

DESCRIPTION

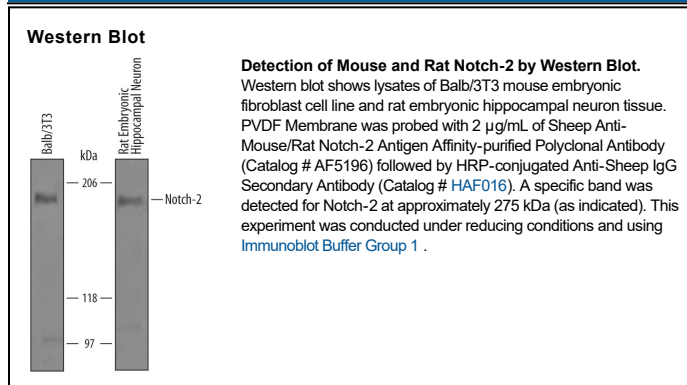
Species Reactivity	Mouse/Rat
Specificity	Detects mouse and rat Notch-2 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human Notch-2 is observed and less than 1% cross-reactivity with recombinant mouse (rm) Notch-1 and rmNotch-3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse Notch-2 Leu26-Val528 Accession # NP_035058
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	2 µg/mL	See Below

DATA



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-2 is a 300 kDa type I transmembrane glycoprotein that is one of four Notch homologues involved in development (1-3). Although Notch proteins are structurally and functionally similar, deletion of either Notch-1 or Notch-2 is lethal, demonstrating that not all functions overlap (4, 5). Mice with hypomorphic Notch-2 show defects in development of kidney, heart and eye (6). Notch-2 is upregulated in mature B cells and is critical for differentiation to splenic marginal zone B cells (7). Notch-2 is also preferentially expressed in choroid plexus epithelia and neuronal precursors (8, 9). Mouse Notch-2 is synthesized as a 2470 amino acid (aa) precursor that contains a 25 aa signal sequence, a 1652 aa extracellular domain (ECD), a 21 aa transmembrane (TM) segment, and a 772 aa cytoplasmic domain. The ECD contains 35 EGF-like repeats and three Lin-12/Notch repeats, while the cytoplasmic region shows six ankyrin repeats, a glutamine-rich domain and a PEST sequence. Binding of ligands, including Jagged and Delta-like molecules, has been localized to the 11th and 12th EGF-like repeats of human Notch-1 (corresponding to aa 413-492 in mouse Notch-2) (10). Notch receptors undergo post-translational furin-type proteolytic cleavage (11). This forms a heterodimer through the interaction of a hydrophobic area in the ligand-binding extracellular region with the TM/cytoplasmic portion (11, 12). Upon ligand binding, additional sequential proteolysis by TNF-converting enzyme (ADAM-17) 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 (13). Mouse Notch-2 ECD (aa 26-528) shares 93%, 96%, 92% and 92% aa identity with the corresponding regions of human, rat, canine, and bovine Notch-2, respectively. This region also exhibits 55-58% aa identity with mouse Notch-1 and Notch-3.

References:

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