245 0500 human rec. bFGF (basic fibroblast growth factor) 242 1000 human rec. Long R3 IGF-1 223 0005 Ascorbic acid 241 0025 human rec. VEGF 224 0010 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro microvascular endothelial cell growth medium, advanced is a sterile liquid culture medium for culturing microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, HuS-kit, advanced

Cat.-Nr.: 212 1102

contains of:

Basal media		Supplements	
200 0102	500 ml Microvascular endothelial cell growth medium, basal	222 1000	L-Glutamine
		232 2500	HuS (human serum AB)
		244 0250	human rec. EGF (epidermal growth factor)
		245 0500	human rec. bFGF (basic fibroblast growth factor)
		242 1000	human rec. Long R3 IGF-1
		223 0005	Ascorbic acid
		241 0025	human rec. VEGF
		224 0050	Hydrocortisone
		236 0350	Antibiotics (optional)

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**

Characteristics:

The Provitro microvascular endothelial cell growth medium is a sterile liquid culture medium for culturing human microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Microvascular endothelial cell growth medium, HuS-kit, advanced, phenol red free

Cat.-Nr.: 212 1102-prf

contains of:

Basal media	Supplements
2000102-prf 500 ml Microvascular endothelial cell growth medium, basal, phenol red free	222 1000 L-Glutamine 232 2500 HuS (human serum AB) 244 0250 human rec. EGF (epidermal growth factor) 245 0500 human rec. bFGF (basic fibroblast growth factor) 242 1000 human rec. Long R3 IGF-1 223 0005 Ascorbic acid 241 0025 human rec. VEGF 224 0050 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of microvascular endothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**

Characteristics:

The Provitro microvascular endothelial cell growth medium is a sterile liquid culture medium for culturing human microvascular endothelial cells (HMVEC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMVEC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented microvascular endothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Chondrocyte growth medium, basal

Cat.-Nr.: 200 0201

contains of:

Basal media	Supplements
200 0201 500 ml Chondrocyte growth medium, basal	-

Maintenance of chondrocyte growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro chondrocyte growth medium is a sterile liquid culture medium for culturing human and bovine chondrocytes (HCHON / BCHON). The medium is delivered as a basal medium and is suitable for culturing HCHON **after adding optional available essential supplement components**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented chondrocyte growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's chondrocyte growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HCHON proliferating characteristics. The cells cultured in chondrocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Chondrocyte growth medium, basal, phenol red free

Cat.-Nr.: 200 0201-prf

contains of:

Basal media	Supplements
2000201-prf 500 ml Chondrocyte growth medium, basal, phenol red free	-

Maintenance of chondrocyte growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro chondrocyte growth medium is a sterile liquid culture medium for culturing human and bovine chondrocytes (HCHON / BCHON). The medium is delivered as a basal medium and is suitable for culturing HCHON **after adding optional available essential supplement components**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented chondrocyte growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's chondrocyte growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HCHON proliferating characteristics. The cells cultured in chondrocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Chondrocyte growth medium, basal, advanced

Cat.-Nr.: 200 1201

contains of:

Basal media	Supplements
200 1201 500 ml Chondrocyte growth medium, basal, advanced	-

Maintenance of chondrocyte growth medium, advanced:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro chondrocyte growth medium, advanced is a sterile liquid culture medium for culturing human and bovine chondrocytes (HCHON / BCHON). The medium is delivered as a basal medium and is suitable for culturing HCHON **after adding optional available essential supplements**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented chondrocyte growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's chondrocyte growth medium, advanced is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HCHON proliferating characteristics. The cells cultured in chondrocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Chondrocyte growth medium, FCS

Cat.-Nr.: 201 0201

contains of:

Basal media		Supplements	
200 0201	500 ml Chondrocyte growth medium, basal	218 0201	Chondrocyte growth Supplement-Mix, FCS
		236 0350	Antibiotics (optional)

Maintenance of chondrocyte growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro chondrocyte growth medium is a sterile liquid culture medium for culturing human and bovine chondrocytes (HCHON / BCHON). The medium is delivered as a basal medium and is suitable for culturing Provitro HCHON after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented chondrocyte growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's chondrocyte growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HCHON proliferating characteristics. The cells cultured in chondrocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Chondrocyte growth medium, FCS, phenol red free

Cat.-Nr.: 201 0201-prf

contains of:

Basal media	Supplements
2000201-prf 500 ml Chondrocyte growth medium, basal	218 0201 Chondrocyte growth Supplement-Mix, FCS 236 0350 Antibiotics (optional)

Maintenance of chondrocyte growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro chondrocyte growth medium is a sterile liquid culture medium for culturing human and bovine chondrocytes (HCHON / BCHON). The medium is delivered as a basal medium and is suitable for culturing Provitro HCHON after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented chondrocyte growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's chondrocyte growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HCHON proliferating characteristics. The cells cultured in chondrocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Chondrocyte growth medium, FCS, advanced

Cat.-Nr.: 201 1201

contains of:

Basal media		Supplements	
200 1201	500 ml Chondrocyte growth medium, basal, advanced	218 1201	Chondrocyte growth Supplement-Mix, FCS, advanced
		236 0350	Antibiotics (optional)

Maintenance of chondrocyte growth medium, advanced:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro chondrocyte growth medium, advanced is a sterile liquid culture medium for culturing human and bovine chondrocytes (HCHON / BCHON). The medium is delivered as a basal medium and is suitable for culturing Provitro HCHON after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented chondrocyte growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's chondrocyte growth medium, advanced is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HCHON proliferating characteristics. The cells cultured in chondrocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Osteoblast growth medium, basal

Cat.-Nr.: 200 0301

contains of:

Basal media	Supplements
200 0301 500 ml Osteoblast growth medium, basal	-

Take care: basal medium, requires further supplementation for cell culture of human osteoblasts !

Maintenance of osteoblast growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro osteoblast growth medium is a sterile liquid culture medium for culturing human osteoblasts (HOB). The medium is delivered as a basal medium **w/o Ca, Mg** and is suitable for culturing HOB **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 2,000 cells / cm² up to confluence (up to first cell contact). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented osteoblast growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's osteoblast growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HOB proliferating characteristics. The cells cultured in osteoblast growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Osteoblast growth medium, basal, advanced

Cat.-Nr.: 200 1301

contains of:

Basal media	Supplements
200 1301 500 ml Osteoblast growth medium, basal, advanced	-

Maintenance of osteoblast growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro osteoblast growth medium is a sterile liquid culture medium for culturing human osteoblasts (HOB). The medium is delivered as a basal medium **with Ca, Mg** and is suitable for culturing HOB **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 2,000 cells / cm² up to confluence (up to first cell contact). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented osteoblast growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's osteoblast growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HOB proliferating characteristics. The cells cultured in osteoblast growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Osteoblast growth medium, FCS

Cat.-Nr.: 201 0301

contains of:

Basal media		Supplements	
200 0301	500 ml Osteoblast growth medium, basal	218 0301	Osteoblast growth Supplement-Mix, FCS
		236 0350	Antibiotics (optional)

Maintenance of osteoblast growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro osteoblast growth medium is a sterile liquid culture medium for culturing human osteoblasts (HOB). The medium is delivered as a basal medium **w/o Ca, Mg** and is suitable for culturing Provitro HOB after adding the supplement mix components. The formulation is optimized for initial seeding of 2,000 cells / cm² up to confluence (up to first cell contact). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented osteoblast growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's osteoblast growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HOB proliferating characteristics. The cells cultured in osteoblast growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Osteoblast growth medium, FCS, advanced

Cat.-Nr.: 201 1301

contains of:

Basal media		Supplements	
200 1301	500 ml Osteoblast growth medium, basal advanced Differentiation Formulation	218 0301	Osteoblast growth Supplement-Mix, FCS advanced
		236 0350	Antibiotics (optional)

Maintenance of osteoblast growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro osteoblast growth medium is a sterile liquid culture medium for culturing human osteoblasts (HOB). The medium is delivered as a basal medium and is suitable for culturing Provitro HOB after adding the supplement mix components. The formulation is optimized for initial seeding of 2,000 cells / cm² up to confluence (up to first cell contact). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented osteoblast growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's osteoblast growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HOB proliferating characteristics. The cells cultured in osteoblast growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Provitro AG Charitéplatz 1 tel +49.30.450 578 358 sales@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 919 www.provitro.de

Fibroblast growth medium, basal

Cat.-Nr.: 200 0401

contains of:

Basal media	Supplements
200 0401 500 ml Fibroblast growth medium, basal	-

Maintenance of fibroblast growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro fibroblast growth medium is a sterile liquid culture medium for culturing human fibroblasts (HFIB). The medium is delivered as a basal medium and is suitable for culturing HFIB **after adding optional available essential supplement mix components**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented fibroblast growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's fibroblast growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HFIB proliferating characteristics. The cells cultured in fibroblast growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Fibroblast growth medium, basal, phenol red free

Cat.-Nr.: 200 0401 - prf

contains of:

Basal media		Supplements
200 0401-prf	500 ml Fibroblast growth medium, basal, phenol red free	-

Maintenance of fibroblast growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro fibroblast growth medium is a sterile liquid culture medium for culturing human fibroblasts (HFIB). The medium is delivered as a basal medium and is suitable for culturing HFIB **after adding optional available essential supplement mix components**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (**approx. 90 %**). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented fibroblast growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's fibroblast growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HFIB proliferating characteristics. The cells cultured in fibroblast growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Fibroblast growth medium, FCS

Cat.-Nr.: 201 0401

contains of:

Basal media		Supplements	
200 0401	500 ml Fibroblast growth medium, basal	218 0401	Fibroblast growth Supplement-Mix, FCS
		236 0350	Antibiotics (optional)

Maintenance of fibroblast growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro fibroblast growth medium is a sterile liquid culture medium for culturing human fibroblasts (HFIB). The medium is delivered as a basal medium and is suitable for culturing Provitro HFIB after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented fibroblast growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's fibroblast growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HFIB proliferating characteristics. The cells cultured in fibroblast growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Fibroblast growth medium, phenol red free, FCS

Cat.-Nr.: 201 0401-prf

contains of:

Basal media	Supplements
2000401-prf 500 ml Fibroblast growth medium, basal, phenol red free	218 0401 Fibroblast growth Supplement-Mix, FCS 236 0350 Antibiotics (optional)

Maintenance of fibroblast growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro fibroblast growth medium is a sterile liquid culture medium for culturing human fibroblasts (HFIB). The medium is delivered as a basal medium and is suitable for culturing Provitro HFIB after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented fibroblast growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's fibroblast growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HFIB proliferating characteristics. The cells cultured in fibroblast growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Defined fibroblast maintenance medium, serum-free

Cat.-Nr.: 203 0401

contains of:

Basal media		Supplements	
200 0403	500 ml Defined fibroblast maintenance medium, basal	219 0401	Fibroblast maintenance Supplement-Mix, serum-free
		236 0350	Antibiotics (optional)

Maintenance of defined fibroblast maintenance medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro defined fibroblast maintenance medium is a sterile liquid culture medium w/o serum for **maintenance culturing** of human fibroblasts (HFIB). The medium is delivered as a basal medium and is suitable for culturing Provitro HFIB after adding the supplement mix components. The formulation is optimized for initial seeding of 6,000 cells / cm². Feeder-layer, matrix substrates or other substances are not necessary. **We recommend using the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented defined fibroblast maintenance medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's defined fibroblast maintenance medium is thoroughly tested after each production. All components are tested in a stringent biological assay. The cells cultured in defined fibroblast maintenance medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Defined fibroblast maintenance medium, serum-free kit

