

Product Information

Anti-NOTCH3

produced in rabbit, affinity isolated antibody

Catalog Number **N5038**

Product Description

Anti-NOTCH3 is produced in rabbit using as immunogen a synthetic peptide corresponding to residues 1661-1676 [GVMVARRKREHSTLWF] of human NOTCH3 (GeneID 4854). The antibody is affinity-purified.

Anti-NOTCH3 recognizes human, mouse, and rat NOTCH3. Applications include the detection of NOTCH3 by immunoblotting (~280 kDa and cleaved ~230 kDa).

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 a 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. Mutations in NOTCH3 have been identified as the underlying cause of cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL).

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.

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

References

1. Bellavia, D., et al., Combined expression of pTalpha and Notch3 in T cell leukemia identifies the requirement of preTCR for leukemogenesis. *Proc. Natl. Acad. Sci. U S A.* **99**(6), 3788-3793 (2002).
2. Ito, D., et al., Notch3 gene polymorphism and ischaemic cerebrovascular disease. *J. Neurol. Neurosurg. Psychiatry.* **72**(3), 382-384 (2002).
3. Sugaya, K., et al., Three genes in the human MHC class III region near the junction with the class II: gene for receptor of advanced glycosylation end products, PBX2 homeobox gene and a notch homolog, human counterpart of mouse mammary tumor gene int-3. *Genomics* **23**(2), 408-419 (1994).

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