

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Megalin/LRP2 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 545606
Purification	Protein A or G purified from ascites
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Megalin/LRP2 Pro3510-Lys3964 Accession # P98164
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	CaCo-2 human cell line

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. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Megalin, also known as the low-density lipoprotein receptor-related protein 2 (LRP2), is a large type I transmembrane cell surface protein. This glycoprotein is a multi-ligand endocytic receptor that is expressed in many different tissues but primarily in absorptive epithelial tissues such as the kidney (1). The Megalin protein is critical for the re-uptake of numerous ligands, including lipoproteins, sterols, vitamin-binding proteins, and hormones. This protein also has a role in cell-signaling. Mutations in this gene cause Donnai-Barrow Syndrome (DBS) and Facio-Oculoacoustico-Renal Syndrome (FOAR) (1). Megalin is consisting of a 25 amino acid (aa) probable N-terminal signal peptide sequence, a 4400 aa extracellular region, a 22 aa single transmembrane domain, and a 213 aa C-terminal cytoplasmic tail. The entire extracellular region is made up of 36 class A motifs of putative ligand-binding domains arranged in four distinct clusters, 16 growth factor repeats separated by 8 YWTD spacer regions, and 1 epidermal growth factor-like repeat (2). The extracellular ligand-binding-domains bind diverse macromolecules including albumin, apolipoproteins B and E, and lipoprotein lipase (3). The amino acid 3510-3964 encodes the fourth class A motif cluster in human Megalin, termed Megalin C4. Human Megalin C4 shares 77% and 74% identity with mouse and rat Megalin C4.

References:

1. Christensen, E. I. and Birn, H. (2002) *Nat. Rev. Mol. Cell Biol* **3**:256.
2. Saito, A. *et al.* (1994) *Proc. Natl. Aca. Sci. U. S. A.* **91**:9725.
3. Kantarci, S. *et al.* (2007) *Nat. Genet* **39**:957.

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.