Cat.-Nr.: 213 0401

contains of:

Basal media		Supplements	
200 0403	500 ml Defined fibroblast maintenance medium, basal	222 1000	L-Glutamine
		245 0050	human rec. bFGF (basic fibroblast growth factor)
		246 0250	human rec. Insulin
		236 0350	Antibiotics (optional)

Maintenance of defined fibroblast maintenance medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro defined fibroblast maintenance medium is a sterile liquid culture medium w/o serum for **maintenance culturing** of human fibroblasts (HFIB). The medium is delivered as a basal medium and is suitable for culturing Provitro HFIB after adding the supplement kit components. The formulation is optimized for initial seeding of 6,000 cells / cm². Feeder-layer, matrix substrates or other substances are not necessary. **We recommend using the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented defined fibroblast maintenance medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's defined fibroblast maintenance medium is thoroughly tested after each production. All components are tested in a stringent biological assay. The cells cultured in defined fibroblast maintenance medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Provitro AG Charitéplatz 1 tel +49.30.450 578 358 sales@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 919 www.provitro.de

Keratinocyte growth medium, basal

Cat.-Nr.: 200 0501

contains of:

Basal media	Supplements
200 0501 500 ml Keratinocyte growth medium, basal	-

Maintenance of keratinocyte growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro keratinocyte growth medium is a sterile liquid culture medium w/o serum for culturing human keratinocytes (HKER). The medium is delivered as a basal medium and is suitable for culturing HKER **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented keratinocyte growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's keratinocyte growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HKER proliferating characteristics. The cells cultured in keratinocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Keratinocyte growth medium, serum-free

Cat.-Nr.: 203 0501

contains of:

Basal media		Supplements	
200 0501	500 ml Keratinocyte growth medium, basal	238 0505	Keratinocyte growth medium Supplement Mix, serum free

Maintenance of keratinocyte growth medium:

Place the bottle of **basal medium** in the dark at **2°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro keratinocyte growth medium is a sterile liquid culture medium w/o serum for culturing human keratinocytes (HKER). The medium is delivered as a basal medium and is suitable for culturing Provitro HKER after adding the supplement mix. The formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented keratinocyte growth medium can be stored in the dark at 2°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's keratinocyte growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HKER proliferating characteristics. The cells cultured in keratinocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Melanocyte growth medium, basal

Cat.-Nr.: 200 0502

contains of:

Basal media	Supplements
200 0502 500 ml Melanocyte growth medium, basal	-

Maintenance of melanocyte growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro melanocyte growth medium is a sterile liquid culture medium w/o serum for culturing human melanocytes (HMEL). The medium is delivered as a basal medium and is suitable for culturing HMEL **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented melanocyte growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's melanocyte growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMEL proliferating characteristics. The cells cultured in melanocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Melanocyte growth medium, serum-free

Cat.-Nr.: 203 0502

contains of:

Basal media		Supplements	
200 0502	500 ml Melanocyte growth medium, basal	219 0502	Melanocyte growth Supplement-Mix, serum-free

Maintenance of melanocyte growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro melanocyte growth medium is a sterile liquid culture medium w/o serum for culturing human melanocytes (HMEL). The medium is delivered as a basal medium and is suitable for culturing Provitro HMEL after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented melanocyte growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's melanocyte growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMEL proliferating characteristics. The cells cultured in melanocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Melanocyte growth medium, serum-free kit

Cat.-Nr.: 213 0502

contains of:

Basal media		Supplements	
200 0502	500 ml Melanocyte growth medium, basal	222 1000	L-Glutamine
		234 2600	BPE
		245 0050	human rec. bFGF (basic fibroblast growth factor)
		224 0025	Hydrocortisone
		246 0250	human rec. Insulin
		235 0500	PMA
		236 0350	Antibiotics (optional)

Maintenance of melanocyte growth medium:

Place the bottle of **basal medium** in the dark at 4°C to 8°C immediately after delivery. Store the **supplements** at -20°C.

Characteristics:

The Provitro melanocyte growth medium is a sterile liquid culture medium w/o serum for culturing human melanocytes (HMEL). The medium is delivered as a basal medium and is suitable for culturing Provitro HMEL after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented melanocyte growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's melanocyte growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMEL proliferating characteristics. The cells cultured in melanocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Provitro AG Charitéplatz 1 tel +49.30.450 578 358 sales@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 919 www.provitro.de

Smooth muscle cell growth medium, basal

Cat.-Nr.: 200 0601

contains of:

Basal media	Supplements
200 0601 500 ml Smooth muscle cell growth medium, basal	-

Maintenance of smooth muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro smooth muscle cell growth medium is a sterile liquid culture medium for culturing human smooth muscle cells (HSMC). The medium is delivered as a basal medium and is suitable for culturing HSMC **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented smooth muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's smooth muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSMC proliferating characteristics. The cells cultured in smooth muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Smooth muscle cell growth medium, FCS

Cat.-Nr.: 201 0601

contains of:

Basal media		Supplements	
200 0601	500 ml Smooth muscle cell growth medium, basal	218 0601	Smooth muscle cell growth Supplement-Mix, FCS
		236 0350	Antibiotics (optional)

Maintenance of smooth muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro smooth muscle cell growth medium is a sterile liquid culture medium for culturing human smooth muscle cells (HSMC). The medium is delivered as a basal medium and is suitable for culturing Provitro HSMC after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented smooth muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's smooth muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSMC proliferating characteristics. The cells cultured in smooth muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Smooth muscle cell growth medium, FCS-kit

Cat.-Nr.: 211 0601

contains of:

Basal media		Supplements	
200 0601	500 ml Smooth muscle cell growth medium, basal	222 1000	L-Glutamine
		231 2500	FCS (foetal calf serum)
		243 0025	human rec. EGF (epidermal growth factor)
		245 0100	human rec. bFGF (basic fibroblast growth factor)
		246 0250	human rec. Insulin
		236 0350	Antibiotics (optional)

Maintenance of smooth muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro smooth muscle cell growth medium is a sterile liquid culture medium for culturing human smooth muscle cells (HSMC). The medium is delivered as a basal medium and is suitable for culturing Provitro HSMC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented smooth muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's smooth muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSMC proliferating characteristics. The cells cultured in smooth muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Smooth muscle cell growth medium, HuS-kit

Cat.-Nr.: 212 0601

contains of:

Basal media		Supplements	
200 0601	500 ml Smooth muscle cell growth medium, basal	222 1000	L-Glutamine
		232 2500	HuS (human serum AB)
		243 0025	human rec. EGF (epidermal growth factor)
		245 0100	human rec. bFGF (basic fibroblast growth factor)
		246 0250	human rec. Insulin
		236 0350	Antibiotics (optional)

Maintenance of smooth muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro smooth muscle cell growth medium is a sterile liquid culture medium for culturing human smooth muscle cells (HSMC). The medium is delivered as a basal medium and is suitable for culturing Provitro HSMC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented smooth muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's smooth muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSMC proliferating characteristics. The cells cultured in smooth muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Smooth muscle cell growth medium, basal, phenol red free (prf)

Cat.-Nr.: 200 0601 - prf

Maintenance of smooth muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro smooth muscle cell growth medium is a sterile liquid culture medium for culturing human smooth muscle cells (HSMC). The medium is delivered as a basal medium and is suitable for culturing HSMC after adding the optional available essential supplement kit components (Cat.No. 215 0601 or 2016 0601). The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use any antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented smooth muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's smooth muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSMC proliferating characteristics. The cells cultured in smooth muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Smooth muscle cell growth medium, phenol red free (prf) FCS

Cat.-Nr.: 201 0601 -prf

contains of:

Basal media		Supplements	
200 0601 -prf	500 ml Smooth muscle cell growth medium, phenol red free (prf),basal	218 0601	Smooth muscle cell growth Supplement-Mix, FCS
		236 0350	Antibiotics (optional)

Maintenance of smooth muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro smooth muscle cell growth medium is a sterile liquid culture medium for culturing human smooth muscle cells (HSMC). The medium is delivered as a basal medium (prf) and is suitable for culturing Provitro HSMC after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented smooth muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's smooth muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSMC proliferating characteristics. The cells cultured in smooth muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Smooth muscle cell growth medium, phenol red free, FCS-kit

Cat.-Nr.: 211 0601-prf

contains of:

Basal media	Supplements
2000601-prf 500 ml Smooth muscle cell growth medium, basal, phenol red free	222 1000 L-Glutamine 231 2500 FCS (foetal calf serum) 243 0025 human rec. EGF (epidermal growth factor) 245 0100 human rec. bFGF (basic fibroblast growth factor) 246 0250 human rec. Insulin 236 0350 Antibiotics (optional)

Maintenance of smooth muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro smooth muscle cell growth medium is a sterile liquid culture medium for culturing human smooth muscle cells (HSMC). The medium is delivered as a basal medium and is suitable for culturing Provitro HSMC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented smooth muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's smooth muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSMC proliferating characteristics. The cells cultured in smooth muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Smooth muscle cell growth medium, phenol red free, HuS-kit

Cat.-Nr.: 212 0601-prf

contains of:

Basal media	Supplements
2000601-prf 500 ml Smooth muscle cell growth medium, basal, phenol red free	222 1000 L-Glutamine 232 2500 HuS (human serum AB) 243 0025 human rec. EGF (epidermal growth factor) 245 0100 human rec. bFGF (basic fibroblast growth factor) 246 0250 human rec. Insulin 236 0350 Antibiotics (optional)

Maintenance of smooth muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro smooth muscle cell growth medium is a sterile liquid culture medium for culturing human smooth muscle cells (HSMC). The medium is delivered as a basal medium and is suitable for culturing Provitro HSMC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented smooth muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's smooth muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSMC proliferating characteristics. The cells cultured in smooth muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Provitro AG Charitéplatz 1 tel +49.30.450 578 358 sales@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 919 www.provitro.de

Skeletal muscle cell growth medium, basal

Cat.-Nr.: 200 0602

contains of:

Basal media	Supplements
200 0602 500 ml Skeletal muscle cell growth medium, basal	-

Maintenance of skeletal muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro skeletal muscle cell growth medium is a sterile liquid culture medium for culturing human skeletal muscle cells (HSKMC). The medium is delivered as a basal medium and is suitable for culturing HSKMC **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented skeletal muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's skeletal muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSKMC proliferating characteristics. The cells cultured in skeletal muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Skeletal muscle cell growth medium, FCS

Cat.-Nr.: 201 0602

contains of:

Basal media		Supplements	
200 0602	500 ml Skeletal muscle cell growth medium, basal	218 0602	Skeletal muscle cell growth Supplement-Mix, FCS
		236 0350	Antibiotics (optional)

Maintenance of skeletal muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro skeletal muscle cell growth medium is a sterile liquid culture medium for culturing human skeletal muscle cells (HSKMC). The medium is delivered as a basal medium and is suitable for culturing Provitro HSKMC after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented skeletal muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's skeletal muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSKMC proliferating characteristics. The cells cultured in skeletal muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Skeletal muscle cell growth medium, FCS-kit

Cat.-Nr.: 211 0602

contains of:

