

## DESCRIPTION

<b>Species Reactivity</b>	Rat
<b>Specificity</b>	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.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 199509
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant rat Notch-2 Leu26-Glu492 Accession # Q9QW30
<b>Conjugate</b>	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
<b>Formulation</b>	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 11<sup>th</sup> and 12<sup>th</sup> 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

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