

Technical Data Sheet

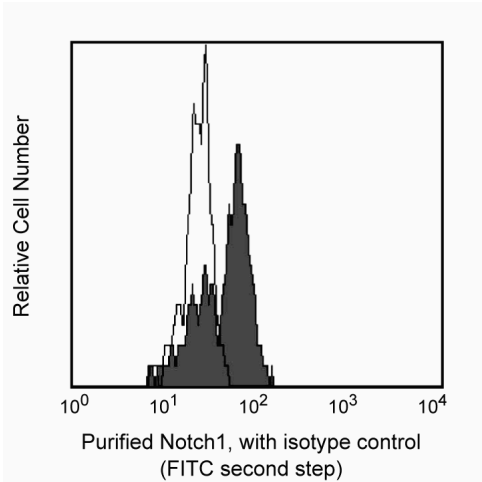
Purified Mouse Anti-Mouse Notch1

Product Information

Material Number:	552466
Alternate Name:	Notch1; Notch 1; NOTC1; lin-12; Mis6; Motch A; mT14; N1; NICD; p300; Tan1
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	mN1A
Immunogen:	Mouse Notch1 GST fusion protein
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Mouse Reported: Human
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The Notch family of transmembrane receptors controls cell-fate "decisions" during the development of many organs in a wide variety of animal species. After binding its ligand, a Notch receptor is cleaved in its transmembrane domain, and the resulting intracellular domain dissociates from the membrane and translocates to the nucleus, where it is able to suppress the expression of lineage-specific genes by interacting with transcriptional repressors. The mN1A antibody reacts with the intracellular domain of mouse and human Notch1, but not with mouse Notch2, 3, or 4. In the mouse, Notch1 mRNA is expressed in mouse hematopoietic cells of the fetal liver and adult thymus and bone marrow. Using mAb mN1A, Notch1 is detected in CD4-CD8- (double-negative) and CD4-CD8+ thymocytes. Studies of Notch1-transgenic cells and Notch1-null mice indicate that the receptor is involved in the regulation of lymphopoiesis and myelopoiesis. The mN1A mAb does not cross-react with rat thymocytes. An alternative anti-mouse Notch1 monoclonal antibody, clone 22E5.5, specifically binds to an extracellular domain of mouse Notch1.



Expression of Notch1 in double-negative thymocytes.
Fixed and permeabilized C57BL/6 thymocytes were stained with either Purified Mouse anti-Mouse Notch1 (filled histogram) or Purified Mouse IgG1, κ Isotype Control (Cat. no. 557273, open histogram), followed by FITC Rat anti-Mouse IgG1 (Cat. No. 553443). Cells were then stained with APC Rat anti-Mouse CD4 (Cat. No. 553051) and PE Rat anti-Mouse CD8a (Cat. No. 53032/553033). For analysis of Notch1 expression, an electronic gate was set to include only the CD4-CD8a- subpopulation. Flow cytometry was performed on a BD FACSCalibur™ Flow Cytometry System.

Preparation and Storage

Store undiluted at 4°C.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested
ELISA	Reported
Western blot	Reported
Immunohistochemistry	Reported

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554714	BD Cytotfix/Cytoperm™ Fixation/Permeabilization Kit	250 tests	(none)
557273	Purified Mouse IgG1, κ Isotype Control	0.5 mg	MOPC-31C
553443	FITC Rat Anti-Mouse IgG1	0.5 mg	A85-1
553051	APC Rat Anti-Mouse CD4	0.1 mg	RM4-5
553032	PE Rat Anti-Mouse CD8a	0.1 mg	53-6.7
554656	Stain Buffer (FBS)	500 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
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. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
5. An isotype control should be used at the same concentration as the antibody of interest.

References

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Huppert SS, Le A, Schroeter EH, et al. Embryonic lethality in mice homozygous for a processing-deficient allele of Notch1. *Nature.* 2000; 405(6789):966-970. (Immunogen: ELISA, Western blot)

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Walker L, Carlson A, Tan-Pertel HT, Weinmaster G, Gasson J. The notch receptor and its ligands are selectively expressed during hematopoietic development in the mouse. *Stem Cells.* 2001; 19(6):543-552. (Biology)

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