Human Notch-3 Alexa Fluor® 700-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF1559N
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Notch-3 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant mouse Notch-3 is observed and less than 5% cross-reactivity with recombinant human (rh) Notch-1 and rhNotch-2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Notch-3 Ala40-Glu467 Accession # Q9UM47
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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.
Blockade of Receptor-ligand Interaction	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

Human Notch-3 is part of the Notch family of type I transmembrane glycoproteins involved in a number of early-event developmental processes (1). The extracellular domain of Notch receptors interact with the extracellular domain of transmembrane ligands Jagged, Delta, and Serrate expressed on the surface of a neighboring cell. In both vertebrates and invertebrates, Notch signaling is important for specifying cell fates and for defining boundaries between different cell types. The Notch molecule is synthesized as a 2321amino acid (aa) precursor that contains an 39 aa signal sequence, a 1603 aa extracellular region, a 21aa transmembrane (TM) segment and a 658 aa cytoplasmic domain. The large Notch extracellular domain has 34 EGF-like repeats followed by three notch/Lin-12 repeats (LNR) (2). The 11^{th} and 12^{th} EGF-like repeats of Notch have been shown to be both necessary and sufficient for binding the ligands Serrate and Delta, in Drosophila (3). Notch-3 has the same biochemical mechanism of signal tranduction as Notch-1, where a series of cleavage 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.

Mutations in Notch-3 in humans cause an autosomal dominant condition called CADASIL (cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy). This disorder is characterized by recurrent ischemic strokes at an early age without any underlying vascular risk and progressive dementia. Nearly all mutations leading to this disorder are clustered in the first 5 EGF repeats of the Notch-3 gene (5). Human Notch-3 shows 90% aa identity to mouse Notch-3 over the entire protein.

PRODUCT SPECIFIC NOTICES

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