Human MFRP Alexa Fluor® 488-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1915G
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MFRP C-Terminus in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 2% cross-reactivity with recombinant mouse (rm) Frizzled-1, rmFrizzled-2, rmFrizzled-3, rmFrizzled-4, recombinant human Frizzled-5, rmFriz
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human MFRP Ser101-Pro579 Accession # Q9BY79
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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

MFRP (membrane-type frizzled-related protein) is a 65 kDa, type II transmembrane protein related to both Tolloid 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.

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