

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MFRP in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse (rm) Frizzled-1, -2, -3, -4, -7, -8, -9, recombinant human Frizzled-5, -6, -10, or rmMFRP is observed.
Source	Monoclonal Rat IgG ₁ Clone # 291204
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human MFRP Ser101-Pro579 Accession # Q9BY79
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.

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

MFRP (membrane-type frizzled-related protein) is a 65 kDa, type II transmembrane protein related to both Tollid proteases and frizzled-domain containing Wnt pathway proteins (1-4). Human MFRP is 579 amino acids (aa) in length (3, 5, 6). It contains a 69 aa cytoplasmic region, a 21 aa transmembrane segment, and a 489 aa extracellular domain (ECD). The ECD is characterized by the presence of two LDLR class A repeats, two CUB domains, and a C-terminal cysteine-rich/frizzled domain. The mRNA for MFRP is highly unusual in that it is dicistronic; that is, it contains two independent ORFs, one for MFRP and one for a functionally-related protein termed CTRP5/C1qTNF5 (4, 7). CTRP5 is a secreted, 25 kDa short-chain collagen that contains a C1q-type domain (6, 8). In prokaryotes, polycistronic transcripts exist that contain functionally-interactive molecules. This would also appear to be the case for MFRP and CTRP5. CTRP5 is suggested to bind to membrane MFRP via the C1q and CUB domains, respectively. This is positioned to generate a receptor-coreceptor complex that binds select Wnts such as Wnt-1 and/or Wnt-10b (4, 6, 7). MFRP has multiple documented mutations. In human, these are associated with hyperopia (severe farsightedness). The mutations result in premature truncations (3, 9). MFRP is expressed in retinal pigment epithelium, ciliary epithelium, and keratinocytes (4, 7, 10, 11). Human MFRP ECD is 70% aa identical to mouse ECD.

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.