Mouse ROBO3 Alexa Fluor® 532-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3155X
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse ROBO3 in direct ELISAs and Western blots. In direct ELISAs, approximately 40% cross-reactivity with recombinant human (rh) ROBO3 and less than 5% cross-reactivity with rhROBO2 and rhROBO4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived mouse ROBO3 Gly54-Ser545 Accession # Q9Z2I4
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 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.
Immunohistochemistry	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

Mouse ROBO3 (also named Rig-1) is a 200 kDa member of the ROBO family of guidance molecules (1-3). The term ROBO derives from round-about, a description of the circuitous pathway axons take in the absence of a functional ROBO gene (3, 4). Mouse ROBO3 is a type I transmembrane glycoprotein that is synthesized as a 1366 amino acid (aa) precursor. It contains a 20 aa signal sequence, an 871 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 454 aa cytoplasmic region (5, 6). The ECD contains five C2-type Ig-like domains (aa 64-531) and three fibronectin (FN) type III domains (aa 555-863). The cytoplasmic region contains three of four possible 15-20 aa long CC (conserved cytoplasmic) motifs that are found in ROBO-1 (7, 8). Mouse ROBO3 has multiple isoforms. An alternate start site generates an 1366 aa (precursor) A isoform and a 1344 aa (precursor) B isoform. These two forms only differ in the first 53 and 31 amino acids of the precursor, respectively (9). There are reportedly nine splice variants in the mouse ROBO3 gene. Three result in soluble forms. Little information exists about the isoforms. Mouse ROBO3 ECD is 95%, 84% and 86% aa identical to the ROBO3 ECD in rat, human and canine, respectively. Normally, axons originating on one side of the spinal cord are inhibited from crossing to the other side by a SLIT2-ROBO1 interaction at the midline. ROBO3 is permissive for this event. It is unclear how this is accomplished. One possibility is that it binds directly to ROBO-1, blocking SLIT activation. A second possibility involves ROBO3 binding to SLIT2 in a nonproductive interaction. In human, only ROBO3 Form B is known to bind to SLIT2 (9-11).

PRODUCT SPECIFIC NOTICES

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