Basal media		Supplements	
200 0602	500 ml Skeletal muscle cell growth medium, basal	222 1000	L-Glutamine
		231 2500	FCS (foetal calf serum)
		237 2500	Fetuin
		244 0500	human rec. EGF (epidermal growth factor)
		245 0050	human rec. bFGF (basic fibroblast growth factor)
		246 0500	human rec. Insulin
		225 0020	Dexamethasone
		236 0350	Antibiotics (optional)

Maintenance of skeletal muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro skeletal muscle cell growth medium is a sterile liquid culture medium for culturing human skeletal muscle cells (HSKMC). The medium is delivered as a basal medium and is suitable for culturing Provitro HSKMC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented skeletal muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's skeletal muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSKMC proliferating characteristics. The cells cultured in skeletal muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Skeletal muscle cell growth medium, HuS-kit

Cat.-Nr.: 212 0602

contains of:

Basal media		Supplements	
200 0602	500 ml Skeletal muscle cell growth medium, basal	222 1000	L-Glutamine
		232 2500	HuS (human serum AB)
		237 2500	Fetuin
		244 0500	human rec. EGF (epidermal growth factor)
		245 0050	human rec. bFGF (basic fibroblast growth factor)
		246 0500	human rec. Insulin
		225 0020	Dexamethasone
		236 0350	Antibiotics (optional)

Maintenance of skeletal muscle cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro skeletal muscle cell growth medium is a sterile liquid culture medium for culturing human skeletal muscle cells (HSKMC). The medium is delivered as a basal medium and is suitable for culturing Provitro HSKMC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented skeletal muscle cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's skeletal muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSKMC proliferating characteristics. The cells cultured in skeletal muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Skeletal muscle cell differentiation medium, serum-free

Cat.-Nr.: 203 0603

contains of:

Basal media		Supplements	
200 0602	500 ml Skeletal muscle cell growth medium, basal	219 0603	Skeletal muscle cell differentiation Supplement-Kit, serum-free Contains of:
		222 1000	L-Glutamine
		246 0500	human rec. Insulin
		236 0350	Antibiotics (optional)

Maintenance of skeletal muscle cell differentiation medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro skeletal muscle cell differentiation medium is a sterile liquid culture medium w/o serum for culturing human skeletal muscle cells (HSKMC). The medium is delivered as a basal medium and is suitable for culturing Provitro HSKMC after adding the supplement mix components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented skeletal muscle cell differentiation medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's skeletal muscle cell differentiation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSKMC proliferating characteristics. The cells cultured in skeletal muscle cell differentiation medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Skeletal muscle cell differentiation medium, serum-free kit

Cat.-Nr.: 213 0603

contains of:

Basal media		Supplements	
200 0602	500 ml Skeletal muscle cell growth medium, basal	222 1000	L-Glutamine
		246 0500	human rec. Insulin
		236 0350	Antibiotics (optional)

Maintenance of skeletal muscle cell differentiation medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro skeletal muscle cell differentiation medium is a sterile liquid culture medium w/o serum for culturing human skeletal muscle cells (HSKMC). The medium is delivered as a basal medium and is suitable for culturing Provitro HSKMC after adding the supplement kit components. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented skeletal muscle cell differentiation medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's skeletal muscle cell differentiation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSKMC proliferating characteristics. The cells cultured in skeletal muscle cell differentiation medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Airway epithelial cell growth medium, basal

Cat.-Nr.: 200 0701

contains of:

Basal media	Supplements
200 0701 500 ml Airway epithelial cell growth medium, basal	-

Maintenance of airway epithelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro airway epithelial cell growth medium is a sterile liquid culture medium w/o serum for culturing human airway epithelial cells (HEPC). The medium is delivered as a basal medium and is suitable for culturing HEPC **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented airway epithelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's airway epithelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HEPC proliferating characteristics. The cells cultured in airway epithelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Airway epithelial cell growth medium, serum-free

Cat.-Nr.: 203 0701

contains of:

Basal media		Supplements	
200 0701	500 ml Airway epithelial cell growth medium, basal	238 0701	Airway epithelial cell growth supplement 1
		238 0702	Airway epithelial cell growth supplement 2
		238 0703	Airway epithelial cell growth supplement 3

Maintenance of airway epithelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro airway epithelial cell growth medium is a sterile liquid culture medium w/o serum for culturing human airway epithelial cells (HAEPC). The medium is delivered as a basal medium and is suitable for culturing Provitro HAEPCC after adding the 3 supplement mix components. The formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented airway epithelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

For passaging of cells use provitro Passage Kit 4 (Cat.-Nr.: 204 0004) only. Other cell detachment kits might lead to insufficient cell detachment and cell loss!

Quality control:

Provitro's airway epithelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HEPC proliferating characteristics. The cells cultured in airway epithelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Provitro AG Charitéplatz 1 tel +49.30.450 578 358 sales@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 919 www.provitro.de

Urothelial cell growth medium, basal

Cat.-Nr.: 200 0702

contains of:

Basal media	Supplements
200 0702 500 ml Urothelial cell growth medium, basal	-

Maintenance of urothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro urothelial cell growth medium is a sterile liquid culture medium w/o serum for culturing Human urothelial epithelial cells (HUEPC). The medium is delivered as a basal medium and is suitable for culturing HUEPC **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented urothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's urothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HUEPC proliferating characteristics. The cells cultured in urothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Urothelial cell growth medium, serum-free

Cat.-Nr.: 203 0702

contains of:

Basal media		Supplements	
200 0702	500 ml Urothelial cell growth medium, basal	238 0704	Urothelial cell growth supplement 1
		238 0705	Urothelial cell growth supplement 2
		238 0706	Urothelial cell growth supplement 3

Maintenance of urothelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro urothelial cell growth medium is a sterile liquid culture medium w/o serum for culturing Human urothelial epithelial cells (HUEPC). The medium is delivered as a basal medium and is suitable for culturing Provitro HUEPC after adding the 3 supplement components. The formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented urothelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's urothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HUEPC proliferating characteristics. The cells cultured in urothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Mammary epithelial cell growth medium, basal

Cat.-Nr.: 200 0703

contains of:

Basal media	Supplements
200 0703 500 ml Mammary epithelial cell growth medium, basal	-

Maintenance of mammary epithelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro mammary epithelial cell growth medium is a sterile liquid culture medium w/o serum for culturing human mammary epithelial cells (HMEPC). The medium is delivered as a basal medium and is suitable for culturing HMEPC **after adding the optional available essential supplement kit components**. The final formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented mammary epithelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's mammary epithelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMEPC proliferating characteristics. The cells cultured in mammary epithelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Mammary epithelial cell growth medium, serum-free

Cat.-Nr.: 203 0703

contains of:

Basal media		Supplements	
200 0703	500 ml Mammary epithelial cell growth medium, basal	219 0701	Mammary epithelial cell Supplement-Mix, serum-free
		236 0350	Antibiotics (optional)

Maintenance of mammary epithelial cell growth medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro mammary epithelial cell growth medium is a sterile liquid culture medium w/o serum for culturing human mammary epithelial cells (HMEPC). The medium is delivered as a basal medium and is suitable for culturing Provitro HMEPC after adding the supplement mix components. The formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented mammary epithelial cell growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's mammary epithelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMEPC proliferating characteristics. The cells cultured in mammary epithelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Provitro AG Charitéplatz 1 tel +49.30.450 578 358 sales@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 919 www.provitro.de

hMSC proliferation medium, basal

Cat.-Nr.: 200 0901

contains of:

Basal media	Supplements
200 0901 500 ml hMSC proliferation medium, basal	-

Maintenance of hMSC proliferation medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro hMSC proliferation medium is a sterile liquid culture medium for culturing human mesenchymal stem cells (hMSC). The medium is delivered as a basal medium and is suitable for culturing human mesenchymal stem cells **after adding optional available essential supplement mix components**. The final formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented hMSC proliferation medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's hMSC proliferation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for hMSC proliferating characteristics. The cells cultured in hMSC proliferation medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

hMSC proliferation medium, FCS

Cat.-Nr.: 201 0901

contains of:

Basal media		Supplements	
200 0901	500 ml hMSC proliferation medium, basal	218 0901	hMSC proliferation medium Supplement-Mix, FCS
		236 0350	Antibiotics (optional)

Maintenance of hMSC proliferation medium:

Place the bottle of **medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro hMSC proliferation medium is a sterile liquid culture medium for culturing human mesenchymal stem cells (hMSC). The medium is delivered as a basal medium and is suitable for culturing hMSC after adding the supplement mix components. The formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use any antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented hMSC proliferation medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's hMSC proliferation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for hMSC proliferating characteristics. The cells cultured in hMSC proliferation medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

hMSC proliferation medium, FCS-kit

Cat.-Nr.: 211 0901

contains of:

Basal media		Supplements	
200 0901	500 ml hMSC proliferation medium, basal	231 5000	FCS (foetal calf serum)
		221 1000	HEPES
		222 1001	L-Alanyl-L-Glutamine
		245 0100	human rec. bFGF (basic fibroblast growth factor)
		236 0350	Antibiotics (optional)

Maintenance of hMSC proliferation medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro hMSC proliferation growth medium is a sterile liquid culture medium for culturing human mesenchymal stem cells (hMSC). The medium is delivered as a basal medium and is suitable for culturing hMSC after adding the supplement kit components. The formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented hMSC proliferation growth medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's hMSC proliferation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for hMSC proliferating characteristics. The cells cultured in hMSC proliferation medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

hMSC chondrogenesis induction medium, basal

Cat.-Nr.: 200 0902

contains of:

Basal media	Supplements
200 0902 500 ml hMSC chondrogenesis induction medium, basal	-

Maintenance of hMSC chondrogenesis induction medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro hMSC chondrogenesis induction medium is a sterile liquid culture medium for inducing chondrogenic differentiation of human mesenchymal stem cells (hMSC). The medium is delivered as a basal medium and is suitable **after adding optional available essential supplement mix components**. The final formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented hMSC chondrogenesis induction medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's hMSC chondrogenesis induction medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for hMSC chondrogenesis induction characteristics. The cells cultured in hMSC chondrogenesis induction medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

hMSC chondrogenesis induction medium, serum-free kit

Cat.-Nr.: 213 0902

contains of:

Basal media		Supplements	
200 0902	500 ml hMSC chondrogenesis induction medium, basal +4°C	1x 221 1000	HEPES -20°C
		10x 238 0902	ITS +4°C
		10x 238 0903	Dexamethasone -20°C
		10x 238 0904	TGF-β-3 -20°C
		10x 238 0905	Sodium pyruvate -20°C
		10x 238 0906	Asorbic-acid-2-phosphate -20°C
		10x 238 0907	Proline -20°C
		1x 236 0350	Antibiotics (optional) -20°C

Maintenance of hMSC chondrogenesis induction medium:

Place the bottle of **medium** in the dark at **4°C to 8°C** immediately after delivery. Store the separate delivered **Supplements** at **-20°C** / **+4°C**. **Take care on the instructions on the Supplement vials!!!**

Characteristics:

The Provitro hMSC chondrogenesis induction medium is a sterile liquid culture medium for inducing chondrogenic differentiation of human mesenchymal stem cells (hMSC). The medium is delivered as a basal medium and is suitable for culturing hMSC after adding all the supplement mix components. The formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

After adding 10 ml HEPES and optional 3,5ml antibiotics to the hMSC chondrogenesis induction medium basal the media can be stored in the dark at 4°C to 8°C for up to 4 weeks. After adding the induction supplement components 1, 2 and 3 to the media, the media can be stored in the dark at 4°C to 8°C for up to 1 week. Therefore each aliquot contains enough volume to prepare 50 ml hMSC chondrogenesis induction media only. **To prepare 50 ml chondrogenesis inductions media add 500 µl ITS, 500 µl Dexamethasone, 500 µl Sodium pyruvate, 500 µl Asorbic-acid-2-phosphate and 500 µl Proline to 50 ml hMSC chondrogenesis induction medium, basal (already supplemented with HEPES). 500 µl TGF-β-3 must be added always fresh (see recommended application). Do not use the supplemented media for longer than one week (without TGF-β-3). Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.**

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's hMSC chondrogenesis induction medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for hMSC chondrogenesis induction characteristics. The cells cultured in hMSC chondrogenesis induction medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Recommended application of hMSC chondrogenesis induction medium

Completion of culture medium:

- First of all add 10 ml HEPES and optional 3.5 ml of antibiotics to 500 ml of basal media. Having added HEPES and antibiotics, the medium can be stored in the dark at 4°C to 8°C for up to 4 weeks.

