

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat UNC5H2 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant rat UNC5H1 or recombinant human UNC5H4 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 187305
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat UNC5H2 Gly27-Asp373 Accession # O08722
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.

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

Caenorhabditis elegans UNC5 (UNC = behaviorally uncoordinated) and its mammalian homologues (including rat UNC5H1 and H2, mouse UNC5H2 and H3 (also known as rostral cerebellar malformation, RCM), and human UNC5H3 and H4) are transmembrane proteins belonging to the immunoglobulin (Ig) superfamily. All UNC5 family members have two Ig and two thrombospondin type 1 domains in their extracellular regions, as well as a conserved ZU-5 domain, a DCC (Deleted in Colorectal Cancer)-binding domain (DB) and a C-terminal death domain (DD) in their cytoplasmic regions (1, 2). UNC5 family proteins are receptors for the netrin/UNC6 (netr: Sanskrit for "one who guides") family of secreted axon guidance cues that are laminin-related proteins. Netrin family proteins can act as a chemoattractant for some axons and as a chemorepellent for others. Besides UNC5, netrin family proteins also bind to the DCC family of type I transmembrane receptors that share sequence similarity with proteins of the NCAM family, and adenosine A2b receptor, a G protein-coupled seven-transmembrane receptor belonging to the adenosine receptor family (3, 4). *In vitro*, netrin binding to DCC family receptors in the absence of UNC5 is associated with axon attraction. However, the DCC-mediated attraction to netrin is converted to repulsion by binding of UNC5 to the DCC-netrin complex. *In vivo*, the mechanisms of netrin-dependent axon attraction and repulsion are more complex and may include UNC5-mediated repulsion that is independent of DCC (1, 5). Besides their roles in axon guidance and neuronal migration, the UNC5 and DCC families also act as dependence receptors and exert pro-apoptotic effects in the absence of netrin (6). Rat UNC5H2 cDNA encodes a 945 amino acid (aa) type I membrane protein with a putative 26 aa signal peptide and 347 aa extracellular domain. The extracellular domain of rat UNC5H2 shares approximately 65%, 73% and 73% aa sequence similarity with that of rat UNC5H1, human UNC5H3 and mouse UNC5H3, respectively.

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.