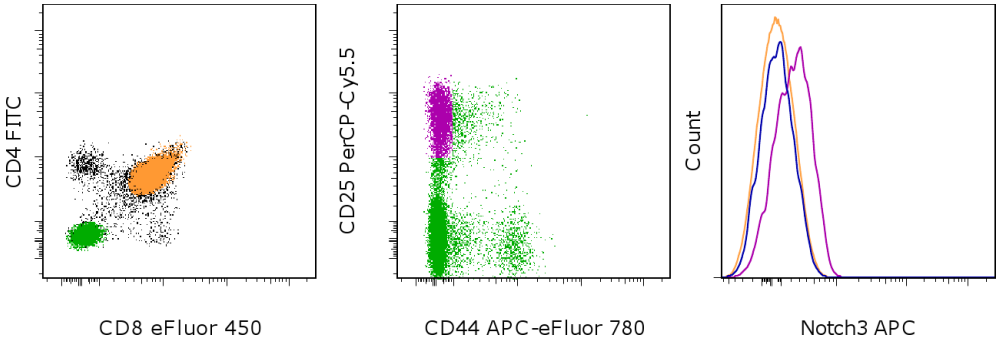
Anti-Mouse Notch3 APC

Catalog Number: 17-5763
Also known as: Neurogenic locus notch homolog protein 3
RUO: For Research Use Only. Not for use in diagnostic procedures.



Staining of C57Bl/6 thymocytes with Anti-Mouse CD8a eFluor® 450 (cat. 48-0081), Anti-Mouse CD4 FITC (cat. 11-0042) and 0.125 ug of Armenian Hamster IgG Isotype Control APC (cat. 17-4888) (blue histogram) or 0.125 ug of Anti-Mouse Notch3 APC. CD49b+ B220+ CD11b+ gamma delta TCR+ cells were excluded (PE-gate) and CD4+CD8+ DP cells (orange histogram) or CD4-CD8-CD25+CD44- cells (purple histogram) were used for analysis.

Product Information

Contents: Anti-Mouse Notch3 APC
REF **Catalog Number:** 17-5763
Clone: HMN3-133
Concentration: 0.2 mg/mL
Host/Isotype: Armenian Hamster IgG

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
Contains sodium azide

Description

This HMN3-133 monoclonal antibody reacts with mouse Notch3, 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 3 expression has been demonstrated on regulatory T cells and some thymocyte subsets, including CD4-CD8- and CD8SP cells. In addition, this Notch receptor is prevalent in vascular smooth muscle and the central nervous system. In addition to its role in stem cell hematopoiesis, Notch 3 plays a pivotal role in mammalian T cell lineage commitment and thymocyte development. Specifically, Notch 3 has been implicated in the CD4-CD8- double negative (DN) to CD4+CD8+ double positive transition with greatest expression in DN3 (CD4-CD8-CD25+CD44-) cells. Notch 3 may also be involved in regulating the pre-TCR checkpoint via crosstalk with the NFkappaB and E2A signaling pathways. Finally, overexpression of Notch 3 has been implicated in leukemia.

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Applications Reported
This HMN3-133 antibody has been reported for use in flow cytometric analysis.

Applications Tested
This HMN3-133 antibody has been tested by flow cytometric analysis of mouse thymocytes. This can be used at less than or equal to 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. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

References
Sekine C, Moriyama Y, Koyanagi A, Koyama N, Ogata H, Okumura K, Yagita H. Differential regulation of splenic CD8- dendritic cells and marginal zone B cells by Notch ligands. Int Immunol. 2009 Jan 30. (**HMN3-133**, FC, Pubmed)

Moriyama Y, Sekine C, Koyanagi A, Koyama N, Ogata H, Chiba S, Hirose S, Okumura K, Yagita H. Delta-like 1 is essential for the maintenance of marginal zone B cells in normal mice but not in autoimmune mice. Int Immunol. 2008 Jun;20(6):763-73. (**HMN3-133**, FC, Pubmed)

D Bellavia, S Checquolo, AF Campese, MP Felli, A Gulino and I Screpanti. Notch3: from subtle structural differences to functional diversity. Review. Oncogene 2008; 27, 5092–5098

Related Products
11-0042 Anti-Mouse CD4 FITC (RM4-5)
12-0112 Anti-Mouse CD11b PE (M1/70)
12-0452 Anti-Human/Mouse CD45R (B220) PE (RA3-6B2)
12-5711 Anti-Mouse gamma delta TCR PE (eBioGL3 (GL-3, GL3))
12-5971 Anti-Mouse CD49b (Integrin alpha 2) PE (DX5)
17-4888 Armenian Hamster IgG Isotype Control APC (eBio299Arm)
45-0251 Anti-Mouse CD25 PerCP-Cy5.5 (PC61.5)
47-0441 Anti-Human/Mouse CD44 APC-eFluor® 780 (IM7)
48-0081 Anti-Mouse CD8a eFluor® 450 (53-6.7)

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