1st option: Preparing 50 ml of chondrogenesis control media (CCM):

- Add to 50 ml basal media (being already supplemented with HEPES) one vial of ITS (500 µl), one vial of Dexamethasone (500 µl), one vial of Sodium pyruvate (500µl), one vial of Asorbic-acid-2-phosphate (500µl) and one vial of Proline (500 µl).

NOTE: Store the prepared chondrogenesis control media at 4°C to 8°C in the dark and do not use longer than 1 week!

2nd option: Preparing 50 ml of chondrogenesis induction media (CIM):

- Add one vial of TGF-β-3 (500 µl) to 50 ml of the control media (CCM) prepared before.

NOTE: Prepare the chondrogenesis induction medium (CIM) always fresh and use it within 12 hours! If you need less than 50 ml of chondrogenesis induction media (CIM) at one time, you may aliquot smaller volumes of chondrogenesis induction supplement 3. In general, one needs 10 µl of chondrogenesis induction supplement 3 to prepare 1 ml of chondrogenesis inductions media (CIM).

Culture protocol:

- First of all, estimate the total number of pellet cultures needed for your experiment. BEWARE: You will need $2.5 \cdot 10^5$ cells to form one chondrocyte pellet. You should always work in duplicates and maybe carry a negative control (using chondrogenesis control media instead of chondrogenesis induction media during the following culturing steps).
- After harvesting your precultured hMSC, transfer for each pellet $2.5 \cdot 10^5$ cells into a separate 15 ml polypropylene tube.
- Centrifuge the cells at 150xg for 5 minutes and discard the supernatant. Resuspend the cells in **500 µl of chondrogenesis control (CCM) or inductions media (CIM)**.
- Centrifuge the cells again at 150xg for 5 minutes and DO NOT aspirate the supernatant, and DO NOT resuspend the pellet!
- Loosen the cap of the tubes one half turn to allow gas exchange and incubate the tubes at 37°C, 5% CO₂ for 48 hours
- Meanwhile, the cells should have formed a spherical aggregate detached from the tube wall.
- Replace every 2-3 days 90% of the supernatant with 450 µl of the corresponding medium (CCM or CIM).
- Having replaced the media, gently flick the bottom of each tube to ensure the pellet is free floating, and do not forget to loosen the gap again before returning the tubes to the 37°C incubator
- Chondrogenic pellets and also the control pellets should be harvested after 28 days in culture.
- For frozen sectioning the pellets may be embedded in Tissue Tek. Thin sections of pellet cultures may be stained e.g. with markers specific for glycoproteins

hMSC osteogenesis induction medium, basal

Cat.-Nr.: 200 0903

contains of:

Basal media	Supplements
200 0903 500 ml hMSC osteogenesis induction medium, basal	-

Maintenance of hMSC osteogenesis induction medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro hMSC osteogenesis induction medium is a sterile liquid culture medium for inducing osteogenic differentiation of human mesenchymal stem cells (hMSC). The medium is delivered as a basal medium and is suitable **after adding optional available essential supplement mix components**. The final formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented hMSC osteogenesis induction medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's hMSC osteogenesis induction medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for hMSC osteogenesis induction characteristics. The cells cultured in hMSC osteogenesis induction medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

hMSC osteogenesis induction medium, FCS-kit

Cat.-Nr.: 211 0903

contains of:

Basal media (+4°C)		Supplements (-20°C)	
200 0903	500 ml hMSC osteogenesis induction medium, basal	1x 231 5000	FCS (foetal calf serum)
		1x 221 1000	HEPES
		1x 222 1001	L-Glutamine
		10x 238 0903	Dexamethasone
		10x 238 0908	Ascorbic-Acid-2-phosphate
		10x 238 0909	β-Glycerol-phosphate
		1x 236 0350	Antibiotics (optional)

Maintenance of hMSC osteogenesis induction medium:

Place the bottle of **medium** in the dark at **4°C to 8°C** immediately after delivery. Store the delivered **Supplements** at **-20°C**.

Characteristics:

The Provitro hMSC osteogenesis induction medium is a sterile liquid culture medium for inducing osteogenic differentiation of human mesenchymal stem cells (hMSC). The medium is delivered as a basal medium and is suitable for culturing hMSC after adding the supplement mix components. The formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Reconstitution, stability and storage:

After adding 50 ml FCS, 10 ml HEPES and 5 ml L-glutamine and optional 3,5 ml Antibiotics to the 500 ml hMSC osteogenesis induction medium basal the media can be stored in the dark at 4°C to 8°C for up to 4 weeks. **Take care:** After adding the Osteogenesis induction factor Dexamethasone, Ascorbic-Acid-2-phosphate and β-Glycerol-phosphate to the media, the media can be stored in the dark at 4°C to 8°C for up to 1 week. Therefore each aliquot contains enough volume to prepare 50 ml hMSC osteogenesis induction media only. To prepare 50 ml osteogenesis inductions media add 500 µl Dexamethasone, 500 µ Ascorbic-Acid-2-phosphate and 500 µ β-Glycerol-phosphate to 50 ml hMSC osteogenesis induction medium, basal (already supplemented with FCS, HEPES and L-Glutamine). Do not use the supplemented media for longer than one week. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's hMSC osteogenesis induction medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for hMSC osteogenesis induction characteristics. The cells cultured in hSMC osteogenesis induction medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Recommended application of hMSC osteogenesis induction medium

Completion of culture medium:

- First of all add 50 ml FCS, 10 ml HEPES, 5 ml L-Glutamine and optional 3.5 ml of antibiotics to 500 ml basal medium. Having added those supplements, the medium can be stored in the dark at 4°C to 8°C for up to 4 weeks.

Preparing 50 ml of osteogenesis induction medium:

- Add one vial of Dexamethasone (500 µl), one vial Ascorbic-Acid-2-phosphate (500 µl) and one vial β-Glycerol-phosphate (500 µl) to 50 ml basal media (the latter being already supplemented with HEPES, FCS, L-Glutamine).

NOTE: Store the prepared osteogenesis induction medium at 4°C to 8°C in the dark, and do not use longer than 1 week!

Culture protocol:

- After harvesting your pre-cultured hMSC, plate 5,000 cells/cm² in a 6 well-plate (1 well ~ 10 cm² = 5*10⁴ cells per well).
- Feed the cells every 2-3 days with hMSC proliferation media (e.g. provitro 201 0901) until the culture reaches 100 % confluence (approx. 5-7 days).
- Having 100% confluent hMSC culture change the media all 2-3 days with osteogenesis induction media and incubate the cells always at 37°C, 5 % CO₂.
- Possible negative controls will be fed always with osteogenesis induction media without the osteogenesis induction factor (that means basal media only supplemented with HEPES, FCS and L-Glutamine).
- After at least 28 days of culturing osteogenic structures can be detected e.g. with Von Kossa or Alkaline phosphatase staining.

hMSC adipogenesis induction medium, basal

Cat.-Nr.: 200 0904

contains of:

Basal media	Supplements
200 0904 500 ml hMSC adipogenesis induction medium, basal	-

Maintenance of hMSC adipogenesis induction medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro hMSC adipogenesis induction medium is a sterile liquid culture medium for inducing adipogenic differentiation of human mesenchymal stem cells (hMSC). The medium is delivered as a basal medium and is **suitable after adding optional available essential supplement mix components**. The final formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented hMSC adipogenesis induction medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's hMSC adipogenesis induction medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for hMSC adipogenesis induction characteristics. The cells cultured in hMSC adipogenesis induction medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

hMSC adipogenesis induction medium, FCS-kit

Cat.-Nr.: 211 0904

contains of:

Basal media		Supplements	
200 0904	500 ml hMSC adipogenesis induction medium, basal (+4°C)	1x 231 5000	FCS (foetal calf serum) (-20°C)
		1x 221 1000	HEPES (-20°C)
		1x 222 1001	L-Glutamine (-20°C)
		10x 225 0904	Dexamethasone (-20°C)
		10x 229 0904	Indomethacine (-20°C)
		10x 230 0904	3-Isobutyl-1-methyl-xanthine (-20°C)
		10x 246 0904	Insulin (-20°C)
		1x 236 0350	Antibiotics (optional) (-20°C)

Maintenance of hMSC adipogenesis induction medium:

Place the bottle of **medium** in the dark at **4°C to 8°C** immediately after delivery. Store the separate delivered **Supplements** at **-20°C**.

Characteristics:

The Provitro hMSC adipogenesis induction medium is a sterile liquid culture medium for inducing adipogenic differentiation of human mesenchymal stem cells (hMSC). The medium is delivered as a basal medium and is suitable for culturing hMSC after adding the supplement kit components. The formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

After adding 50 ml FCS, 10 ml HEPES and 5 ml L-Glutamine and optional 3,5 ml antibiotics to the 500 ml hMSC adipogenesis induction medium basal the media can be stored in the dark at 4°C to 8°C for up to 4 weeks. After adding the induction factor Dexamethasone, Indomethacine, 3-Isobutyl-1-methyl-xanthine and insulin to the media, the media can be stored in the dark at 4°C to 8°C for up to 1 week. Therefore each aliquot contains enough volume to prepare 50 mL hMSC adipogenesis induction media only. **To prepare 50 ml adipogenesis inductions media add 500 µl Dexamethasone, 500 µl Indomethacine, 500 µl 3-Isobutyl-1-methyl-xanthine and 500 µl Insulin to 50 mL hMSC adipogenesis induction medium, basal (already supplemented with FCS, HEPES and L-Glutamine). Do not use the supplemented media for longer than one week.** Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's hMSC adipogenesis induction medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for hMSC adipogenesis induction characteristics. The cells cultured in hMSC adipogenesis induction medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Recommended application of hMSC adipogenesis induction medium

Completion of culture medium:

- First of all add 50 ml FCS, 10 ml HEPES, 5 ml L-Glutamine and optional 3.5 ml of antibiotics to 500 ml basal medium. Having added those supplements, the medium can be stored in the dark at 4°C to 8°C for up to 4 weeks.

1st option: Preparing 50 ml of adipogenesis maintenance medium (AMM):

- Add one vial of Insulin (500 µl) to 50 ml basal media (the latter being already supplemented with HEPES, FCS, L-Glutamine).

NOTE: Store the prepared adipogenesis maintenance medium at 4°C to 8°C in the dark, and do not use longer than 1 week!

