

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat Notch-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant rat Notch-1 or recombinant mouse Notch-3 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 199509
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant rat Notch-2 Leu26-Glu492 Accession # Q9QW30
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Rat Notch-2 is a 300 kDa, type I transmembrane glycoprotein involved in a number of early-event developmental processes (1). In both vertebrates and invertebrates, Notch signaling is important for specifying cell fates and for defining boundaries between different cell types. The molecule is synthesized as a 2472 amino acid (aa) precursor that contains a putative 27 aa signal sequence, a 1650 aa extracellular region, a 23 aa transmembrane (TM) segment and a 772 aa cytoplasmic domain (2). The large Notch extracellular domain has 36 EGF-like repeats followed by three notch/Lin-12 repeats (LNR). Of the 36 EGF-like repeats, the 11th and 12th EGF-like repeats have been shown to be both necessary and sufficient for binding the ligands Serrate and Delta, in *Drosophila* (3). Cell surface Notch receptor is thought to be a heterodimer consisting of the ligand binding extracellular region associated with the remaining transmembrane protein, as a result of post-translational proteolytic cleavage by a furin-like enzyme. Upon ligand binding, additional proteolysis events result in the release of the Notch intracellular domain (NICD). NICD translocates into the nucleus and initiates transcription of Notch-responsive genes (4). Thus Notch acts as both a ligand-binding receptor and a nuclear factor that regulates transcription. In addition, an alternative Notch signaling pathway that is mediated by the full-length, uncleaved form of Notch-1 at the cell surface has been reported to suppress differentiation of myoblasts in response to ligand binding (5). Rat Notch-2 shows 92% and 95% aa identity to human and mouse Notch-2 extracellular domains, respectively. Relative to the extracellular region of rat Notch-1, rat Notch-2 exhibits 56% aa identity.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.