

**DESCRIPTION**

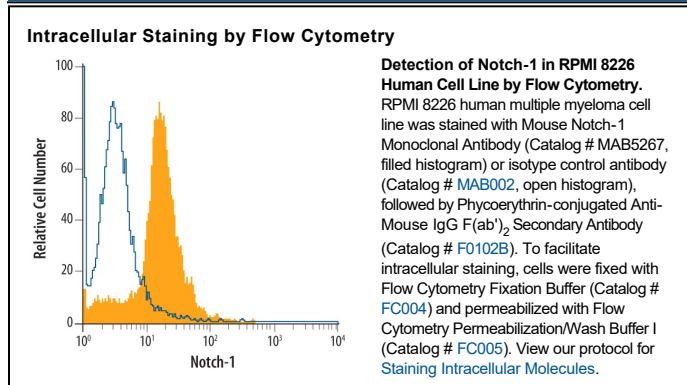
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse Notch-1 intracellular domain in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # N1A
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse embryonic fibroblast cell line PA317-derived recombinant mouse Notch-1 Accession # Q01705
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Intracellular Staining by Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

**DATA**



**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

Notch-1 is a 300 kDa type I transmembrane glycoprotein that is one of four Notch homologues involved in developmental processes (1-3). Notch signaling is important for maintaining stem cells and inducing differentiation, especially in the nervous system and lymphoid tissues (2-4). Notch can specify binary cell fates. For example, it promotes T cell over B cell development from a common precursor (2). Mouse Notch-1 is synthesized as a 2531 amino acid (aa) precursor that contains an 18 aa signal sequence, a 1707 aa extracellular domain (ECD) with 36 EGF-like repeats and three Lin-12/notch repeats (LNR), a 21 aa transmembrane (TM) segment and a 785 aa cytoplasmic domain that contains six ankyrin repeats, a glutamine-rich domain and a PEST sequence. The 11<sup>th</sup> and 12<sup>th</sup> EGF-like repeats, that bind ligands such as Jagged and Delta-like families in humans, correspond to aa 412-488 in mouse Notch-1 (6). Elongation of O-linked fucose chains by Fringe family members at a site within this region can inhibit the interaction of Notch with Jagged ligands, thereby promoting Delta-like ligand interactions (7). The Notch-1 receptor undergoes post-translational furin-type proteolytic cleavage, generating a heterodimer through the interaction of a hydrophobic area C-terminal to the LNR on the extracellular region with the transmembrane/cytoplasmic portion (8, 9). Upon ligand binding, additional sequential proteolysis by TNF-converting enzyme (ADAM17) and the presenilin-dependent  $\gamma$ -secretase results in the release of the Notch intracellular domain (NICD) which translocates into the nucleus, activating transcription of Notch-responsive genes (10).

**References:**

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