



CSI017Hu01

Human Umbilical Vein Endothelial Cells (HUVEC)

Homo sapiens, human

*Instruction manual*

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Revised in Nov, 2022)

## [ DESCRIPTION ]

**Synonyms:** HUV-EC-C; HUVEC

**Organism:** Homo sapiens, human

**Tissue Source:** Umbilical cord

**Age:** Neonate

**Disease:** Normal

**Cell Type:** Endothelial cell

**Morphology:** Cobblestone-like

**Growth Properties:** Adherent

## [ PROPERTIES ]

**Cell activity:** >95% (Viability by Trypan Blue Exclusion).

**Formulation:** Frozen 1 mL.

**Biosafety:** Negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast and fungi.

**Applications:** For research use only. It is not approved for human or animal use, or for application in clinical diagnostic procedures.

**Size:** >5×10<sup>5</sup>cell/vial

## [ STORAGE ]

Upon receiving, directly and immediately transfer the cells from dry ice to liquid nitrogen and keep the cells in liquid nitrogen until they are needed for experiments.

**Form & Buffer:** Supplied as solution form in frozen stock solution, containing 50% base medium +40%FBS+10%DMSO.

**Storage conditions:** liquid nitrogen

## [ USAGE ]

**Culture conditions:**

Complete growth medium:

DMEM/F12+5% FBS+1% Endothelial Cell Growth Supplement+1% Penicillin-Streptomycin Solution

Temperature: 37°C

Condition: 95% air, 5% carbon dioxide



## **Cell recovery:**

1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the cap out of the water. The thawing time is about 2 minutes.
2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by spraying with 75% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions.
3. Transfer the vial contents to a centrifuge tube containing 9.0mL complete culture medium. and spin at approximately 1000 rpm for 5 minutes.
4. Resuspend cell pellet with the recommended complete medium . and dispense into a T25 culture flask.
5. Incubate the culture at 37°C, 5% CO<sub>2</sub> in a suitable incubator.

## **Cell passage:**

1. Cell passage when cell growth at 85-95%.
2. Remove and discard culture medium and wash with PBS 1-2 times.
3. Add 1.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 2 to 3 minutes. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal). Stop digestion by adding 2-3 ml of complete medium containing 10% serum. Make it a single cell suspension.
4. Add the fresh medium to resuspend the cells. Unless otherwise stated, the recommended ratio of primary cells is 1/2.

## **[ Shipping ]**

Dry ice.

## **[ IMPORTANTNOTE ]**

1. The cell is for research use only, and we will not be responsible for any issue if the cell was used in clinical diagnostic or any other procedures.
2. The transmission of the cells is limited, and excessive passage times will lead to changes in cell growth characteristics. It is recommended to use the cells for experiments as soon as possible after receiving them
3. Read the instructions carefully, and keep and operate in strict accordance with the instructions.
4. After cell recovery, please take regular microscopic examination and photos to record the growth status of cells.
5. If you observe abnormalities or have questions about cell culture operations, please contact us in time.



**[ Figure ]**

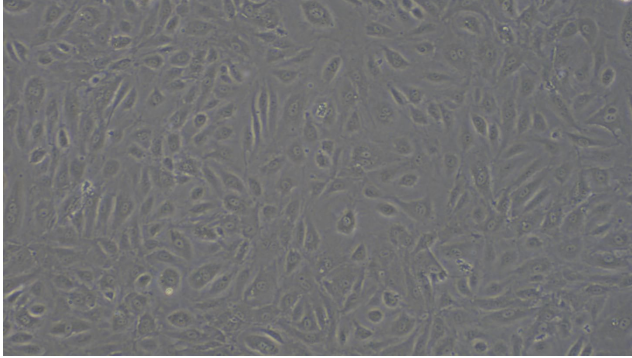


Figure 1 Morphology of Human Umbilical Vein Endothelial Cells (Optical microscope,×100)