

LRP2 (Megalin) Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP6154a**Specification****LRP2 (Megalin) Antibody (C-term) Blocking peptide - Product Information**Primary Accession [P98164](#)**LRP2 (Megalin) Antibody (C-term) Blocking peptide - Additional Information****Gene ID** 4036**Other Names**

Low-density lipoprotein receptor-related protein 2, LRP-2, Glycoprotein 330, gp330, Megalin, LRP2

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP6154a](/product/products/AP6154a) was selected from the C-term region of human LRP2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

LRP2 (Megalin) Antibody (C-term) Blocking peptide - Protein Information**Name** LRP2 ([HGNC:6694](#))**LRP2 (Megalin) Antibody (C-term) Blocking peptide - Background**

Low density lipoprotein (LDL) receptor-related protein (LRP), a member of the LDL receptor family, binds multiple classes of ligands and has been implicated in a broad range of normal and disease processes involving lipid metabolism, protease clearance, and cell migration (1). Structurally, members of the LDLR family share homology within their extracellular domains, which are highlighted by the presence of clusters of ligand-binding repeats. LRP is a large endocytic receptor that participates in several biological pathways and plays prominent roles in lipoprotein metabolism and in the catabolism of proteinases involved in coagulation and fibrinolysis. LRP also mediates the cellular entry of certain viruses and toxins and facilitates the activation of various lysosomal enzymes (2). All LRPs are expressed in the central nervous system and, for most receptors, animal models have shown that they are indispensable for successful neurodevelopment. The mechanisms by which they regulate the formation of the nervous system are varied and include the transduction of extracellular signals and the modulation of intracellular signal propagation, as well as cargo transport, the function most commonly attributed to this gene family (3).

LRP2 (Megalin) Antibody (C-term) Blocking peptide - References

Christensen, E.I., et al., Nat. Rev. Mol. Cell Biol. 3(4):256-266 (2002).Hjalm, G., et al., Eur. J. Biochem. 239(1):132-137 (1996).Farquhar, M.G., et al., J. Am. Soc. Nephrol. 6(1):35-47 (1995).Kounnas, M.Z., et al., J. Biol. Chem. 270(22):13070-13075 (1995).Korenberg, J.R., et al., Genomics 22(1):88-93 (1994).

Function

Multiligand endocytic receptor (By similarity). Acts together with CUBN to mediate endocytosis of high-density lipoproteins (By similarity). Mediates receptor-mediated uptake of polybasic drugs such as aprotinin, aminoglycosides and polymyxin B (By similarity). In the kidney, mediates the tubular uptake and clearance of leptin (By similarity). Also mediates transport of leptin across the blood-brain barrier through endocytosis at the choroid plexus epithelium (By similarity). Endocytosis of leptin in neuronal cells is required for hypothalamic leptin signaling and leptin-mediated regulation of feeding and body weight (By similarity). Mediates endocytosis and subsequent lysosomal degradation of CST3 in kidney proximal tubule cells (By similarity). Mediates renal uptake of 25-hydroxyvitamin D3 in complex with the vitamin D3 transporter GC/DBP (By similarity). Mediates renal uptake of metallothionein-bound heavy metals (PubMed:15126248). Together with CUBN, mediates renal reabsorption of myoglobin (By similarity). Mediates renal uptake and subsequent lysosomal degradation of APOM (By similarity). Plays a role in kidney selenium homeostasis by mediating renal endocytosis of selenoprotein SEPP1 (By similarity). Mediates renal uptake of the antiapoptotic protein BIRC5/survivin which may be important for functional integrity of the kidney (PubMed:23825075). Mediates renal uptake of matrix metalloproteinase MMP2 in complex with metalloproteinase inhibitor TIMP1 (By similarity). Mediates endocytosis of Sonic hedgehog protein N-product (ShhN), the active product of SHH (By similarity). Also mediates ShhN transcytosis (By similarity). In the embryonic neuroepithelium, mediates endocytic uptake and degradation of BMP4, is required for correct SHH localization in the ventral neural tube and plays a role in patterning of the ventral telencephalon (By similarity). Required at the onset of neurulation to sequester SHH on the apical surface of neuroepithelial cells of the rostral diencephalon ventral midline and to control PTCH1- dependent uptake and intracellular

trafficking of SHH (By similarity). During neurulation, required in neuroepithelial cells for uptake of folate bound to the folate receptor FOLR1 which is necessary for neural tube closure (By similarity). In the adult brain, negatively regulates BMP signaling in the subependymal zone which enables neurogenesis to proceed (By similarity). In astrocytes, mediates endocytosis of ALB which is required for the synthesis of the neurotrophic factor oleic acid (By similarity). Involved in neurite branching (By similarity). During optic nerve development, required for SHH-mediated migration and proliferation of oligodendrocyte precursor cells (By similarity). Mediates endocytic uptake and clearance of SHH in the retinal margin which protects retinal progenitor cells from mitogenic stimuli and keeps them quiescent (By similarity). Plays a role in reproductive organ development by mediating uptake in reproductive tissues of androgen and estrogen bound to the sex hormone binding protein SHBG (By similarity). Mediates endocytosis of angiotensin-2 (By similarity). Also mediates endocytosis of angiotensin 1-7 (By similarity). Binds to the complex composed of beta-amyloid protein 40 and CLU/APOJ and mediates its endocytosis and lysosomal degradation (By similarity). Required for embryonic heart development (By similarity). Required for normal hearing, possibly through interaction with estrogen in the inner ear (By similarity).

Cellular Location

Apical cell membrane; Single-pass type I membrane protein. Endosome lumen {ECO:0000250|UniProtKB:P98158}. Membrane, coated pit {ECO:0000250|UniProtKB:A2ARV4}. Cell projection, dendrite {ECO:0000250|UniProtKB:A2ARV4}. Cell projection, axon {ECO:0000250|UniProtKB:A2ARV4}. Note=Localizes to brush border membranes in the kidney. In the endolymphatic sac of the inner ear, located in the lumen of endosomes as a soluble form {ECO:0000250|UniProtKB:P98158}

Tissue Location

Expressed in first and third trimester cytotrophoblasts in the placenta (at protein level) (PubMed:27798286) Absorptive epithelia, including renal proximal tubules

LRP2 (Megalin) Antibody (C-term)
Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)