

Technical Data Sheet

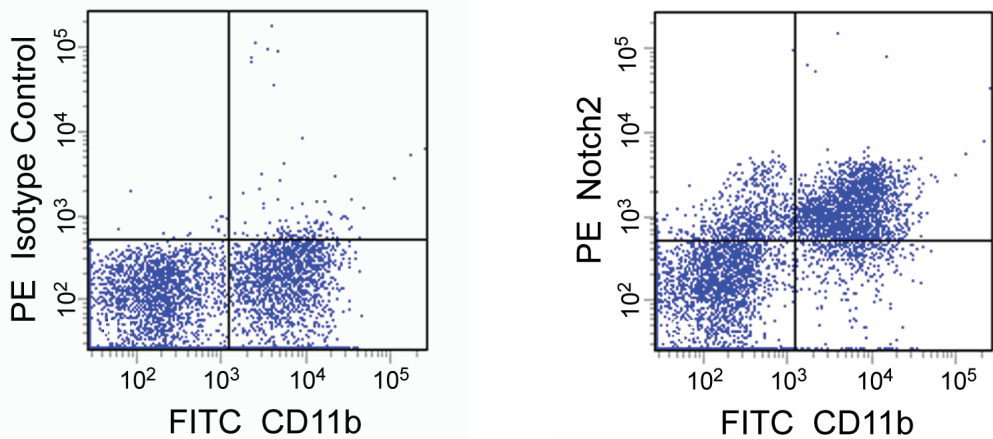
PE Rat anti-Mouse Notch2

Product Information

Material Number:	562755
Alternate Name:	Notch2; Notch 2; NOTC2; Motch B; N2
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	16F11
Immunogen:	Mouse Notch2 extracellular domain Recombinant Protein
Isotype:	Rat IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 16F11 monoclonal antibody specifically binds to the extracellular domain of Notch2. This Type 1 transmembrane protein is a member of the Notch family that includes Notch1-4. Notch ligands include membrane-bound Jagged1, Jagged2 and Delta-like1, 3 and 4. Notch receptors mediate juxtacrine signals between adjacent cells. Upon ligand binding, Notch2 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 the RBP-J DNA binding factor and other transcriptional cofactors. These multimeric complexes regulate the expression of multiple genes including those that orchestrate many facets of embryonic development and the subsequent functioning of cells within multiple organ systems. Notch2 is expressed on bone marrow cells, DN1 and DN2 thymocytes, B cells and activated T cells. Notch2 plays multiple roles in the immune system including the development of marginal zone B cells and the regulation of granzyme B expression by CD8+ T cells. In altered forms, Notch2 has been implicated in cellular transformation or progression in various neoplasms.



**Multicolor flow cytometric analysis of Notch2 expression on BALB/c mouse bone marrow cells.** Mouse bone marrow cells were stained with FITC Rat Anti-Mouse CD11b antibody (Cat. No. 553310/557396/561688) and either PE Rat IgG1, κ Isotype Control (Cat. No. 554685, Left Panel) or PE Rat Anti-Mouse Notch2 antibody (Cat. No. 562755, Right Panel). The two-color flow cytometric dot plots showing the expression of CD11b versus Notch2 (or Ig Isotype Control staining) were derived from gated events with the forward and side light-scatter characteristics of viable bone marrow cells. Flow cytometry was performed using a BD FACSCanto™ II System.

Preparation and Storage

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

Application Notes

Application

Flow cytometry	Routinely Tested
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## Suggested Companion Products

Catalog Number	Name	Size	Clone
554685	PE Rat IgG1, $\kappa$ Isotype Control	0.1 mg	R3-34
554656	Stain Buffer (FBS)	500 ml	(none)
553310	FITC Rat Anti-Mouse CD11b	0.5 mg	M1/70
557396	FITC Rat Anti-Mouse CD11b	0.1 mg	M1/70
561688	FITC Rat Anti-Mouse CD11b	25 $\mu$ g	M1/70

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
4. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.
5. 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.

## References

Fiorini E, Merck E, Wilson A, et al. Dynamic regulation of Notch1 and Notch2 surface expression during T cell development and activation revealed by novel monoclonal antibodies. *J Immunol.* 2009; 183(11):7212-7222. (Immunogen: Flow cytometry, Immunofluorescence)

Maekawa Y, Minato Y, Ishifune C, et al. Notch2 integrates signaling by the transcription factors RBP-J and CREB1 to promote T cell cytotoxicity. *Nat Immunol.* 2008; 9(10):1140-1147. (Biology)

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

Saito T, Chiba S, Ichikawa M, et al. Notch2 is preferentially expressed in mature B cells and indispensable for marginal zone B lineage development. *Immunity.* 2003; 18(5):675-685. (Biology)

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