2nd option: Preparing 50 ml of adipogenesis induction medium (AIM):

- Add one vial of Insulin (500 µl), one vial of Dexamethasone (500 µl), one vial of Indomethacine (500 µl) and one vial of 3-Isobutyl-1-methyl-xanthine (500 µl) to 50 ml of basal medium (the latter being already supplemented with HEPES, FCS, L-Glutamine).

NOTE: Store the prepared adipogenesis inductions media at 4°C to 8°C in the dark and do not use longer than 1 week!

Culture protocol:

- After harvesting your pre-cultured hMSC, plate 5,000 cells/cm² in a 6 well-plate (1 well ~ 10 cm² = 5*10⁴ cells per well).
- Feed the cells every 2-3 days with hMSC proliferation media (e.g. provitro 201 0901) until the culture reaches 100 % confluence (approx. 5-7 days).
- Having 100% confluent hMSC culture, 3 cycles of inductions and maintenance follow:

Precultrue	1st cycle		2nd cycle		3rd cycle	
until 100% confluence	AIM 3 days	AMM 2 days	AIM 3 days	AMM 2 days	AIM 3 days	AMM 2 days

- Change the media all 3 or 2 days according to the above scheme with fresh adipogenesis induction media (**AIM**) or adipogenesis maintenance media (**AMM**), and incubate the cells always at 37°C, 5 % CO₂.
- Possible negative controls will be fed always with adipogenesis maintenance media (AMM).
- After 15 days of culturing the cells should show lipid vacuoles which can be detected e.g. with Oil Red O.

Cancer stem cell medium, basal

Cat.-Nr.: 200 1001

contains of:

Basal media	Supplements
200 1001 500 ml Cancer stem cell medium, basal	-

Maintenance of cancer stem cell medium:

Place the bottle of **basal medium** in the dark at **4°C to 8°C** immediately after delivery.

Characteristics:

The Provitro cancer stem cell medium is a sterile liquid culture medium for culturing human cancer stem cells. The medium is delivered as a basal medium and is suitable for culturing human cancer stem cells **after adding optional available essential supplement mix components**. The final formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary.

Stability and storage:

The supplemented cancer stem cell medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's cancer stem cell medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human cancer stem cell proliferating characteristics. The cells cultured in cancer stem cell medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Cancer stem cell medium, serum-free

Cat.-Nr.: 213 1001

contains of:

Basal media	Supplements
200 1001 500 ml Cancer stem cell medium, basal	222 1000 L-Glutamine 204 3100 BIT-100 Supplement 236 0350 Antibiotics (optional)

Maintenance of cancer stem cell medium:

Place the bottle of **medium** in the dark at **4°C to 8°C** immediately after delivery. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro cancer stem cell medium is a sterile liquid culture medium for culturing human cancer stem cells. The medium is delivered as a basal medium and is suitable for culturing human cancer stem cells after adding the supplement mix components. The formulation is optimized for initial seeding of 6,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use any antibiotic supplement for freshly isolated cells only.**

Stability and storage:

The supplemented cancer stem cell medium can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the medium over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). If only a part of the medium is to be used, remove this amount from the bottle and heat it.

Special note:

Do not freeze the medium. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's cancer stem cell medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human cancer stem cell proliferating characteristics. The cells cultured in cancer stem cell medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

Product specification:

The pH is set at 7.6 and osmolality at 285 ± 10 mOsm / kg.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Passage kit 1

Cat.-No.: 204 0001

contains of:

255 0050	PBS
254 0025	Trypsin/EDTA solution
251 0025	Trypsin neutralization solution with FCS

Maintenance of Passage Kit

Immediately after delivery, place the passage kit in the dark at -20°C. Prior use thaw the passage kit. After thawing store the passage kit in the dark at 4°C for a maximum of 4 weeks. **Take care: After thawing shelf time is limited to 4 weeks!**

Subculture of normal human cells:

- Examine the cell culture under the microscope. Proceed with subculturing if the cell culture reached the stage of confluence recommended for this particular cell type.
- Incubate a freshly filled culture flasks in an incubator at 37°C, steam saturated with 5 % (V/V) CO₂. Make sure that the screw lids on the culture flasks are only slightly closed so that a gas exchange is possible.
- Allow all three solutions in the passage kit to reach room temperature, and remove the seals from the bottles.
- Open the cell culture flask carefully in a laminar flow cabinet and remove the medium using a sterile pipette. Do not touch the cell monolayer with the pipette. Replace the medium with PBS and wash the cell monolayer for about 30 seconds by gently swivelling the culture flask.
- For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	5 ml	15 ml
- Replace the PBS with approx. 80 µl of Trypsin-EDTA-solution/cm². Incubate the culture flask for 4 to 7 minutes at 37°C. The incubation period with the Trypsin-EDTA-solution should not exceed a total of 7 minutes.
- For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	2 ml	6 ml
- Immediately afterwards, examine the cells under the microscope. Make sure that all cells are detached. When the cells are completely detached, add approx. 80 µl of neutralising solution/cm² of culture flask surface. Transfer the cell suspension into a centrifuge tube. Rinse the culture flask with additional 80 µl of medium/cm² of culture flask surface and add this suspension to the one in the centrifuge tube.
- For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	2 ml	6 ml
- Centrifuge the suspension at 250 x g for 5 minutes. Make sure that the supernatant is completely clear and that all cells are packed in the sediment at the bottom of the tube. After that remove the supernatant carefully.
- Add 2 ml of medium and re-suspend the cells slowly and carefully by means of a sterile pipette. Take a precise amount of the suspension to determine the cell number.
- Dilute the cell suspension to a concentration required for culturing. Provitro recommends 200 µl medium/cm² of culture flask bottom.
- For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
---------------------------	--------------------	--------------------

Passage Kit 1

approx. media volume	5 ml	15 ml
<p>14. Remove the culture medium from the flasks prepared according to step 2 of these instructions. Transfer the cell suspension to these flasks.</p> <p>15. Place the cell culture flasks newly seeded with subcultured cells in an incubator at 37°C, steam saturated with 5 % (V/V) CO₂. Close the screw lids on the culture flasks by half a turn to allow a gas exchange between flask and incubator.</p> <p>16. Examine the cells microscopically after 24 hours. At least 80 % of the cells should adhere. Some cells will swim in the medium or only adhere slightly while most of the cells should be spread out on the bottom of the flasks. At this stage, most of the cells will grow alone or in small clusters. Once the cells have adhered (after min. 24 hours), remove the medium with a pipette and replace it with the same volume of fresh, pre-warmed medium.</p> <p>17. Incubate for a further 24 hours. After this period, the culture should show mitotic clusters reflecting the proliferating activity of the cells.</p> <p>18. Now, replace the medium only every two days.</p>		
Stability and storage:		
<p>After thawing the passage kit can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the kit over 37°C or use uncontrollable sources of heat (e.g. microwave appliances).</p> <p>Do not refreeze the kit. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.</p>		
Special note:		
<p>Overtrypsination causes irreversible damage.</p> <p>Because of the tryptic activity of this passage kit, do not exceed the recommended incubation period. Exposing the cells too long will cause irreversible damages to your culture.</p>		
Quality control:		
<p>Provitro's passage kit is thoroughly tested after each production. All components are tested in a stringent biological assay.</p>		

Passage kit 2

Cat.-No.: 204 0002

contains of:

255 0050	PBS
254 0025	Trypsin/EDTA solution
251 1025	Trypsin neutralization solution, serum-free

Maintenance of Passage Kit:

Immediately after delivery, place the passage kit in the dark at -20°C. Prior use thaw the passage kit. After thawing store the passage kit in the dark at 4°C for a maximum of 4 weeks. **Take care: After thawing shelf time is limited to 4 weeks!**

Subculture of normal human cells:

- Examine the cell culture under the microscope. Proceed with subculturing if the cell culture reached the stage of confluence recommended for this particular cell type.
- Incubate a with freshly culture medium filled culture flasks in an incubator at 37°C, steam saturated with 5 % (V/V) CO₂. Make sure that the screw lids on the culture flasks are only slightly closed so that a gas exchange is possible.
- Allow all three solutions in the passage kit to reach room temperature, and remove the seals from the bottles.
- Open the cell culture flask carefully in a laminar flow cabinet and remove the medium using a sterile pipette. Do not touch the cell monolayer with the pipette. Replace the medium with PBS and wash the cell monolayer for about 30 seconds by gently swivelling the culture flask.
- For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	5 ml	15 ml
- Replace the PBS with approx. 80 µl of Trypsin-EDTA-solution/cm². Incubate the culture flask for 4 to 7 minutes at 37°C. The incubation period with the Trypsin-EDTA-solution should not exceed a total of 7 minutes.
- For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	2 ml	6 ml
- Immediately afterwards, examine the cells under the microscope. Make sure that all cells are detached. When the cells are completely detached, add approx. 80 µl of neutralising solution/cm² of culture flask surface. Transfer the cell suspension into a centrifuge tube. Rinse the culture flask with additional 80 µl of medium/cm² of culture flask surface and add this suspension to the one in the centrifuge tube.
- For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	2 ml	6 ml
- Centrifuge the suspension at 250 x g for 5 minutes. Make sure that the supernatant is completely clear and that all cells are packed in the sediment at the bottom of the tube. After that remove the supernatant carefully.
- Add 2 ml of medium and re-suspend the cells slowly and carefully by means of a sterile pipette. Take a precise amount of the suspension to determine the cell number.
- Dilute the cell suspension to a concentration required for culturing. Provitro recommends 200 µl medium/cm² of culture flask bottom.
- For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	5 ml	15 ml
- Remove the culture medium from the flasks prepared according to step 2 of these instructions. Transfer tcell suspension to these flasks.
- Place the cell culture flasks newly seeded with subcultured cells in an incubator at 37°C, steam saturated with 5 % (V/V)

Passage Kit 2

- CO₂. Close the screw lids on the culture flasks by half a turn to allow a gas exchange between flask and incubator.
16. Examine the cells microscopically after 24 hours. At least 80 % of the cells should adhere. Some cells will swim in the medium or only adhere slightly while most of the cells should be spread out on the bottom of the flasks. At this stage, most of the cells will grow alone or in small clusters. Once the cells have adhered (after min. 24 hours), remove the medium with a pipette and replace it with the same volume of fresh, pre-warmed medium.
 17. Incubate for a further 24 hours. After this period, the culture should show mitotic clusters reflecting the proliferating activity of the cells.
 18. Now, replace the medium only every two days.

Stability and storage:

After thawing the passage kit can be stored in the dark at 4°C to 8°C for up to 1 month. Do not heat the kit over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). Do not refreeze the kit. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Special note:

Overtrypsination causes irreversible damage. Because of the tryptic activity of this passage kit, do not exceed the recommended incubation period. Exposing the cells too long will cause irreversible damages to your culture.

Quality control:

Provitro's passage kit is thoroughly tested after each production. All components are tested in a stringent biological assay.

