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Recombinant Mouse LRP2 protein Tag Free

Catalog Number: MF-2025

General Information

Synonyms	Pancreatic Lipase-Related Protein 2; PL-RP2; Galactolipase; PNLIPRP2; PLRP2
Accession #	A2ARV4
Source	HEK293 Gln26-Arg261
Predicted Mol Mass	27 KDa

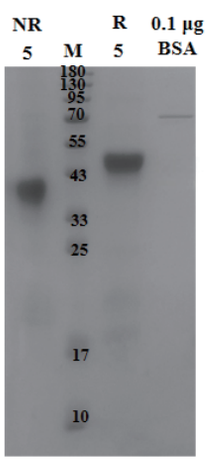
Components and Storage

Formulation	Solution protein. Dissolved in sterile PBS buffer. This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
Storage and Stability	Avoid repeated freeze/thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 °C as supplied.
Shipping	Shipping with dry ice.

Quality

Purity	＞ 90%,determined by SDS-PAGE.
Endotoxin Level	＜1.0 EU per 1 ug of the protein by the LAL method.
Activity	Activity in progress

SDS-PAGE



5 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

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Background

mLRP2, also known as megalin or gp330, is the largest member of the low-density lipoprotein receptor family, encoded by the Lrp2 gene (MGI:95794) in mice (UniProt: A2ARV4). This type I transmembrane glycoprotein comprises 4,660 amino acids and is highly expressed on the apical surface of absorptive epithelia, particularly in kidney proximal tubules, as well as in the choroid plexus, inner ear, thyroid, and lung . As a multiligand endocytic receptor, mLRP2 mediates the uptake of more than 75 diverse ligands, including lipoproteins, vitamin-binding proteins, hormones, and enzymes, thereby playing an essential role in maintaining metabolic homeostasis . Recent cryo-electron microscopy studies have revealed that mLRP2 functions as a pH-sensitive homodimer that undergoes large conformational changes to facilitate ligand binding at the cell surface and subsequent ligand release within acidic endosomes . Genetic deficiency of mLRP2 in mice results in holoprosencephaly, neural tube defects, and perinatal lethality due to respiratory failure . In humans, loss-of-function mutations in the LRP2 ortholog cause Donnai-Barrow syndrome, an autosomal recessive disorder characterized by low-molecular-weight proteinuria, sensorineural hearing loss, and agenesis of the corpus callosum . Beyond its established roles in development and physiology, emerging evidence links LRP2 dysfunction to various human diseases, including chronic kidney disease, Alzheimer's disease, and certain epithelial cancers .

Reference

1. Christensen, E. I. and Birn, H. (2002) Nat. Rev. Mol. Cell Biol. 3:256.
2. Beenken, A. et al. (2023) Cell 186:821.
3. Willnow, T. E. et al. (1996) Proc. Natl. Acad. Sci. USA 93:8460.
4. Kantarci, S. et al. (2007) Nat. Genet. 39:957.

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