

Product Information

Anti-NOTCH4

produced in rabbit, affinity isolated antibody

Catalog Number **N5163**

Product Description

Anti-NOTCH4 is produced in rabbit using as immunogen a synthetic peptide corresponding to residues 1506-1524 [EDSIGLKALKPKAEVDEDG] of human NOTCH4 (GeneID 4855). This sequence is 89% identical to mouse and rat NOTCH4. The antibody is affinity-purified.

Anti-NOTCH4 recognizes human NOTCH4. Applications include the detection of NOTCH4 by immunoblotting (~230 kDa and cleaved ~800 kDa) and immunohistochemistry.

Notch signaling plays a key role in the normal development of many tissues and cell types, through diverse effects on differentiation, survival, and/or proliferation that are highly dependent on signal strength and cellular context. Members of the Notch gene family encode transmembrane receptors that are critical for various cell fate decisions. Notch family members share structural characteristics including an extracellular domain consisting of multiple epidermal growth factor-like (EGF) repeats, and an intracellular domain consisting of multiple different domain types. Multiple human notch proteins (NOTCH1, NOTCH2, NOTCH3, and NOTCH4) have been identified and they function as receptors for membrane bound ligands. Notch signaling is also linked to tumorigenesis as first demonstrated by the identification of a recurrent t(7;9)(q34;q34.3) chromosomal translocation involving the human NOTCH1 gene that is found in a small subset of human pre-T-cell acute lymphoblastic leukemias (T-ALL). Since this discovery, aberrant Notch signaling has been suggested to be involved in a wide variety of human neoplasms. NOTCH4 functions as a receptor for membrane bound ligands, and may play a role in vascular, renal and hepatic development. NOTCH4 may also be associated with susceptibility to schizophrenia in a small portion of cases.

Reagent

Supplied as a solution in phosphate buffered saline, containing 0.02% sodium azide.
Antibody concentration: ~1.0 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 three months. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended.

Product Profile

Immunoblotting: a working dilution of 1:500 to 1:1,000 is recommended.

Immunohistochemistry: a working dilution of 1:100 to 1:200 is recommended.

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

References

1. Allenspach, E. J., et al., Notch signaling in cancer. *Cancer Biol. Ther.* **1**(5):466-476 (2002).
2. Leong, K. G., et al., Activated Notch4 inhibits angiogenesis: role of beta 1-integrin activation. *Mol. Cell. Biol.* **22**(8):2830-2841 (2002).
3. Schnabel, M., et al., Differential expression of Notch genes in human osteoblastic cells. *Int. J. Mol. Med.* **9**(3):229-232 (2002).
4. Fan, J. B., et al., A family-based and case-control association study of the NOTCH4 gene and schizophrenia. *Mol. Psychiatry* **7**(1):100-103 (2002).

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