

Technical Data Sheet

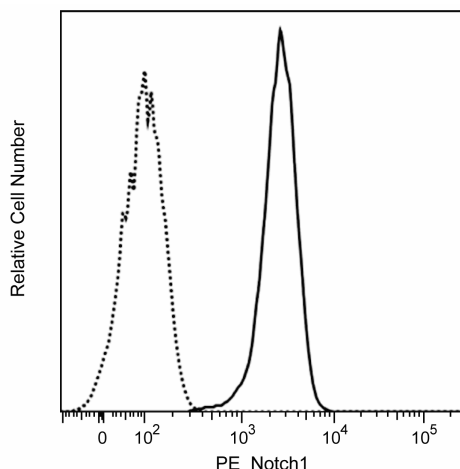
PE Mouse anti-Human Notch1

Product Information

Material Number:	563421
Alternate Name:	NOTCH1; Notch 1; NOTC1; hN1; TAN1; Neurogenic locus notch homolog protein 1
Size:	50 tests
Vol. per Test:	5 µl
Clone:	MHN1-519
Immunogen:	Human Notch1 Recombinant Protein
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The MHN1-519 monoclonal antibody specifically binds to an extracellular domain of human Notch1. Notch1 is a type 1 transmembrane glycoprotein receptor and member of the Notch family that includes Notch1-Notch4. Notch1 is cleaved in the Golgi and presents as a cell surface heterodimeric receptor. The Notch1 receptor can bind to several membrane-bound ligands including Jagged1, Jagged2, Delta1 and Delta4. Upon ligand binding, Notch1 undergoes proteolytic cleavage that results in the release of the Notch intracellular domain, NICD. NICD translocates to the nucleus where it forms a transcriptional activator complex with various transcriptional factors. These multimeric complexes either positively or negatively regulate the expression of multiple genes including those that orchestrate many facets of embryonic development and the subsequent functioning of multiple organ systems such as the immune, cardiovascular and nervous systems. Within the immune system, Notch signaling significantly affects the development, proliferation, differentiation and survival of numerous cell types including thymocytes and subsets of T and B lymphocytes and dendritic cells. In altered forms, Notch1 has been associated with certain cardiovascular diseases and with some lymphocyte neoplasms.



Flow cytometric analysis of Notch1 expression on stimulated human peripheral blood lymphocytes. Phytohemagglutinin-stimulated (3 days) peripheral blood mononuclear cells were stained with either PE Mouse IgG1, κ Isotype Control (554680; dashed line histogram) or PE Mouse Anti-Human Notch-1 antibody (Cat. No. 563421; solid line histogram) at matched concentrations. The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphoblasts. Flow cytometric analysis was performed using a BD FACSCanto™ II Flow Cytometry System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
555746	Purified Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21

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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

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Chiba S. Notch signaling in stem cell systems. *Stem Cells*. 2006; 24(11):2437-2447. (Biology)

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Haraguchi K, Suzuki T, Koyama N et al. Notch activation induces the generation of functional NK cells from human cord blood CD34-positive cells devoid of IL-15. *J Immunol*. 2009; 182(10):6168-6178. (Immunogen: Blocking, ELISA, Flow cytometry, Inhibition)

Milner LA, Kopan R, Martin DI, Bernstein ID. A human homologue of the Drosophila developmental gene, Notch, is expressed in CD34+ hematopoietic precursors. *Blood*. 1994; 83(8):2057-2062. (Biology)

Yamada S, Ebihara S, Asada M, et al. Role of ephrinB2 in nonproductive angiogenesis induced by Delta-like 4 blockade. *Blood*. 2009; 113(15):3631-3639. (Clone-specific: Flow cytometry)

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