

Product Information

Human Brain Vascular Pericytes

Catalog Number	10HU-031	Cell Number	0.5 x 10 ⁶ cells/vial
Species	<i>Homo sapiens</i>	Storage Temperature	Liquid Nitrogen

Description

Pericytes are contractile cells that wrap around the endothelial cells of capillary and venules throughout the body^[1]. Pericytes are embedded in basement membrane, where they communicate with endothelial cells by means of direct physical contact and paracrine signaling^[2]. In the brain, pericytes help sustain the blood-brain barriers, which regulate capillary blood flow, the clearance and phagocytosis of cellular debris and the permeability of the blood-brain barrier. Pericytes deficiency in the central nervous system can cause the blood-brain barrier breakdown, leading to neurodegenerative diseases.

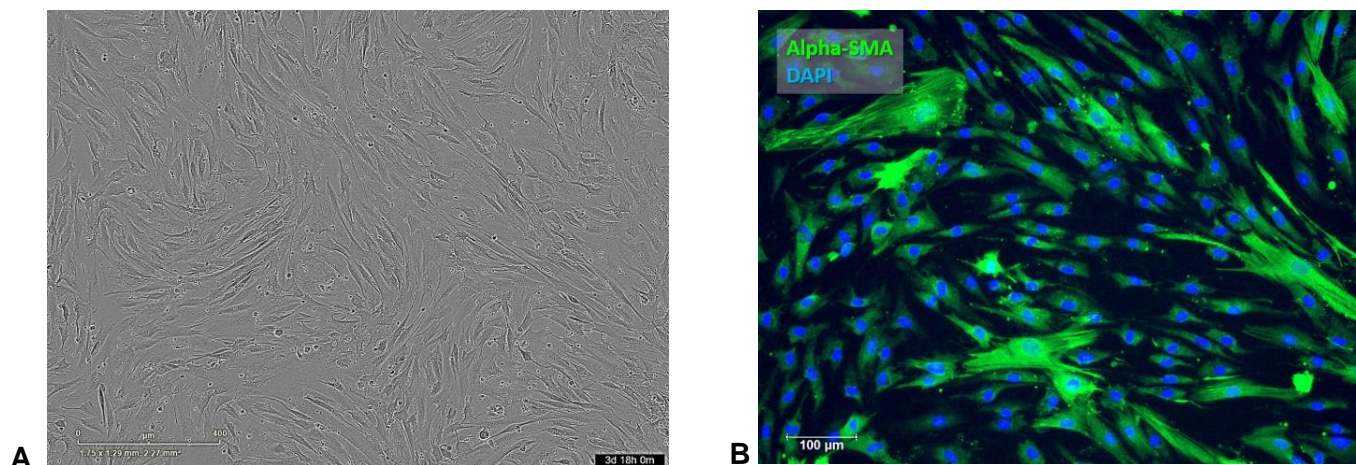


Figure 1. (A) Phase contrast image of Human Brain Vascular Pericytes.
(B) Immunofluorescence staining of Human Brain Vascular Pericytes with Alpha-SMA antibody.

iXCells Biotechnologies offers human brain vascular pericytes (HBVPs) from human brain. HBVP are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast and fungi. HBVPs are guaranteed to maintain at least 10 passages.

Product Details

Tissue	Human Brain Vascular Pericytes
Package Size	0.5 x 10 ⁶ cells/vial
Passage Number	P2
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Pericytes Growth Medium (Cat # MD-0030)

Protocols

Thawing of Frozen Cells

1. Upon receipt of the frozen Human Brain Vascular Pericytes (HBVP), it is recommended to thaw the cells and initiate the culture immediately in order to retain the highest cell viability.
2. To thaw the cells, put the vial in 37°C water bath with gentle agitation for ~1 minute. Keep the cap out of water to minimize the risk of contamination.
3. Pipette the cells into a 15ml conical tube with 5ml fresh Pericytes Growth Medium (Cat # MD-0030).
4. Centrifuge at 1000rpm (~220g) for 5 minutes under room temperature.
5. Remove the supernatant and resuspend the cells in fresh culture medium.
6. Culture the cell in 100 mm culture dish or T75 flask. Note: culture dishes or flasks should be pre-coated with 0.01% poly-l-lysine or rat collagen 1 >1 hours at 37°C before use.

Safety Precaution: *it is highly recommended that protective gloves and clothing should be used when handling frozen vials.*

Standard Culture Procedure

1. Human Brain Vascular Pericytes (HBVP) can be cultured in Pericytes Growth Medium (Cat # MD-0030).
2. When cells reach ~80-90% confluence, remove the medium, and wash once with sterile PBS (5ml/T75 flask).
3. Add ~2.5ml of 0.25% Trypsin-EDTA to the flask and incubate for ~3 minutes at 37°C. Neutralize the enzyme by adding 2-3 volumes of cell culture medium.
4. Centrifuge 1000rpm (~220g) for 5min and resuspend the cells in desired volume of medium.
5. Seed new culture vessels at 5 × 10³ cells/cm². Note: culture dishes or flasks should be pre-coated with 0.01% poly-l-lysine or rat collagen 1 >1 hours at 37°C before use.

References

- [1] Birbrair et al and Osvaldo. Role of pericytes in skeletal muscle regeneration and fat accumulation. *Stem Cell and Development* 2013, 22(16): 2298-2314.
- [2] Bergers G and Song S. The role of pericytes in blood-vessel formation and maintenance. *Neuro-Oncology* 2005, 7(4): 452-464.

Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans. While iXCells Biotechnologies uses reasonable efforts to include accurate and up-to-date information on this product sheet, we make no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. iXCells Biotechnologies does not warrant that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, and use. iXCells Biotechnologies is not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to insure authenticity and reliability of strains on deposit, iXCells Biotechnologies is not liable for damages arising from the misidentification or misrepresentation of cultures.

© iXCells Biotechnologies 2015. All rights reserved.