abcam

Product datasheet

# Anti-Notch1 antibody [mN1A] ab128076

KO 評価済

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## 製品の概要

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| **製品名** | Anti-Notch1 antibody [mN1A] |
| **製品の詳細** | Mouse monoclonal [mN1A] to Notch1 |
| **由来種** | Mouse |
| **特異性** | ab128076 recognizes intracellular domain of Notch1 protein, mainly its activated form. The unprocessed Notch1 protein is recognized with lower affinity. |
| **アプリケーション** | **適用あり:** WB, Flow Cyt (Intra) |
| **種交差性** | **交差種:** Human<br>**非交差種:** Rat |
| **免疫原** | Recombinant fragment corresponding to Mouse Notch1. GST fusion protein containing cdc10-NCR region of mouse Notch1<br>Database link: **P46531** |
| **ポジティブ・コントロール** | WB: HAP1 cell lysate Flow Cyt (Intra): SH-SY5Y cells, Jurkat cells. |
| **特記事項** | The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.<br>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As |

## 製品の特性

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| **製品の状態** | Liquid |
| **保存方法** | 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. |
| **バッファー** | pH: 7.40<br>Preservative: 0.1% Sodium azide<br>Constituent: 99% PBS |
| **精製度** | Protein A purified |

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| **特記事項（精製）** | Purified from cell culture supernatant. Purity >95% by SDS-PAGE. |
| **ポリ/モノ** | モノクローナル |
| **クローン名** | mN1A |
| **アイソタイプ** | IgG1 |

## アプリケーション

**The Abpromise guarantee** **Abpromise保証は、次のテスト済みアプリケーションにおけるab128076の使用に適用されます**

**アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。**

| アプリケーション | Abreviews | 特記事項 |
|---|---|---|
| **WB** | ★★★★☆ (4) | Use at an assay dependent concentration. Predicted molecular weight: 272 kDa. |
| **Flow Cyt (Intra)** | | Use 1µg for $10^6$ cells.<br>**ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |

## ターゲット情報

**機能**

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.

**組織特異性**

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.

**関連疾患**

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.

**配列類似性**

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

**翻訳後修飾**

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.

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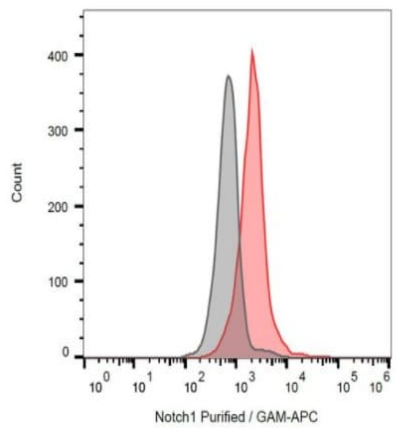
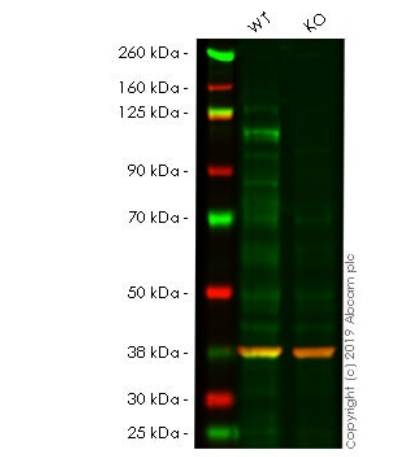
| | Phosphorylated.<br>O-glycosylated on the EGF-like domains. Contains both O-linked fucose and O-linked glucose.<br>Ubiquitinated; undergoes 'Lys-29'-linked polyubiquitination catalyzed by ITCH. |
| **細胞内局在** | Cell membrane and Nucleus. Following proteolytical processing NICD is translocated to the nucleus. |

## 画像




Flow Cytometry (Intracellular) - Anti-Notch1 antibody [mN1A] (ab128076)

Separation of Jurkat cells stained using anti-Notch1 (ab128076) purified antibody (concentration in sample 16 µg/ml, GAM APC, red) from Jurkat cells unstained by primary antibody (GAM APC, black) in Intracellular Flow Cytometry analysis (surface staining).




Western blot - Anti-Notch1 antibody [mN1A] (ab128076)

**All lanes :** Anti-Notch1 antibody [mN1A] (ab128076) at 1/1000 dilution

**Lane 1 :** Wild-type HAP1 whole cell lysate
**Lane 2 :** NOTCH1 knockout HAP1 whole cell lysate

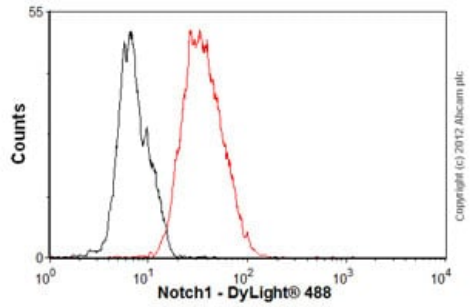
Lysates/proteins at 40 µg per lane.

**Predicted band size:** 272 kDa

**Lanes 1 - 2:** Merged signal (red and green). Green - ab128076 observed at 110 kDa. Red - loading control, **ab181602**, observed at 37 kDa.

ab128076 was shown to recognize NOTCH1 in wild-type HAP1 cells as signal was lost at the expected MW in NOTCH1 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and NOTCH1 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab128076 and **ab181602** (Rabbit anti-GAPDH loading

control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed **ab216772** and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed **ab216777** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.




Flow Cytometry (Intracellular) - Anti-Notch1 antibody [mN1A] (ab128076)

Overlay histogram showing SH-SY5Y cells stained with ab128076 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab128076, 1µg/1x$10^6$ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x$10^6$ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SH-SY5Y cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



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