# Human umbilical vein endothelial cells, pooled (HUVEC-p) vital
Cat.-No.: 111 0113 (subconfluent proliferating cells / 25 cm² flask)

## Maintenance of HUVEC-p

1. Check the proliferating culture for signs of damage during dispatch (e.g. separation from the culture flask, separation or atypical morphology). Inside the flask many cell “islands” should be visible. Determine the cell density by estimating the “confluence %”. 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) CO$_2$ until it has reached a temperature of 37°C.
3. Prepare fresh medium (please observe the Provitro medium product instructions).
4. Wash the tube lid with 70 % ethanol to kill bacteria and wait until the alcohol has evaporated before opening the tube in a laminar airflow cabinet. Do not touch the tube opening with the fingers. Remove the medium with a pipette without touching the cell monolayer. Replace the medium with 5 ml 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.
5. Place the filled cell culture flask in an incubator at 37°C, steam saturated and 5 % (V/V) CO$_2$. 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 24 to 72 hours (90 % confluence).
7. Recommended seeding density of HUVEC-p: 6,000 cells per cm$^2$

## Description:
The HUVEC-p cultures are produced by Provitro on the base of human tissues. The HUVEC-p are isolated according to known procedures. Then pooled primary cultures are produced. After further culturing, the HUVEC-p are frozen in a computer controlled freezing unit following strict protocol. Proliferating cells are dispatched three days after the cryopreserved cells have been thawed out and cultured.

## Proliferative capacity of HUVEC-p:

HUVEC-p cultures from Provitro are obtained, using careful methods, from original tissue (in vivo state). They are not transformed or mutated and have a limited lifespan in vitro. All HUVEC-p batches are tested by Provitro for their proliferative capacity.

## Quality control:
All HUVEC-p cultures from Provitro are subjected to comprehensive quality tests and the results are given in the accompanying analysis certificate.

## Warning note:
Concerning use of biological material:
Provitro’s cell cultures are of animal origin and no known test procedures can ensure the total absence of infectious agents. All products of bovine origin 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.