Passage kit 3

Cat.-No.: 204 0003

contains of:

255 0050	PBS
252 0025	Dispase II solution (neutral protease, grade II)

Maintenance of Passage Kit:

Immediately after delivery, place the passage kit in the dark at -20°C. Prior use thaw the tube. After usage store them in the dark at 4°C for a maximum of 2 weeks. **Take care: After thawing shelf time of Dispase II solution is limited to 14 days!**

Subculture of normal human cells:

- Examine the cell culture under the microscope. Proceed with subculturing if the cell culture reached the stage of confluence recommended for this particular cell type.
- Incubate a freshly filled culture flasks in an incubator at 37°C, steam saturated with 5 % (V/V) CO₂. Make sure that the screw lids on the culture flasks are only slightly closed so that a gas exchange is possible.
- Allow all solutions in the passage kit to reach room temperature, and remove the seals from the bottles.
- Open the cell culture flask carefully in a laminar flow cabinet and remove the medium using a sterile pipette. Do not touch the cell monolayer with the pipette. Replace the medium with PBS and wash the cell monolayer for about 30 seconds by gently swivelling the culture flask.
For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	5 ml	15 ml
- Replace the PBS with approx. 80 µl of Dispase II-solution/cm². Incubate the culture flask for 8 to 9 minutes at 37°C. Control detaching with the microscope, if necessary incubate for further 5-10 minutes.
For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	2 ml	6 ml
- Immediately afterwards, examine the cells under the microscope. Make sure that all cells are detached. When the cells are completely detached, transfer the cell suspension into a centrifuge tube. Rinse the culture flask with additional 80 µl of medium/cm² of culture flask surface and add this suspension to the one in the centrifuge tube.
For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	2 ml	6 ml
- Centrifuge the suspension at 250 x g for 5 minutes. Make sure that the supernatant is completely clear and that all cells are packed in the sediment at the bottom of the tube. After that remove the supernatant carefully.
- Add 2 ml of medium and re-suspend the cells slowly and carefully by means of a sterile pipette. Take a precise amount of the suspension to determine the cell number.
- Dilute the cell suspension to a concentration required for culturing. Provitro recommends 200 µl medium/cm² of culture flask bottom.
For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	5 ml	15 ml
- Remove the culture medium from the flasks prepared according to step 2 of these instructions. Transfer the cell suspension to these flasks.
- Place the cell culture flasks newly seeded with subcultured cells in an incubator at 37°C, steam saturated with 5 % (V/V) CO₂. Close the screw lids on the culture flasks by half a turn to allow a gas exchange between flask and incubator.
- Examine the cells microscopically after 24 hours. At least 80 % of the cells should adhere. Some cells will swim in the medium or only adhere slightly while most of the cells should be spread out on the bottom of the flasks. At this stage, most of the cells will grow alone or in small clusters. Once the cells have adhered (after min. 24 hours), remove the medium with a pipette and replace it with the same volume of fresh, pre-warmed medium.
- Incubate for a further 24 hours. After this period, the culture should show mitotic clusters reflecting the proliferating activity of the cells.
- Now, replace the medium only every two days.

Passage Kit 3

<p>Stability and storage:</p> <p>After thawing the passage kit can be stored in the dark at 4°C to 8°C for up to 2 weeks. Do not heat the kit over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). Do not refreeze the kit. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.</p>
<p>Quality control:</p> <p>Provitro's passage kit is thoroughly tested after each production. All components are tested in a stringent biological assay.</p>
<p>In vitro laboratory use only.</p> <p>Not intended for any human or animal diagnostic or therapeutic use.</p>

Passage kit 4

Cat.-No.: 204 0004

contains of:

255 0050	PBS
253 0025	detachment solution (recombinant enzyme)

Maintenance of Passage Kit:

Immediately after delivery, place the passage kit in the dark at -20°C. Prior use thaw the tube. After usage store them in the dark at 4°C for a maximum of 4 weeks. **Take care: After thawing shelf time is limited to 4 weeks!**

Subculture of normal human cells:

- Examine the cell culture under the microscope. Proceed with subculturing if the cell culture reached the stage of confluence recommended for this particular cell type.
- Incubate a freshly filled culture flasks in an incubator at 37°C, steam saturated with 5 % (V/V) CO₂. Make sure that the screw lids on the culture flasks are only slightly closed so that a gas exchange is possible.
- Allow all solutions in the passage kit to reach room temperature, and remove the seals from the bottles.
- Open the cell culture flask carefully in a laminar flow cabinet and remove the medium using a sterile pipette. Do not touch the cell monolayer with the pipette. Replace the medium with PBS and wash the cell monolayer for about 30 seconds by gently swivelling the culture flask.
For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	5 ml	15 ml
- Replace the PBS with approx. 80 µl of detachment-solution/cm². Incubate the culture flask for 3 to 5 minutes at 37°C. Control detaching with the microscope, if necessary incubate for further 3-5 minutes.
For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	2 ml	6 ml
- Immediately afterwards, examine the cells under the microscope. Make sure that all cells are detached. When the cells are completely detached, transfer the cell suspension into a centrifuge tube. Rinse the culture flask with additional 80 µl of medium/cm² of culture flask surface and add this suspension to the one in the centrifuge tube.
For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	2 ml	6 ml
- Centrifuge the suspension at 250 x g for 5 minutes. Make sure that the supernatant is completely clear and that all cells are packed in the sediment at the bottom of the tube. After that remove the supernatant carefully.
- Add 2 ml of medium and re-suspend the cells slowly and carefully by means of a sterile pipette. Take a precise amount of the suspension to determine the cell number.
- Dilute the cell suspension to a concentration required for culturing. Provitro recommends 200 µl medium/cm² of culture flask bottom.
For standard cell culture flasks:

Tissue culture flask base	25 cm ²	75 cm ²
approx. media volume	5 ml	15 ml
- Remove the culture medium from the flasks prepared according to step 2 of these instructions. Transfer the cell suspension to these flasks.
- Place the cell culture flasks newly seeded with subcultured cells in an incubator at 37°C, steam saturated with 5 % (V/V) CO₂. Close the screw lids on the culture flasks by half a turn to allow a gas exchange between flask and incubator.
- Examine the cells microscopically after 24 hours. At least 80 % of the cells should adhere. Some cells will swim in the medium or only adhere slightly while most of the cells should be spread out on the bottom of the flasks. At this stage, most of the cells will grow alone or in small clusters. Once the cells have adhered (after min. 24 hours), remove the medium with a pipette and replace it with the same volume of fresh, pre-warmed medium.
- Incubate for a further 24 hours. After this period, the culture should show mitotic clusters reflecting the proliferating activity of the cells.
- Now, replace the medium only every two days.

Passage Kit 4

Stability and storage:

After thawing the passage kit can be stored in the dark at 4°C to 8°C for up to 1 month, at -20°C see expiry date on tube label. Do not heat the kit over 37°C or use uncontrollable sources of heat (e.g. microwave appliances). Do not refreeze the kit after thawing. This can lead to high salt concentrations by freezing out pure water which will cause irreversible damage.

Quality control:

Provitro's passage kit is thoroughly tested after each production. All components are tested in a stringent biological assay.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Cryo solution (serum-free), Cryo-SFM

Cat.-No.: 204 0101, 125 ml

Cat.-No.: 204 0102, 30 ml

Maintenance of Cryo-SFM

Place the medium in the dark at 4°C to 8°C immediately after delivery.

Description:

In a serum-free cell culture system, it is very important to cryopreserve cells also in a serum-free freeze medium and not in a serum containing medium. Using an ordinary serum containing freeze medium, the serum affects the cell culture system over a long period. This influence can only be removed by dilution during a large number of passages after seeding. Provitro's Cryo-SFM is a new formulation for cryopreservation of animal and human cells containing no serum, but rather DMSO, methyl cellulose and other cryoprotectant ingredients. After cryopreservation and thawing, a very high percentage of viable cells is obtained. Cells which are cryopreserved in Cryo-SFM also show excellent attachment ability as well as growth performance after thawing.

Using Cryo-SFM:

Adherent Cells: Remove adherent cells with Trypsin/EDTA (Provitro Cat.-No.: 204 0001). Neutralize Trypsin with Trypsin inhibitor (Provitro Cat.-No. 204 0001), pellet cells by centrifuging at low acceleration (200 x g) for 3-5 minutes and remove Trypsin inhibitor solution. Resuspend the cells in cold Cryo-SFM at a concentration of 1 - 4 million cells/ml. Freeze the cells gradually (1°C/minute) and store them in liquid nitrogen.

Cells in Suspension: Pellet the cells by centrifuge at low acceleration (200 x g) for 4 minutes. Remove the supernatant, gently resuspend the cells in Cryo-SFM at a concentration of 1-5 million cells/ml. Freeze the cells gradually (1°C/minute) and store them in liquid nitrogen.

Thawing: Gently shake the vial in warm water (37°C) until approximately 90% of the freeze medium is just thawed. Remove the vial immediately and continue shaking until the whole contents is thawed. (Do not allow longer incubation of the vial at 37°C! The viability of the cells is drastically diminished in the thawed freeze medium.) Wipe it with 70% ethanol and remove the cap being careful not to touch the interior threads with fingers. Resuspend the contents of the vial gently using a pipette and dispense the contents of the vial into the equilibrated culture vessels.

Quality control:

Provitro's Cryo-SFM is fully performance tested at the time of production. Each lot is tested and cell viability, attachment ability and growth performance is controlled after cryopreservation and thawing of cells.

Stability and storage:

The Cryo-SFM can be stored in the dark at 4°C to 8°C for up to 3 months.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Cryo solution (serum-free), Cryo-SFM

Cat.-No.: 204 0101, 125 ml

Cat.-No.: 204 0102, 30 ml

Maintenance of Cryo-SFM

Place the medium in the dark at 4°C to 8°C immediately after delivery.

Description:

In a serum-free cell culture system, it is very important to cryopreserve cells also in a serum-free freeze medium and not in a serum containing medium. Using an ordinary serum containing freeze medium, the serum affects the cell culture system over a long period. This influence can only be removed by dilution during a large number of passages after seeding. Provitro's Cryo-SFM is a new formulation for cryopreservation of animal and human cells containing no serum, but rather DMSO, methyl cellulose and other cryoprotectant ingredients. After cryopreservation and thawing, a very high percentage of viable cells is obtained. Cells which are cryopreserved in Cryo-SFM also show excellent attachment ability as well as growth performance after thawing.

Using Cryo-SFM:

Adherent Cells: Remove adherent cells with Trypsin/EDTA (Provitro Cat.-No.: 204 0001). Neutralize Trypsin with Trypsin inhibitor (Provitro Cat.-No. 204 0001), pellet cells by centrifuging at low acceleration (200 x g) for 3-5 minutes and remove Trypsin inhibitor solution. Resuspend the cells in cold Cryo-SFM at a concentration of 1 - 4 million cells/ml. Freeze the cells gradually (1°C/minute) and store them in liquid nitrogen.

Cells in Suspension: Pellet the cells by centrifuge at low acceleration (200 x g) for 4 minutes. Remove the supernatant, gently resuspend the cells in Cryo-SFM at a concentration of 1-5 million cells/ml. Freeze the cells gradually (1°C/minute) and store them in liquid nitrogen.

Thawing: Gently shake the vial in warm water (37°C) until approximately 90% of the freeze medium is just thawed. Remove the vial immediately and continue shaking until the whole contents is thawed. (Do not allow longer incubation of the vial at 37°C! The viability of the cells is drastically diminished in the thawed freeze medium.) Wipe it with 70% ethanol and remove the cap being careful not to touch the interior threads with fingers. Resuspend the contents of the vial gently using a pipette and dispense the contents of the vial into the equilibrated culture vessels.

Quality control:

Provitro's Cryo-SFM is fully performance tested at the time of production. Each lot is tested and cell viability, attachment ability and growth performance is controlled after cryopreservation and thawing of cells.

