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Product Information

Human Brain Vascular Pericytes (HBVP)

Catalog Number	10HU-031	Cell Number	0.5 million cells/vial		
Species	Homo sapiens	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.

iXCells Biotechnologies provides high quality Human Brain Vascular Pericytes (HBVP), which are isolated from human brain and cryopreserved at P2, with >0.5 million cells in each vial. These HBVP are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi. They can further expand for no more than 3 passages in https://example.com/Human Pericyte Growth Medium (Cat# MD-0030) under the condition suggested by iXCells Biotechnologies. Additional expansion is not recommended, because the purity of pericyte population may decrease.

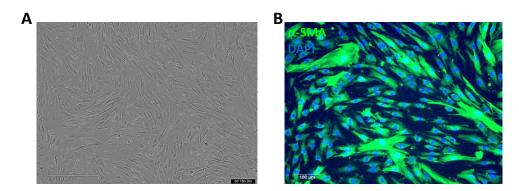


Figure 1. Human Brain Vascular Pericytes (HBVP). **(A)** Phase contrast image of HBVP. **(B)** Immunofluorescence staining with antibody against Anti-alpha smooth muscle Actin (α-SMA).

Product Details

Tissue	Human Brain Vascular Pericytes (HBVP)
Package Size	0.5 million 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 1-2 minute. Keep the cap out of water to minimize the risk of contamination.
- 3. Pipette the cells into a 15 mL conical tube with 5 mL fresh Pericytes Growth Medium (Cat # MD-0030).
- 4. Centrifuge at 1,000 rpm (~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. Change the medium every other day until cells reach 80-90% confluence.

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 (5 mL/T75 flask).
- 3. Add ~2.5 mL 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 1,000 rpm (~220 g) for 5 minutes and resuspend the cells in desired volume of medium.
- 5. Seed new culture vessels at 5×10^3 cells/cm². Change the medium every other day until cells reach 80-90% confluence.

References

[1]	Birbrair etc and Osvaldo.	Role fo pericytes in	skeletal muscle	regeneration	and fat acc	umulation.	Stem Cell	and Developmer	nt 2013,	22(16): 2	2298-
231	4.										

[2] Bergers G and Song S. The role of pericytes in blood-vessel formation and maintenance. Neuro-Oncology 2005, 7(4): 452-464.

Disclaimers

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