

Product Description

Astrocytes are the major cell type in the mammalian brain. They provide a variety of supportive functions to their partner neurons in the central nervous system (CNS), such as neuronal guidance during development, nutritional and metabolic support throughout life ^[1]. Astrocytes have also been implicated in various pathological processes ^[2]. Impairment of normal astrocyte functions during stroke and other insults can critically influence neuron survival. Long-term recovery after brain injury, through neurite outgrowth, synaptic plasticity, or neuron regeneration, is also influenced by astrocyte surface molecule expression and trophic factor release ^[3]. Numerous studies have demonstrated that astrocytes are among the most functionally diverse group of cells in the CNS ^[4]. Much of what we have learned about astrocytes is from in vitro studies and astrocyte culture is a useful tool for exploring the diverse properties of this cell type.

iXCells Biotechnologies provides high quality Rat Astrocytes (RA), which are isolated from rat brain and cryopreserved at P1, with >0.5 million cells in each vial. RA express GFAP and are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi. They can further expand for 5 population doublings in Astrocyte Medium (Cat# MD-0039) under the condition suggested by iXCells Biotechnologies.

Product Details

Tissue	Postnatal day 2 rat brain
Package Size	0.5x10 ⁶ cells/vial
Passage Number	P1
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Astrocyte Medium (Cat# MD-0039)

References

[1] Astrocytes, pharmacology and function. Edited by Sean Murphy. 1993 by Academic press, Inc.

[2] Van der Laan, L. J. W., De Groot, C. J. A., Elices, M. J. and Dijkstran, C. D. (1997) Extracellular matrix proteins expressed by human adult astrocytes in vivo and in vitro: an astrocyte surface protein containing the CS1 domain contributes to binding of lymphoblasts. J. Neurosci. Res. 50:539-548.

[3] Shao, Y. and McCarhy, K. D. (1994) Plasticity of astrocytes. Glia 11:147-155.

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