Technical Data Sheet

Purified Mouse Anti-Rat Nestin

Product Information

Material Number:	**556309**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	Rat 401
Immunogen:	Rat (E15) spinal cord extracts
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat
Target MW:	198-260 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Multipotential stem cells in the neural tube of the developing embryo give rise to the different neuronal cell types of the brain. Nestin is an intermediate filament protein which is abundantly expressed in neuroepithelial stem cells early in embryogenesis, but is absent from nearly all mature central nervous system (CNS) cells. After its down-regulation, GFAP and neurofilaments are expressed in differentiated astrocytes and neurons, respectively. Initial studies showed that the mouse anti-rat nestin antibody (clone Rat 401) recognized transient radial glial cells and dividing neuroepithelial stem cells in the embryonic rat CNS. Reportedly, Rat 401 has been used to analyze nestin expression in the developing rat nervous system and in immortalized CNS precursor cell lines (e.g such as in E11 rat CNS stem cells, but lost by postnatal day 6 (P6) in spinal cord and by P21 in the cerebellum). Although not expressed in normal adult CNS cells, nestin has been reportedly to be detectable in a variety of CNS tumors, suggesting that these tumors share gene expression patterns with primitive, undifferentiated CNS cells. Rat 401 positive cells have been reported to be found throughout the developing neural tube, but not in the adult CNS. More than 90% of dissociated E11 neural tube cells have been reported to be Rat 401 positive. Rat 401 recognizes rat nestin and has been reported not to cross-react with human nestin. Due to differential tissue expression, this antibody may recognize nestin as a doublet within a range of 198-260 kD.

Western blot analysis of Nestin. *A rat (E21) cerebrum lysate was probed with the mouse anti-rat Nestin antibody at concentrations of 2.0 µg/mL (lane 1), 1.0 µg/mL (lane 2), and 0.5 µg/mL (lane 3).*

Preparation and Storage

Store undiluted at 4°C.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Electron microscopy	Reported
Flow cytometry	Reported

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Immunohistochemistry	Reported
Fluorescence microscopy	Reported

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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