

PRODUCT INFORMATION



Notch1 (mouse, recombinant; aa 19-526)

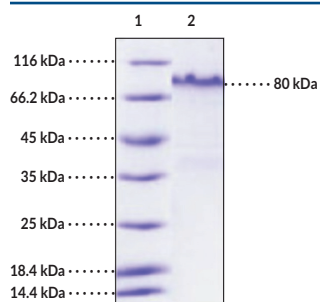
Item No. 34633

Overview and Properties

Synonyms: Motch A, Neurogenic Locus Notch Homolog Protein 1, Notch Receptor 1, Tan1
Source: Active recombinant mouse C-terminal His-tagged Notch1 expressed in insect cells
Amino Acids: 19-526
Uniprot No.: Q01705
Molecular Weight: 55 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥82% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile 20 mM Tris, pH 7.4, with 500 mM sodium chloride and 10% glycerol
Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay
Bioactivity: See figures for details

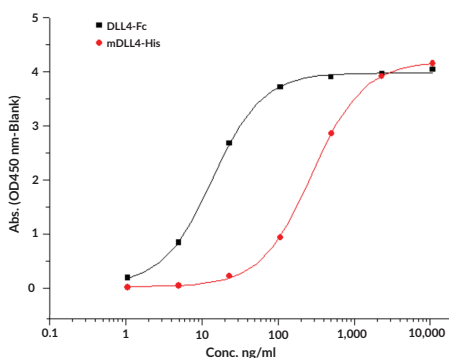
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: Notch1

SDS-PAGE Analysis of Notch1. This protein has a calculated molecular weight of 55 kDa. It has an apparent molecular weight of approximately 80 kDa by SDS-PAGE under reducing conditions due to glycosylation.



Binding ability of Notch1 in a functional ELISA.

1. Immobilized human DLL4 at 10 μg/ml (100 μl/well) can bind Notch1. The EC₅₀ of Notch1 is 40 ng/ml.
2. Immobilized mouse DLL4-his at 10 μg/ml (100 μl/well) can bind Notch1. The EC₅₀ of Notch1 is 30 ng/ml.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Notch1 is a single-pass transmembrane receptor and member of the Notch family.¹ It is synthesized as a precursor that is cleaved by a furin-like convertase to produce two subunits: the noncovalently associated extracellular (NEC) subunit, which contains 36 EGF-like repeats involved in ligand binding, and the transmembrane (NTM) subunit, which contains the transmembrane domain and several other domains that, together, act as a ligand-activated transcription factor.¹⁻³ Notch1 is expressed in endothelial cells, primarily in arteries, as well as in epididymal and subcutaneous fat and the brain.^{4,5} It is bound by ligands from the Jagged or Delta families expressed on adjacent cells, which induces a conformational change and sequential cleavage by a disintegrin and metalloproteinase domain-containing protein (ADAM) and γ -secretase, releasing the intracellular domain, which translocates to the nucleus and induces the transcription of Notch1 target genes as part of a transcriptional activation complex.³ Notch1 is necessary for arterial-venous differentiation during development and the maintenance of hippocampal stem cells in adulthood.^{4,6} It is also involved in tumorigenesis, regulating cell adhesion and metastasis, and is associated with a variety of solid tumor and hematological cancers.^{7,8} Mutations in *NOTCH1* have been found in patients with chronic lymphocytic leukemia (CLL) and T cell acute lymphoblastic leukemia (T-ALL) and are associated with poor outcomes in patients with CLL.³ Cayman's Notch1 (mouse, recombinant; aa 19-526) protein can be used for binding assays. This protein consists of 518 amino acids, has a calculated molecular weight of 55 kDa, and a predicted N-terminus of Ala-19 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 80 kDa due to glycosylation.

References

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7. Hassen, W.A., Yoshida, R., Kudoh, S., *et al.* Notch1 controls cell invasion and metastasis in small cell lung carcinoma cell lines. *Lung Cancer* **86**(3), 304-310 (2014).
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