Stability and storage:

The Cryo-SFM can be stored in the dark at 4°C to 8°C for up to 3 months.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for endothelial cell proliferation medium, FCS-kit

Cat.-Nr.: 215 0001

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 231 3500 FCS (foetal calf serum) 226 0500 Heparin 244 0500 human rec. EGF (epidermal growth factor) 245 0250 human rec. bFGF (basic fibroblast growth factor) 241 0025 human rec. VEGF 242 0500 human rec. Long R3 IGF-1 223 0005 Ascorbic acid 224 0010 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of supplement kit for endothelial cell growth medium:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for endothelial cell proliferation medium is suitable for culturing Provitro human endothelial cells **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for endothelial cell proliferation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for endothelial cell proliferation medium, HuS-kit

Cat.-Nr.: 216 0001

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 232 3500 HuS (human serum AB) 226 0500 Heparin 244 0500 human rec. EGF (epidermal growth factor) 245 0250 human rec. bFGF (basic fibroblast growth factor) 241 0025 human rec. VEGF 242 0500 human rec. Long R3 IGF-1 223 0005 Ascorbic acid 224 0010 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of supplement kit for endothelial cell growth medium:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for endothelial cell proliferation medium is suitable for culturing Provitro human endothelial cells **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for endothelial cell proliferation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for endothelial cell growth medium, advanced, FCS-kit

Cat.-Nr.: 215 1101

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 231 1000 FCS (foetal calf serum) 226 1125 Heparin 244 0250 human rec. EGF (epidermal growth factor) 245 0500 human rec. bFGF (basic fibroblast growth factor) 241 0025 human rec. VEGF 242 1000 human rec. Long R3 IGF-1 223 0005 Ascorbic acid 224 0010 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of supplement kit for endothelial cell growth medium, advanced:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for endothelial cell growth medium, advanced is suitable for culturing Provitro human endothelial cells **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for endothelial cell growth medium, advanced is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for endothelial cell growth medium, advanced, HuS-kit

Cat.-Nr.: 216 1101

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 232 1000 HuS (human serum AB) 226 1125 Heparin 244 0250 human rec. EGF (epidermal growth factor) 245 0500 human rec. bFGF (basic fibroblast growth factor) 241 0025 human rec. VEGF 242 1000 human rec. Long R3 IGF-1 223 0005 Ascorbic acid 224 0010 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of supplement kit for endothelial cell growth medium, advanced:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for endothelial cell growth medium, advanced is suitable for culturing Provitro human endothelial cells **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for endothelial cell growth medium, advanced is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for human endothelial cells proliferating characteristics. The cells cultured in endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for microvascular endothelial cell growth medium, FCS-kit

Cat.-Nr.: 215 0102

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 231 2500 FCS (foetal calf serum) 233 0600 ECGS/H (endothelial cell growth supplement / Heparin) 243 0050 human rec. EGF (epidermal growth factor) 224 0050 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of supplement kit for microvascular endothelial cell growth medium:

The supplements are delivered on dry ice. Store the **supplements at -20°C**.

Characteristics:

The Provitro supplement kit for microvascular endothelial cell growth medium is suitable for culturing Provitro human microvascular endothelial cells **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements at -20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for microvascular endothelial cell growth medium, HuS-kit

Cat.-Nr.: 216 0102

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 232 2500 HuS (human serum AB) 233 0600 ECGS/H (endothelial cell growth supplement / Heparin) 243 0050 human rec. EGF (epidermal growth factor) 224 0050 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of supplement kit for microvascular endothelial cell growth medium:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for microvascular endothelial cell growth medium is suitable for culturing Provitro human microvascular endothelial cells **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for microvascular endothelial cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for microvascular endothelial cell growth medium, advanced, FCS-kit

Cat.-Nr.: 215 1102

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 231 2500 FCS (foetal calf serum) 244 0250 human rec. EGF (epidermal growth factor) 245 0500 human rec. bFGF (basic fibroblast growth factor) 242 1000 human rec. Long R3 IGF-1 223 0005 Ascorbic acid 241 0025 human rec. VEGF 224 0050 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of supplement kit for microvascular endothelial cell growth medium, advanced:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for microvascular endothelial cell growth medium, advanced is suitable for culturing Provitro human microvascular endothelial cells **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for microvascular endothelial cell growth medium, advanced is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for microvascular endothelial cell growth medium, advanced, HuS-kit

Cat.-Nr.: 216 1102

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 232 2500 HuS (human serum AB) 244 0250 human rec. EGF (epidermal growth factor) 245 0500 human rec. bFGF (basic fibroblast growth factor) 242 1000 human rec. Long R3 IGF-1 223 0005 Ascorbic acid 241 0025 human rec. VEGF 224 0050 Hydrocortisone 236 0350 Antibiotics (optional)

Maintenance of supplement kit for microvascular endothelial cell growth medium, advanced:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for microvascular endothelial cell growth medium, advanced is suitable for culturing Provitro human microvascular endothelial cells **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for microvascular endothelial cell growth medium, advanced is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMVEC proliferating characteristics. The cells cultured in microvascular endothelial cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for defined fibroblast maintenance medium, serum-free

Cat.-Nr.: 217 0401

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 245 0050 human rec. bFGF (basic fibroblast growth factor) 246 0250 human rec. Insulin 236 0350 Antibiotics (optional)

Maintenance of supplement kit for defined fibroblast growth medium:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for defined fibroblast maintenance medium is suitable for maintenance culturing of Provitro human fibroblasts (HFIB) **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 6,000 cells / cm². Feeder-layer, matrix substrates or other substances are not necessary. **We recommend using the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for defined fibroblast maintenance medium is thoroughly tested after each production. All components are tested in a stringent biological assay. The cells cultured in defined fibroblast maintenance medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Provitro AG Charitéplatz 1 tel +49.30.450 578 358 sales@provitro.de
 Charité Campus Mitte 10117 Berlin fax +49.30.450 578 952 www.provitro.de

Supplement kit for melanocyte growth medium, serum-free

Cat.-Nr.: 217 0502

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 234 2600 BPE 245 0050 human rec. bFGF (basic fibroblast growth factor) 224 0025 Hydrocortisone 246 0250 human rec. Insulin 235 0500 PMA 236 0350 Antibiotics (optional)

Maintenance of supplement kit for melanocyte growth medium:

The supplements are delivered on dry ice. Store the **supplements** at -20°C.

Characteristics:

The Provitro supplement kit for melanocyte growth medium is suitable for culturing human melanocytes (HMEL) **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 75 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at -20°C. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for melanocyte growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HMEL proliferating characteristics. The cells cultured in melanocyte growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for smooth muscle cell growth medium, FCS

Cat.-Nr.: 215 0601

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 231 2500 FCS (foetal calf serum) 243 0025 human rec. EGF (epidermal growth factor) 245 0100 human rec. bFGF (basic fibroblast growth factor) 246 0250 human rec. Insulin 236 0350 Antibiotics (optional)

Maintenance of supplement kit for smooth muscle cell growth medium:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for smooth muscle cell growth medium is suitable for culturing of human smooth muscle cells (HSMC) **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for smooth muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSMC proliferating characteristics. The cells cultured in smooth muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for smooth muscle cell growth medium, HuS

Cat.-Nr.: 216 0601

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 232 2500 HuS (human serum AB) 243 0025 human rec. EGF (epidermal growth factor) 245 0100 human rec. bFGF (basic fibroblast growth factor) 246 0250 human rec. Insulin 236 0350 Antibiotics (optional)

Maintenance of supplement kit for smooth muscle cell growth medium:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for smooth muscle cell growth medium is suitable for culturing of human smooth muscle cells (HSMC) **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for smooth muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSMC proliferating characteristics. The cells cultured in smooth muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for skeletal muscle cell growth medium, FCS

Cat.-Nr.: 215 0602

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 231 2500 FCS (foetal calf serum) 237 2500 Fetuin 244 0500 human rec. EGF (epidermal growth factor) 245 0050 human rec. bFGF (basic fibroblast growth factor) 246 0500 human rec. Insulin 225 0020 Dexamethasone 236 0350 Antibiotics (optional)

Maintenance of supplement kit for skeletal muscle cell growth medium:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for smooth muscle cell growth medium is suitable for culturing of Provitro human skeletal muscle cells (HSKMC) **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for skeletal muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSKMC proliferating characteristics. The cells cultured in skeletal muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for skeletal muscle cell growth medium, HuS

Cat.-Nr.: 216 0602

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 232 2500 HuS (human serum AB) 237 2500 Fetuin 244 0500 human rec. EGF (epidermal growth factor) 245 0050 human rec. bFGF (basic fibroblast growth factor) 246 0500 human rec. Insulin 225 0020 Dexamethasone 236 0350 Antibiotics (optional)

Maintenance of supplement kit for skeletal muscle cell growth medium:

The supplements are delivered on dry ice. Store the **supplements** at -20°C.

Characteristics:

The Provitro supplement kit for smooth muscle cell growth medium is suitable for culturing of Provitro human skeletal muscle cells (HSKMC) **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at -20°C. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

Provitro's supplement kit for skeletal muscle cell growth medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSKMC proliferating characteristics. The cells cultured in skeletal muscle cell growth medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

Not intended for any human or animal diagnostic or therapeutic use.

Supplement kit for skeletal muscle cell differentiation medium, serum-free

Cat.-Nr.: 217 0603

contains of:

Basal media	Supplements
-	222 1000 L-Glutamine 246 0500 human rec. Insulin 236 0350 Antibiotics (optional)

Maintenance of supplement kit for skeletal muscle cell differentiation medium:

The supplements are delivered on dry ice. Store the **supplements** at **-20°C**.

Characteristics:

The Provitro supplement kit for smooth muscle cell differentiation medium is suitable for culturing of Provitro human skeletal muscle cells (HSKMC) **after adding the supplement kit components to 500 ml basal medium**. The formulation is optimized for initial seeding of 4,000 cells / cm² up to confluence (approx. 90 %). Feeder-layer, matrix substrates or other substances are not necessary. **Due to the possibility of reduced proliferative activity we recommend to use the antibiotic supplement for freshly isolated cells only.**

Stability and storage:

Store the **supplements** at **-20°C**. Do not use the supplements after expiring date.

Special note:

Avoid any thaw/freeze cycle.

