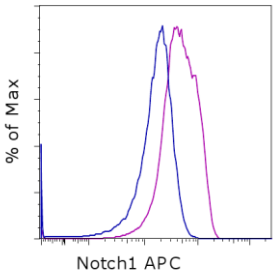
Anti-Human Notch1 APC

Catalog Number: 17-9889
RUO: For Research Use Only. Not for use in diagnostic procedures.



Normal human peripheral blood cells were either unstimulated (blue histogram) or stimulated with immobilized Anti-Human CD3 Functional Grade Purified (cat. 16-0039) for 24 hours (purple histogram) and then stained with Anti-Human Notch1 APC. Cells in the lymphocyte gate were used for analysis.

Product Information

Contents: Anti-Human Notch1 APC
REF **Catalog Number:** 17-9889
Clone: MHN1-519
Concentration: 5 uL (0.25 ug)/test
Host/Isotype: Mouse IgG1

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C. Do not freeze. Light-sensitive material.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial

Description

This MHN1-519 monoclonal antibody reacts with human Notch1, one of four members of the Notch family of receptors. Notch receptors are 300-kDa single-pass transmembrane proteins. While the extracellular domain contains numerous epidermal growth factor-like repeats for ligand binding, the intracellular domain is involved in cell signaling. Upon binding its membrane-bound ligand (either Delta or Jagged), the Notch receptor undergoes proteolytic cleavage, first by ADAM-family metalloproteases and then by γ-secretase. The second cleavage event releases the Notch intracellular domain (NICD), which subsequently translocates into the nucleus, heterodimerizes with the DNA-binding protein RBP-J, recruits co-activator molecules, and ultimately activates transcription.

Notch 1 is expressed on thymocytes, bone marrow hematopoietic stem cells, T and NK cells. Lower Notch1 expression levels can be found on B cells and monocytes. Studies show that some subsets of T-cell acute lymphoblastic leukemia (T-ALL) arise due to Notch1 chromosomal translocation with the TCRβ gene, which results in the expression of constitutively active Notch1. This cell surface receptor is involved in T cell lineage commitment, thymocyte development, and Th2 differentiation.

The MHN1-519 monoclonal antibody recognizes the extracellular domain of Notch1, and has also been reported to block Notch1 binding to Delta-like 4.

Applications Reported

This MHN1-519 antibody has been reported for use in flow cytometric analysis.

Applications Tested

This MHN1-519 antibody has been pre-titrated and tested by flow cytometric analysis of normal peripheral blood cells. This can be used at 5 µl (0.25 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µl. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test.

References

Radtke F, Fasnacht N, Macdonald HR. Notch signaling in the immune system. Immunity. 2010 Jan 29;32(1):14-27.

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Haraguchi K, Suzuki T, Koyama N, Kumano K, Nakahara F, Matsumoto A, Yokoyama Y, Sakata-Yanagimoto M, Masuda S, Takahashi T, Kamijo A, Takahashi K, Takanashi M, Okuyama Y, Yasutomo K, Sakano S, Yagita H, Kurokawa M, Ogawa S, Chiba S. h activation induces the generation of functional NK cells from human cord blood CD34-positive cells devoid of IL-15. J Immunol. 2009 May 15;182(10):6168-78. (**MHN1-519**, FC, FA, Pubmed)

Amsen D, Antov A, Jankovic D, Sher A, Radtke F, Souabni A, Busslinger M, McCright B, Gridley T, Flavell RA. Direct regulation of Gata3 expression determines the T helper differentiation potential of Notch. Immunity. 2007 Jul;27(1):89-99.

Ellisen LW, Bird J, West DC, Soreng AL, Reynolds TC, Smith SD, Sklar J. TAN-1, the human homolog of the Drosophila notch gene, is broken by chromosomal translocations in T lymphoblastic neoplasms. Cell. 1991 Aug 23;66(4):649-61.

Related Products
12-5785 Anti-Human/Mouse Notch1 PE (mN1A)
16-0039 Anti-Human CD3 Functional Grade Purified (HIT3a)
17-4714 Mouse IgG1 K Isotype Control APC (P3.6.2.8.1)

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