### Overview

**Product name**: Anti-Notch1 intracellular domain antibody  
**Description**: Rabbit polyclonal to Notch1 intracellular domain  
**Host species**: Rabbit  
**Tested applications**: Suitable for: WB, IHC-Fr  
**Species reactivity**: Reacts with: Human  
**Predicted to work with**: Mouse, Rat, Horse, Guinea pig, Cow, Dog, Zebrafish  
**Immunogen**: Synthetic peptide corresponding to a region within c-terminal amino acids 2506-2555 (EHPFLTPSPE SPDQWSSSSP HSNVSDWSEG VSSPPTSMQS QIARIPEAFK) of Human Notch1 intracellular domain (NP_060087).  
**Positive control**: WB: 293T cell lysate; HT1080 whole cell lysate. IHC-P: Human lung tissue.

### Properties

**Form**: Liquid  
**Storage instructions**: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.  
**Storage buffer**: Preservative: 0.09% Sodium azide  
Consitituent: 2% Sucrose, PBS  
**Purity**: Immunogen affinity purified  
**Clonality**: Polyclonal  
**Isotype**: IgG

### Applications

Our Abpromise guarantee covers the use of ab83232 in the following tested applications.

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

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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

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<tr>
<td>WB</td>
<td><img src="https://example.com" alt="" /></td>
<td>Use a concentration of 1 µg/ml. Predicted molecular weight: 273 kDa for Notch1 full length protein and 88 kDa for Notch1 intracellular domain. Good results were obtained when blocked with 5% non-fat dry milk in 0.05% PBS-T.</td>
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<tr>
<td>IHC-Fr</td>
<td><img src="https://example.com" alt="" /></td>
<td>Use at an assay dependent concentration.</td>
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Western blot - Anti-Notch1 intracellular domain antibody (ab83232)

Anti-Notch1 intracellular domain antibody (ab83232) at 1 µg/ml (in 5% skim milk / PBS buffer) + 293T cell lysate at 10 µg

**Secondary**

HRP conjugated anti-Rabbit IgG at 1/50000 dilution

**Observed band size:** 88 kDa

*why is the actual band size different from the predicted?*

Gel concentration: 12%
Western blot - Anti-Notch1 intracellular domain antibody (ab83232)

Anti-Notch1 intracellular domain antibody (ab83232) at 1 µg/ml + HT1080 (human fibrosarcoma cell line) whole cell lysate

Immunohistochemistry (Frozen sections) - Anti-Notch1 intracellular domain antibody (ab83232)

Immunohistochemistry (Frozen sections) - Anti-Notch1 intracellular domain antibody (ab83232)

ab83232 staining Notch1 intracellular domain in 16µm sections of Apteronotus leptorhynchus brain tissue by Immunohistochemistry (Frozen sections).

Tissue was fixed in paraformaldehyde, permeabilized using 0.3% Triton X-100, then blocked with 3% sheep serum, 1% BSA, 1% teleostean gelatine in TBS for 1 hour at 24°C, and then incubated with ab83232 at a 1/100 dilution for 18 hours at 4°C. The secondary used was an Alexa-Fluor 488 conjugated goat anti-rabbit polyclonal, used at a 1/200 dilution.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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