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Product Information

Anti-Nestin (C-terminal region)
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200347**

Product Description

Anti-Nestin (C-terminal region) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminal region of human nestin (GeneID: 10763), conjugated to KLH. The sequence is highly conserved (72% identity) in rat and mouse nestin. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Nestin (C-terminal region) specifically recognizes rat and mouse nestin. The antibody may be used in various immunochemical techniques including immunoblotting (~300 kDa) and immunofluorescence. Detection of the nestin band by immunoblotting is specifically inhibited by the nestin immunizing peptide.

Nestin is a type VI intermediate filament protein, that is expressed during early stages of development in the central nervous system (CNS) and in myogenesis.[1,2] Nestin is found in neurogenic progenitor cells (NPCs) and has been used as a marker for neural progenitor cells.[1] During development of the CNS, early expression of nestin mRNA is observed in the neural plate and in neuroepithelial cells and radial glial cells of the neural tube of mouse embryos. Upon differentiation of neural progenitor cells to mature neurons and glial cells, nestin expression is down-regulated and replaced by the expression of other intermediate filament proteins such as neurofilament and GFAP.[1] Nestin expression is barely detectable in the adult CNS, except for certain proliferative regions of the hippocampus and subependymal zones of the brain and spinal cord. Nestin expression is reinduced in the adult organism during pathological conditions, such as formation of glial scar after injury to the CNS and in certain types of CNS tumors.[3] Nestin is also expressed in pluripotent mouse P19 embryonic carcinoma cells which maintain basal nestin expression.[4] Compared with nestin expression, little is known about its function. Nestin specific expression is associated with morphologically dynamic cells such as proliferating and migrating cells. Nestin has been shown to play an important role in the phosphorylation-dependent disassembly of vimentin intermediate filaments during mitosis and is a potential target for cdk5 and p35 during development.[5,6]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.5 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2-4 µg/mL is recommended using lysates of HEK293T cells over-expressing rat nestin.

Immunofluorescence: a working concentration of 1-2 µg/mL is recommended using mouse P19 cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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2. Sejersen, T., and Lendahl, U., *J. Cell Sci.,* **106**, 1291-1300 (1993).
3. Frisen, J., et al., *J. Cell Biol.,* **131**, 453-464 (1995).
4. Jin, Z., et al., *J. Biol. Chem.,* **284**, 8160-8173 (2009).
5. Chou, Y.H., et al., *Mol. Biol. Cell,* **14**, 1468-1478 (2003).
6. Sahlgren, C.M., et al., *Mol. Cell. Biol.,* **23**, 5090-5106 (2003).

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