

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 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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

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.