

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Notch-1 in direct ELISAs and Western blots. In direct ELISA, approximately 10% cross-reactivity with recombinant human Notch-1 and recombinant rat Notch-1 is observed and less than 1% cross-reactivity with recombinant mouse (rm) Notch-2 and rmNotch-3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse Notch-1 Ala19-Gln526 Accession # AAM28905
Formulation	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.

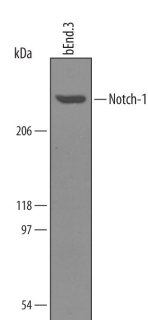
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

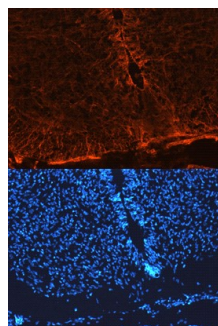
DATA

Western Blot



Detection of Mouse Notch-1 by Western Blot. Western blot shows lysates of bEnd.3 mouse endothelioma cell line. PVDF membrane was probed with 1 µg/mL of Mouse Notch-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5267) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Notch-1 at approximately 300 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 8](#).

Immunohistochemistry



Notch-1 in Mouse Neural Tube. Notch-1 was detected in immersion fixed frozen sections of mouse neural tube (E13.5) using Mouse Notch-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5267) at 10 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red, upper panel; Catalog # NL010) and counterstained with DAPI (blue, lower panel). View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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 11th and 12th 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 γ -secretase results in the release of the Notch intracellular domain (NICD) which translocates into the nucleus, activating transcription of Notch-responsive genes (10). Mouse Notch-1 ECD aa 19-526, which includes the first 13 EGF repeats, shows 94%, 91%, 86% and 79% aa identity with corresponding regions of rat, human, canine, and chicken Notch-1, respectively. This region also exhibits 55-58% aa identity with human Notch-2 and Notch-3.

References:

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4. Androutsellis-Theotokis, A. *et al.* (2006) *Nature* **442**:823.
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