

Nestin (Rat-401) Mouse mAb



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Applications: IHC-P, IF-F	Reactivity: R	Sensitivity: Endogenous	Source/Isotype: Mouse IgG1	UniProt ID: #P21263	Entrez-Gene Id: 25491
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Product Usage Information

Application

Immunohistochemistry (Paraffin)
Immunofluorescence (Frozen)

Dilution

1:200 - 1:800
1:100 - 1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #16983.

Specificity/Sensitivity

Nestin (Rat-401) Mouse mAb detects endogenous levels of nestin protein.

Source / Purification

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

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) *Morfologija* 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

IHC-P: Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen)

Cross-Reactivity Key

R: Rat

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