

DESCRIPTION

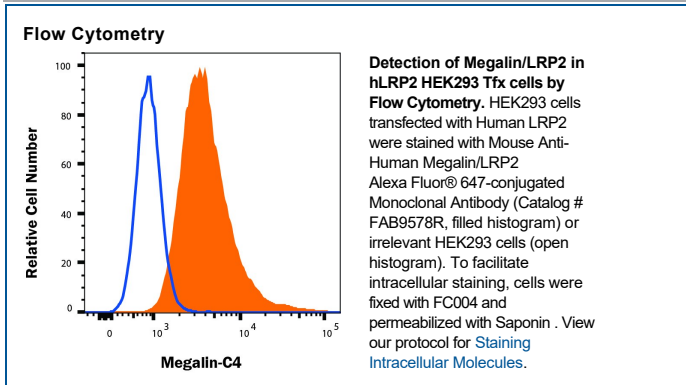
Species Reactivity	Human
Specificity	Detects human Megalin/LRP2 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 545606
Purification	Protein A or G purified from ascites
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Megalin/LRP2 Pro3510-Lys3964 Accession # P98164
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 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.

Flow Cytometry Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was HEK293 cells transfected with Human LRP2

DATA



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

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.

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