



Rabbit Anti-NOTCH1 antibody

SL11976R

Product Name:	NOTCH1
Chinese Name:	Notch1 蛋白抗体
Alias:	hN1; Neurogenic locus Notch homolog protein 1; activated Notch 1; activated Notch-1; Notch homolog 1 translocation associated (Drosophila); NOTCH1; TAN1; Translocation-associated Notch protein TAN-1;
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human, Mouse, Rat, Chicken, Dog, Cow, Horse, Sheep,
Applications:	ELISA=1:500-1000 IHC-P=1:400-800 IHC-F=1:400-800 ICC=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	271kDa
Cellular localization:	The nucleus The cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human NOTCH1:1651-1750/2555<Extracellular>
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	This gene encodes a member of the Notch family. Members of this Type 1 transmembrane protein family 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. Notch family

members play a role in a variety of developmental processes by controlling cell fate decisions. The Notch signaling network is an evolutionarily conserved intercellular signaling pathway which regulates interactions between physically adjacent cells. In *Drosophila*, notch interaction with its cell-bound ligands (delta, serrate) establishes an intercellular signaling pathway that plays a key role in development. Homologues of the notch-ligands have also been identified in human, but precise interactions between these ligands and the human notch homologues remain to be determined. This protein is cleaved in the trans-Golgi network, and presented on the cell surface as a heterodimer. This protein functions as a receptor for membrane bound ligands, and may play multiple roles during development. [provided by RefSeq, Jul 2008].

Function:

Notch family members play a role in a variety of developmental processes by controlling cell fate decisions. The Notch signaling network is an evolutionarily conserved intercellular signaling pathway which regulates interactions between physically adjacent cells. The protein is cleaved in the trans-Golgi network, and presented on the cell surface as a heterodimer. This protein functions as a receptor for membrane bound ligands. Once the Notch extracellular domain interacts with a ligand, a protease called TACE (Tumor Necrosis Factor Alpha Converting Enzyme) cleaves the Notch protein just outside the membrane. This releases the extracellular portion of Notch, which continues to interact with the ligand. The ligand plus the Notch extracellular domain is then endocytosed by the ligand expressing cell. After this first cleavage, an enzyme called gamma-secretase cleaves the remaining part of the Notch protein just inside the inner leaflet of the cell membrane. This releases the intracellular portion of the Notch protein, which then moves to the nucleus and causes various genes to be expressed. There are many other proteins involved in the intracellular portion of the Notch signalling cascade.

Subunit:

Heterodimer of a C-terminal fragment N(TM) and an N-terminal fragment N(EC) which are probably linked by disulfide bonds. Interacts with DNER, DTX1, DTX2 and RBPJ/RBPSUH. Also interacts with MAML1, MAML2 and MAML3 which act as transcriptional coactivators for NOTCH1. The activated membrane-bound form interacts with AAK1 which promotes NOTCH1 stabilization. Forms a trimeric complex with FBXW7 and SGK1. Interacts with HIF1AN. HIF1AN negatively regulates the function of notch intracellular domain (NICD), accelerating myogenic differentiation

Subcellular Location:

Cell membrane; Single-pass type I membrane protein.

Notch 1 intracellular domain: Nucleus. Note=Following proteolytical processing NICD is translocated to the nucleus

Tissue Specificity:

In fetal tissues most abundant in spleen, brain stem and lung. Also present in most adult tissues where it is found mainly in lymphoid tissues.

Post-translational modifications:

Synthesized in the endoplasmic reticulum as an inactive form which is proteolytically cleaved by a furin-like convertase in the trans-Golgi network before it reaches the plasma membrane to yield an active, ligand-accessible form. Cleavage results in a C-terminal fragment N(TM) and a N-terminal fragment N(EC). Following ligand binding, it is cleaved by TNF-alpha converting enzyme (TACE) to yield a membrane-associated intermediate fragment called notch extracellular truncation (NEXT). Following endocytosis, this fragment is then cleaved by presenilin dependent gamma-secretase to release a notch-derived peptide containing the intracellular domain (NICD) from the membrane (By similarity).

Phosphorylated (By similarity).

O-glycosylated on the EGF-like domains. Contains both O-linked fucose and O-linked glucose.

Ubiquitinated; undergoes 'Lys-29'-linked polyubiquitination catalyzed by ITCH.

Monoubiquitination at Lys-1759 is required for activation by gamma-secretase cleavage, it promotes interaction with AAK1, which stabilizes it. Deubiquitination by EIF3F is necessary for nuclear import of activated Notch.

Hydroxylated at Asn-1955 by HIF1AN. Hydroxylated at Asn-2022 by HIF1AN (By similarity). Hydroxylation reduces affinity for HIF1AN and may thus indirectly modulate negative regulation of NICD

DISEASE:

Defects in NOTCH1 are a cause of aortic valve disease 1 (AOVD1) [MIM:109730]. A common defect in the aortic valve in which two rather than three leaflets are present. It is often associated with aortic valve calcification and insufficiency. In extreme cases, the blood flow may be so restricted that the left ventricle fails to grow, resulting in hypoplastic left heart syndrome.

Similarity:

Belongs to the NOTCH family.

Contains 5 ANK repeats.

Contains 36 EGF-like domains.

Contains 3 LNR (Lin/Notch) repeats.

SWISS:

P46531

Gene ID:

4851

Database links:

[Entrez Gene: 4851](#) Human

[Entrez Gene: 18128](#) Mouse

[Entrez Gene: 767866](#) Cow

[Olim: 190198](#) Human

[SwissProt: P46531](#) Human

[SwissProt: Q01705](#) Mouse

[Unigene: 495473](#) Human

[Unigene: 290610](#) Mouse

Important Note:

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