

DESCRIPTION

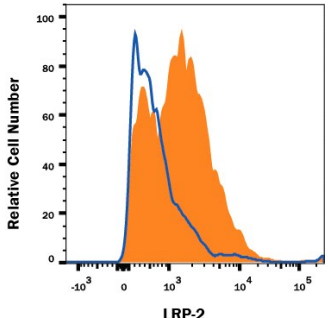
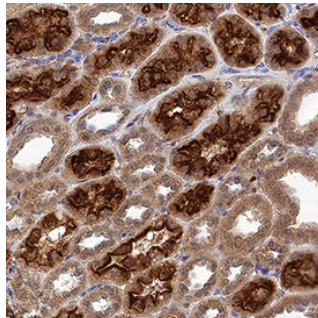
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|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human Megalin/LRP2 in direct ELISAs. |
| Source | Monoclonal Mouse IgG ₁ Clone # 545606 |
| Purification | Protein A or G purified from ascites |
| Immunogen | Mouse myeloma cell line NS0-derived recombinant human Megalin/LRP2 Pro3510-Lys3964 Accession # P98164 |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

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 µg/10 ⁶ cells | See Below |
| Immunohistochemistry | 5-25 µg/mL | See Below |
| CyTOF-ready | Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation. | |

DATA

| Flow Cytometry | Immunohistochemistry |
|--|---|
|  <p>Detection of Megalin/LRP2 in CaCo-2 Human Cell Line by Flow Cytometry. CaCo2 human cell line was stained with Mouse Anti-Human Megalin/LRP2 Monoclonal Antibody (Catalog # MAB9578, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B). View our protocol for Staining Membrane-associated Proteins.</p> |  <p>Megalin/LRP2 in Human Kidney. Megalin/LRP2 was detected in immersion fixed paraffin-embedded sections of human kidney using Mouse Anti-Human Megalin/LRP2 Monoclonal Antibody (Catalog # MAB9578) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to convoluted tubules. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.</p> |

PREPARATION AND STORAGE

| | |
|--------------------------------|--|
| Reconstitution | Reconstitute at 0.5 mg/mL in sterile PBS. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

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.