# abcam

## Product datasheet

## Anti-Notchl antibody [E6] ab245686

Recombinant

## 2 Images

#### Overview

Product name Anti-Notch1 antibody [E6]

**Description** Rabbit monoclonal [E6] to Notch1

Host species Rabbit

Tested applications
Suitable for: ICC/IF
Species reactivity
Reacts with: Human

Immunogen Recombinant fragment (Fc-tag). ab245686 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: Q01705

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 numberE6IsotypeIgGLight chain typelambda

## **Applications**

The Abpromise guarantee Our Abpromise guarantee covers the use of ab245686 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.

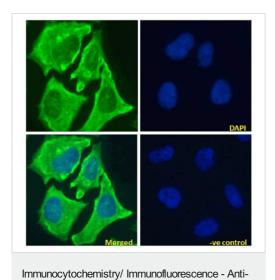
O-glycosylated on the EGF-like domains. Contains both O-linked fucose and O-linked glucose.

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**



Notch1 antibody [E6] (ab245686)

PFA fixed, 0.15% Triton permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Notch1 using ab245686 at 10  $\mu$ g/ml for 1 hour (green) followed by Alexa Fluor 488 secondary antibody (1  $\mu$ g/ml), in ICC/IF. The nuclear counter stain is DAPI (blue).



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