

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects rat Neurofascin in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 727030
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat Neurofascin Ile25-Ala1031 Accession # NP_446361
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 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

Neurofascin 155 (NF155) is a type I transmembrane glycoprotein that belongs to the L1CAM family of cell adhesion proteins (1, 2). The rat NF155 cDNA encodes a 1240 amino acid (aa) precursor that contains a 24 aa signal sequence, a 1086 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 109 aa cytoplasmic domain. The ECD consists of six Ig-like domains and four fibronectin type III repeats, the second of which has an RGD motif. A splice variant of Neurofascin, NF186, lacks the RGD-containing fibronectin type III domain but instead has a mucin-like domain and an additional non-RGD fibronectin type III domain (3). Within shared regions of the ECD, rat NF155 shares 45% and 39% aa sequence identity with rat Nr-CAM and L1CAM, respectively, and 98% aa sequence identity with human and mouse NF155. NF155 is transiently expressed by oligodendrocytes at the onset of axon myelination, whereas NF186 is neuronally expressed in nodes of Ranvier (4-6). Clustering of NF155 in paranodal oligodendroglia lipid raft domains is stabilized by dimerization of its cytoplasmic domains and association with intracellular ankyrin (6-9). NF155 interacts with axonal contactin and plays a role in node of Ranvier formation and the establishment of saltatory conduction (5, 9-12). The ECD of NF155 is cleaved from oligodendroglia membranes by metalloproteases, a process which is required for NF155 transport from the glial cell body to the axoglial junction (13). In addition to distinct expression patterns, Neurofascin isoforms have different functional properties. NF155 promotes neuronal adhesion and neurite outgrowth, whereas NF186 inhibits neuronal adhesion (4, 7, 13).

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.