

Nestin (10C2) Mouse mAb

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Applications: W, IHC-P, IF-IC	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 207-217	Source/Isotype: Mouse IgG1	UniProt ID: #P48681	Entrez-Gene Id: 10763
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Product Usage Information**Application**

Western Blotting
Immunohistochemistry (Paraffin)
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:400 - 1:1600
1:1600 - 1:6400

Storage

Supplied at 1 mg/mL in PBS containing 0.09% sodium azide. Store at -20°C. *This product will freeze at -20°C so it is recommended to aliquot into single-use vials to avoid multiple freeze/thaw cycles. A slight precipitate may be present, but will not interfere with antibody performance. This product is stable for 36 months when stored at -20C.*

Specificity/Sensitivity

Nestin (10C2) Mouse mAb recognizes endogenous levels of total nestin protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of human nestin protein.

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).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human

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