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Rat Oligodendrocyte Precursor Cells

Cat. No. ARP1216, 5×10^5 cells/vial

Description

Rat Oligodendrocyte Precursor Cells (OPCs) are a population of glial progenitor cells derived from the central nervous system (CNS) of embryonic or neonatal rats. Characterized by their bipolar morphology and the expression of specific markers such as PDGFRα, NG2, and A2B5, these cells are highly proliferative and migratory. Their primary biological function is to differentiate into mature oligodendrocytes, the myelin-forming cells of the CNS, in response to developmental cues or injury. In the laboratory, rat OPCs are a critical in vitro model for studying the molecular mechanisms of oligodendrocyte differentiation, myelination, and remyelination. They are extensively utilized in neurobiology research to screen for therapeutic compounds aimed at treating demyelinating diseases (such as Multiple Sclerosis), to investigate the effects of hypoxia and inflammation on brain development, and to explore neuron-glia interactions in co-culture systems.

Specification

Cell Type: Glial cell
Tissue/Organ: Brain
Disease: N/A
Species: Rattus norvegicus (Rat)
Genetic Background: N/A

Shipping & Storage

Shipping condition: Frozen on dry ice.
Storage condition: Liquid nitrogen (LN_2) cryopreservation.

Intended Use

This product is intended for laboratory in vitro use only. It is not intended for diagnostic, therapeutic, or clinical applications.

Culturing Guidance

Morphology: N/A

Growth Mode: Adherent

Temperature: 37°C

Atmosphere: 5% CO_2

Unpacking and Storage Instructions

1. Visually inspect all packaging components for integrity and verify adequate dry ice.
   If any damage is observed, notify Ascent Technical Support immediately.
2. Prioritize transfer to liquid nitrogen vapor phase storage system (-130°C or below).
   Secondary option: -80°C mechanical freezer (short-term storage only).
   Always maintain temperature strictly below -65°C.

Disclaimer

Ascent Research endeavors to provide accurate and up-to-date product information. However, no warranties or representations are made regarding its completeness or reliability. References to scientific literature and patents are for informational purposes only, and the customer assumes sole responsibility for verifying their accuracy.

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