Quality control:

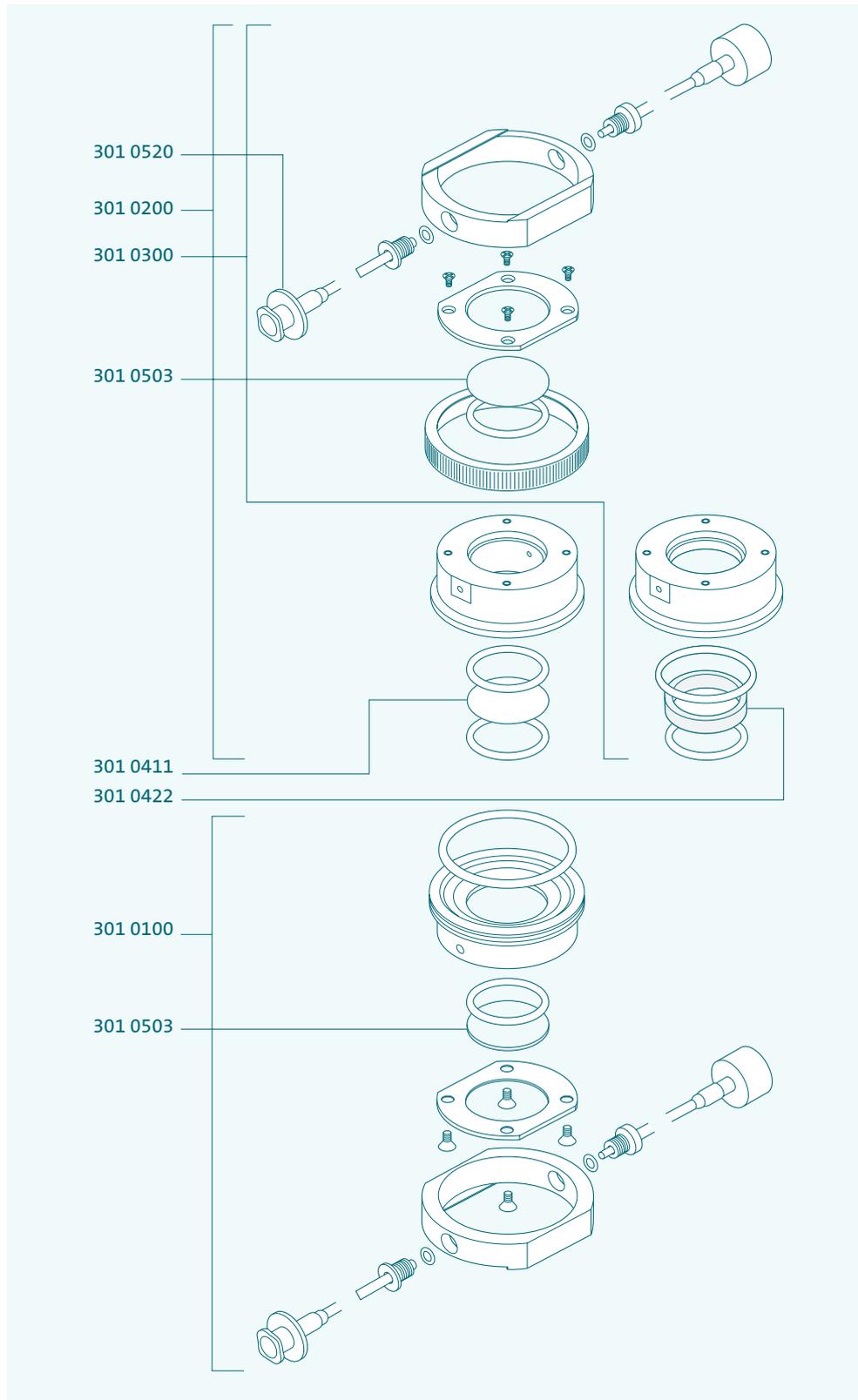
Provitro's skeletal muscle cell differentiation medium is thoroughly tested after each production. All components are tested in a stringent biological assay. Each batch is checked for HSKMC proliferating characteristics. The cells cultured in skeletal muscle cell differentiation medium are checked regarding their morphology, the adherence rate, the colony forming efficiency and the population doubling time.

In vitro laboratory use only.

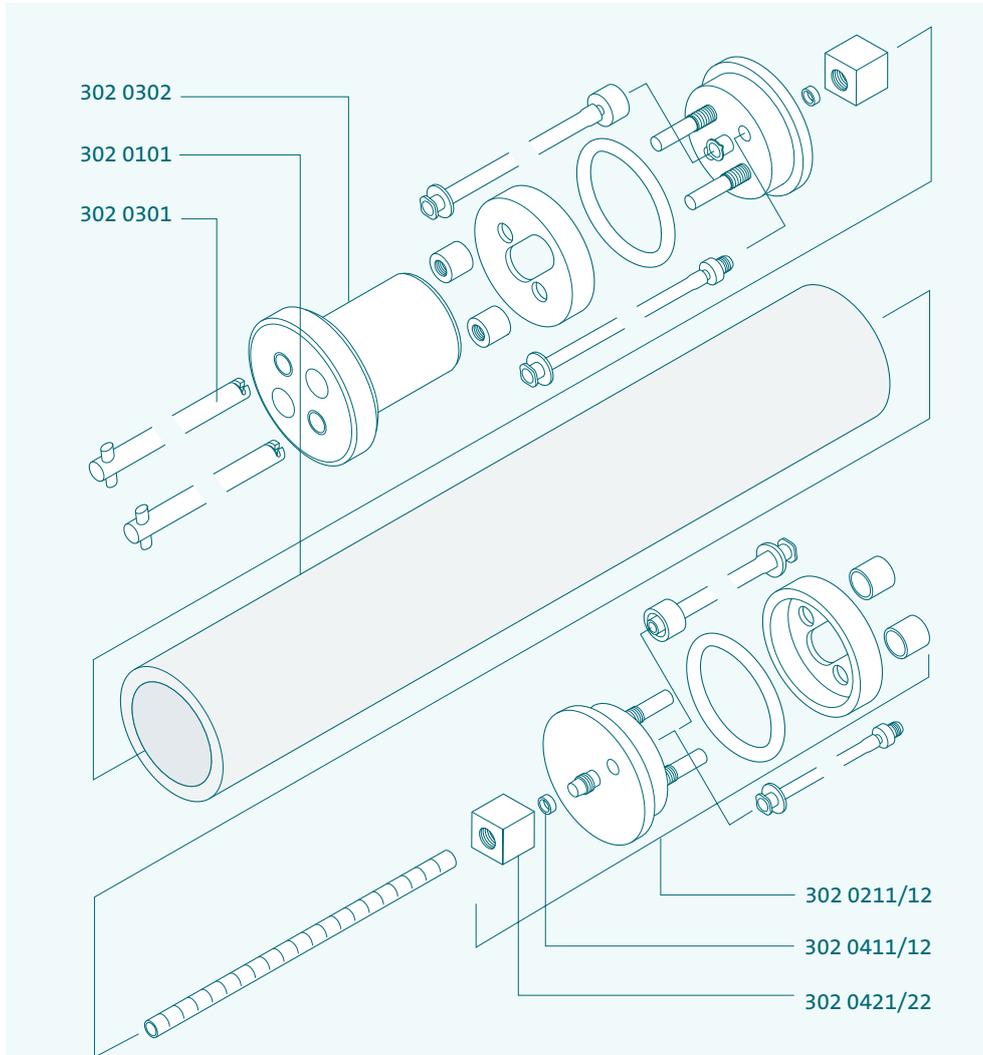
Not intended for any human or animal diagnostic or therapeutic use.

perfusion culture systems

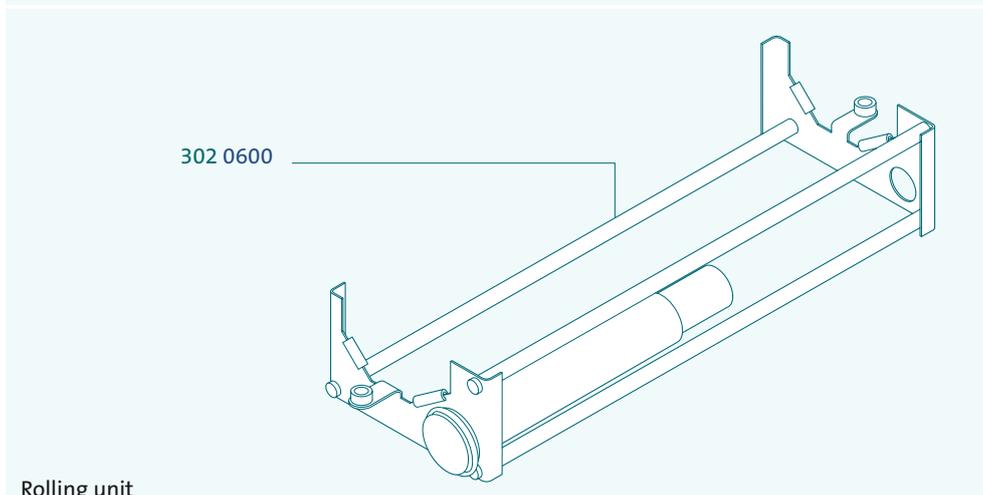
perfusion culture system PCS³



tube chamber system TCS^{2c}

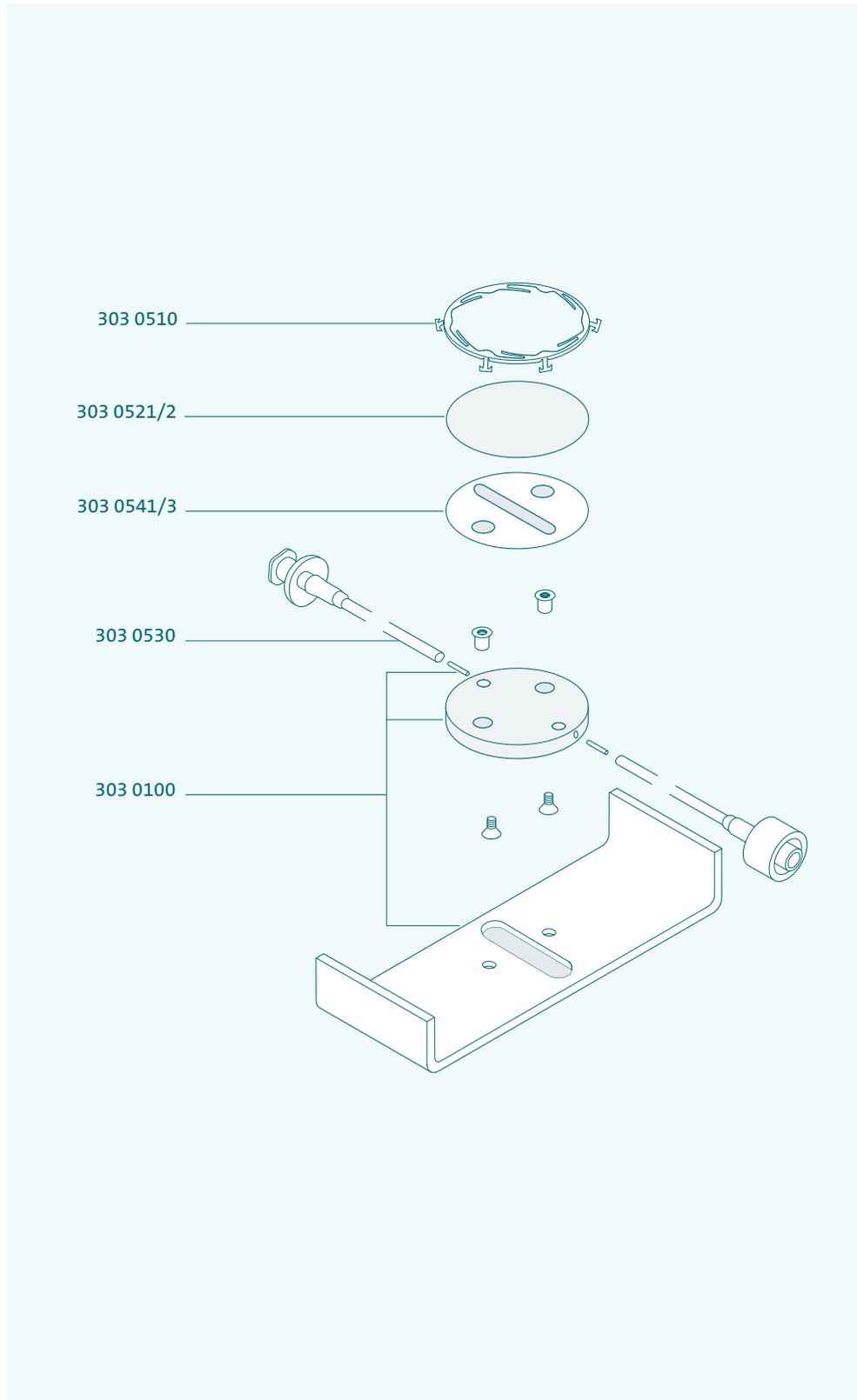


Tube chamber



Rolling unit

flow chamber system FCS^{1c}



perfusion circuit

