abcam

Product datasheet

Anti-Notch1 antibody [E6] ab288420

Recombinant

2 Images

Overview

Product name	Anti-Notch1 antibody [E6]
Description	Mouse monoclonal [E6] to Notch1
Host species	Mouse
Specificity	An engineered ScFv fragment antibody that binds to both mouse mNRR1 and human hNRR1 but not NRR2.
Tested applications	**Suitable for:** ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse
Immunogen	Fusion protein corresponding to Human Notch1. This antibody was selected against a fusion protein consisting of EGF domains 1–12 of murine Notch1 fused to a human Fc domain and binds to to the NRR of mouse Notch1. Database link: **P46531**
Positive control	ICC/IF: HeLa cells

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Proclin 300 Constituent: 99% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	E6
Isotype	IgG1
Light chain type	lambda

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab288420 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 10 µg/ml.

Target

Function

Functions as a receptor for membrane-bound ligands Jagged1, Jagged2 and Delta1 to regulate cell-fate determination. Upon ligand activation through the released notch intracellular domain (NICD) it forms a transcriptional activator complex with RBPJ/RBPSUH and activates genes of the enhancer of split locus. Affects the implementation of differentiation, proliferation and apoptotic programs. May be important for normal lymphocyte function. In altered form, may contribute to transformation or progression in some T-cell neoplasms. Involved in the maturation of both CD4+ and CD8+ cells in the thymus. May be important for follicular differentiation and possibly cell fate selection within the follicle. During cerebellar development, may function as a receptor for neuronal DNER and may be involved in the differentiation of Bergmann glia.

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.

Involvement in disease

Defects in NOTCH1 are a cause of bicuspid aortic valve (BAV) [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.

Sequence similarities

Belongs to the NOTCH family.
Contains 5 ANK repeats.
Contains 36 EGF-like domains.
Contains 3 LNR (Lin/Notch) repeats.

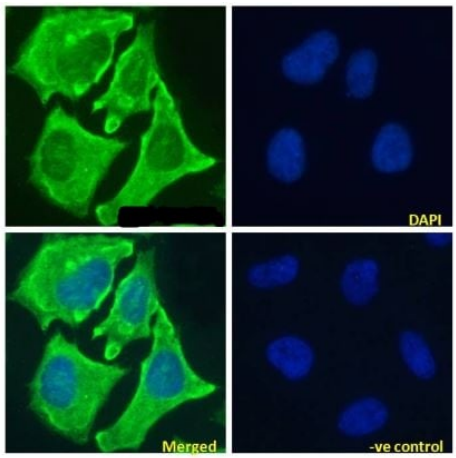
Post-translational modifications

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). This fragment is then cleaved by presenilin dependent gamma-secretase to release a notch-derived peptide containing the intracellular domain (NICD) from the membrane.
Phosphorylated.
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.

Cellular localization

Cell membrane and Nucleus. Following proteolytical processing NICD is translocated to the nucleus.

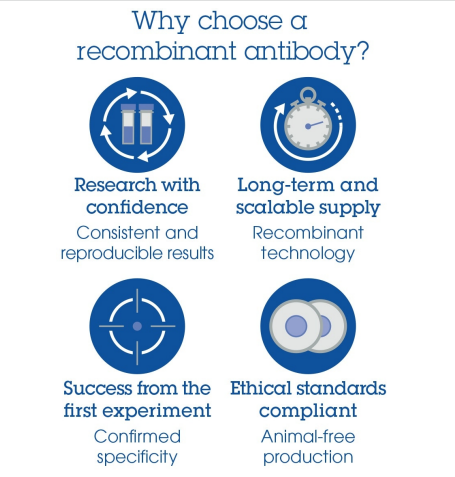
Images



Immunocytochemistry/ Immunofluorescence - Anti-Notch1 antibody [E6] (ab288420)

The image data was generated using the chimeric rabbit IgG version of the same antibody clone.

Immunofluoresence staining of fixed HeLa cells with anti-Notch 1 antibody E6 Immunofluorescence analysis of paraformaldehyde fixed HeLa cells, permeabilized with 0.15% Triton stained with the chimeric rabbit IgG version of E6 at 10 µg/ml for 1h followed by Alexa Fluor® 488 secondary antibody (1 µg/ml), showing membrane and cytoplasmic staining. The nuclear stain is DAPI (blue). Panels show from left-right, top-bottom anti-Notch 1 antibody E6, DAPI, merged channels and a negative control. The negative control was stained with unimmunized rabbit IgG followed by Alexa Fluor® 488 secondary antibody.



Anti-Notch1 antibody [E6] (ab288420)

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