Revision 1

Store at +4C

#6994

Nestin (Rat-401) Mouse mAb (Alexa Fluor® 488 Conjugate)

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-F	R	Endogenous	Mouse IgG1	#P21263	25491

Product Usage Information

Application	Dilution
Immunofluorescence (Frozen)	1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

Nestin (Rat-401) Mouse mAb (Alexa Fluor® 488 Conjugate) detects endogenous levels of rat nestin protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with E15 rat spinal cord.

Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct immunofluorescent analysis in rat tissue. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated Nestin (Rat-401) Mouse mAb #4760.

Background

Nestin is an intermediate filament family member protein that is structurally related to the neurofilament proteins (1). It is highly expressed in the developing brain, where it may help to regulate cell structure and intracellular processes required for neural cell division and migration (1,2). Upon maturation of the brain, nestin expression is quickly downregulated and replaced by expression of the neurofilament proteins (2). Because nestin is expressed in both mature and precursor neuronal and glial cells, as well as in the developing brain and in the brain and spinal cord following damage, nestin is widely accepted as a marker of neural stem/progenitor cells (3). Research studies have shown that expression of nestin is also found in cells from various nervous system tumors, including gliomas, neuroblastomas, and astrocytomas, and it is generally accepted as a marker for neural cancer stem cells (3). However, nestin expression has also been observed in astrocytes, retina, cardiac muscle, pancreas, and other tissues (3). Therefore, the acceptance of nestin as an exclusive marker of neural stem/progenitor cells is not unanimous.

Background References

1. Michalczyk, K. and Ziman, M. (2005) *Histol Histopathol* 20, 665-71.
2. Giliarov, A.V. (2007) *Morfologiia* 131, 85-90.
3. Gilyarov, A.V. (2008) *Neurosci Behav Physiol* 38, 165-9.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IF-F: Immunofluorescence (Frozen)

Cross-Reactivity Key

R: Rat

Trademarks and Patents

Limited Uses

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