AXOL

Discovery Stems From Here

Primary Human Cortical Neurons

Product Information

Catalog. No.	Product Name	Format	Stock Conc.	Storage on Arrival	Thawing Instructions	Storage Once Thawed
ax114667	Primary Cortical Neurons	2,000,000 cells/vial	N/A	Liquid Nitrogen	Follow protocol	N/A

Additional Reagents		
Catalog. No.	**Product Name**	**Format**
ax114668	Neuronal Media (Serum Free)	500 ml

Recommendations

- Always count the number of viable cells after thawing.
- It is not recommended that neurons be subcultured beyond their initial plating.

Neuronal Media (Serum Free)

Axol's Neuronal Media is a serum free, sterile medium containing essential and non-essential amino acids, vitamins, and growth factors. The medium is formulated to provide a defined and optimally balanced nutritional environment that selectively promotes growth of normal primary neurons in vitro.

Components:

- Basal Medium, 500 ml
- Neuronal Growth Supplement (NGS), 5 ml
- Penicillin/Streptomycin Solution (P/S Solution), 5 ml

Primary Cortical Neurons

Axol's Primary Human Cortical Neurons (PHCN) are isolated from cortical tissue of the brain. Neurons are anatomic, functional, and trophic units of the brain. Despite variability in size and shape all neurons share common morphology, resulting in a highly complex communication network. The neurons are the dynamically polarized cells that serve as the major signaling unit of the nervous system.

Thawing & Plating

- Prepare a poly-L-lysine-coated culture vessel (2 µg/cm², T-25 flask is recommended). Add 5 ml of sterile water to a T-25 flask and then add 50 µl of 1 mg/ml poly-L-lysine stock solution. Leave the vessel in a 37°C incubator overnight (or for a minimum of one hour). Rinse the poly-L-lysine-coated vessel twice with sterile water prior to use. NOTE: It is important that these cells are plated in poly-L-lysine-coated culture vessels to promote cell attachment.

- Prepare complete medium. Thaw NGS and P/S Solution at 37°C. Gently tilt the NGS tube several times during thawing to help the contents dissolve. Make sure the contents of the supplement are completely dissolved into solution before adding to the medium. Rinse the bottle and tubes with 70% ethanol and wipe to remove excess. Remove the cap, being careful not to touch the interior threads with fingers. Add NGS and P/S Solution into basal medium in a sterile field and mix well. Rinse the supplement tube with medium to recover the entire volume. The reconstituted medium is then ready for use. NOTE: Since several components of this medium are light-labile, it is recommended that the medium not be exposed to light for lengthy periods of time. If the medium is warmed prior to use, do not exceed 37°C. When stored in the dark at 4°C, the supplemented medium is stable for one month.

- Add complete medium to the culture vessel. Leave the vessel in the sterile field and proceed to thaw the cryopreserved cells.
- Place the frozen vial in a 37°C water bath. Hold and rotate the vial gently until the contents completely thaw. Promptly remove the vial from the water bath, wipe it down with 70% ethanol, and transfer it to the sterile field. Carefully remove the cap without touching the interior threads.
- Gently resuspend and dispense the contents of the vial into the poly-L-lysine-coated culture vessel. A seeding density of 10,000-50,000 cells/cm² is recommended, with an optimal range of 20,000-25,000 cells/cm². 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.
- Replace the cap or lid of the culture vessel and gently rock the vessel to distribute the cells evenly. Loosen cap, if necessary, to allow gas exchange.
- Return the culture vessel to the incubator.
- For best results, do not disturb the culture for at least 16 hours after the culture has been initiated. Refresh culture medium the next day to remove residual DMSO and unattached cells, then every other day thereafter.

Maintenance of Culture

- Refresh supplemented culture medium the next morning after establishing a culture from cryopreserved cells.
- Change the medium every two to three days thereafter.

Pathogen Testing

All cells are tested and confirmed ad negative for HIV-1, HIV-2, HBV, and HCV as detected by PCR. The ells are confirmed to be negative for mycoplasma and other detectable microbial contamination.

Product Warranty

Axol Bioscience Ltd. warrants the performance of cells only if the recommended media/reagents are used and the recommended protocols are followed. Cryopreserved cells are assured to be viable when thawed according to the recommended protocol on recommended culture ware.

Usage Statement:

Our products are intended for research use only and are not to be used for any other purpose, which includes but is not limited to, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses or any type of consumption or application to humans.

Notes

Got any questions? Need help with the protocol?
Contact Axol Technical Support at
support@axolbio.com
Or
call +44 (0) 1223 751051