ANGIO-PROTEOMIE

DATA SHEET

Human Brain Microglia Cells

ORDER INFORMATION

Name of Products: Human Brain Microglia Cells **(HBMgs)**
Catalogue Number: **cAP-0040**
Product Format: Frozen Vial
Cell Number: > 5 x 10^5/vial

General Information

Microglia, one of the glial cell types in the CNS, is an important integral component of neuroglial cell network. They have been observed in the brain parenchyma from the early stage of development to the mature state. Microglia act as brain macrophages when programmed cell death occurs during brain development or when the CNS is injured or pathologically damaged. Microglia can be considered as the main cell in brain immune surveillance, can present antigens in the molecular context of MHC class II expression to CD-4 positive T cells, are capable of Fc mediated phagocytosis, and share many common antigens with hemopoietic and tissue macrophages. Furthermore, there is accumulating evidence that microglia are involved in a variety of physiological and pathological processes in the brain by interacting with neurons and other glial cells and through production of biologically active substances such as growth factors, cytokines, and other factors. Human brain microglia cells (HBMgs, **cAP-0040**) are isolated from healthy human brain tissue. After purification, HBMgs are cryopreserved and delivered frozen. HBMgs are ready to plate in a culture vessel for experiment, but not recommended for expanding or long term cultures since the cells do not proliferate in culture. It is recommended to use Microglia Cell Medium (MCM, cAP-37;) for the culturing of HBMgs.

Characterization of the cells

CD45:	Positive
CD18:	Positive
CD68:	Positive

HBMgs are negative for HIV-1, HBV, HCV, and mycoplasma.
Product Use: HBMgs are for research use only.
Shipping: Frozen vials in dry ice package.

Handling of Arriving Cells

When you receive the cells in a frozen vial, you can transfer the vial of cells into a -80ºC freezer for short period storage or a liquid nitrogen tank for long term storage. Thaw the cells in a 37°C water bath, and then transfer the cells into a T25 flask pre-coated with poly-L-lysine as described in details in Subculture Protocol.

Subculture Protocol

1. Prepare a poly-L-lysine coated flask (2µg/cm^2 , T-25 flask is recommended). Add 5 ml of sterile water to a T-25 flask and then add 9µl of poly-L-lysine stock solution (cAP-38, 10mg/ml). Leave the flask in incubator overnight (minimum one hour at37°C incubator).
2. Rinse the poly-L-lysine coated flask with sterile water twice and add 7 ml of complete medium to the flask. Leave the flask in the hood and go to thaw the cells.
3. Warm MCM (cAP-37) before thawing the cells.
4. Place the vial in a 37C water bath, hold and rotate the vial gently until the contents are completely thawed. Remove the vial from the water bath immediately, wipe it dry, rinse the vial with 70% ethanol and transfer it to a sterile field. Remove the cap, being careful not to touch the interior threads with fingers. Using 1 ml Eppendorf pipette gently resuspend the contents of the vial.
5. Dispense the contents of the vial into the equilibrated, poly-L-lysine coated culture vessels. A seeding density of ≥10,000 cells/cm^2 is recommended. ***Note: Dilution and centrifugation of cells after thawing are not recommended since these actions are more harmful to the cells than the effect of DMSO residue in the culture. It is also important that these cells adhere very strongly to tissue culture dishes, trypsinization after attachment is incomplete. Therefore, it is recommended to plate the cells in the experimental format called for and use them directly for the experiment, instead of trying to subculture them. The cells can also be maintained on ultra low binding dishes (Corning) or on Poly-L-Lysin coated plates.***
6. Replace the cap or cover, and gently rock the vessel to distribute the cells evenly. Loosen cap if necessary to permit gas exchange.
7. Return the culture vessels to the incubator.
8. For best result, do not disturb the culture for at least 16 hours after the culture has been initiated. Change the growth medium the next day to remove the residual DMSO by centrifuging the unattached cells down, resuspending the cells with 5ml fresh medium, and add the cells back to the flask. Then change the medium every other day thereafter.
9. Change the medium every two to three days thereafter

Related products

Microglia Cell Full Medium	cAP-37	500ml	Angio-Proteomie
poly-L-lysine stock solution	cAP-38	1ml	Angio-Proteomie
HBSS w/o Ca^{2+} , Mg^{2+}	cAP-11	100ml	Angio-Proteomie
Trypsin/EDTA Solution	cAP-23	100ml	Angio-Proteomie
Trypsin Neutralization Solution	cAP-28	100ml	Angio-Proteomie

Caution: Handling human tissue derived products is potentially bio-hazardous. Although each cell strain is tested negative for HIV, HBV and HCV DNA, diagnostic tests are not necessarily 100% accurate; therefore, proper precautions must be taken to avoid inadvertent exposure. Always wear gloves and safety glasses when working these materials. Never mouth pipette. We recommend following the universal procedures for handling products of human origin as the minimum precaution against contamination.

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