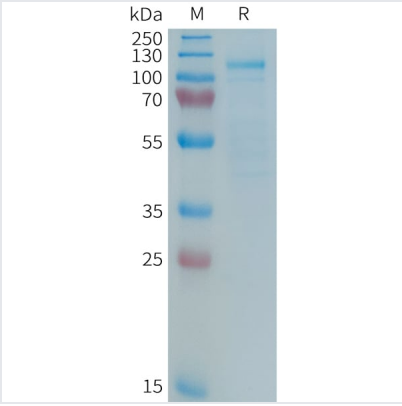
LRP5 Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	LRP5, Recombinant Protein
Full Product Name	Human LRP5 Protein, hFc Tag
Product Gene Name	LRP5 recombinant protein
Product Synonym Names	HBM; LR3; OPS; EVR1; EVR4; LRP7; OPPG; BMND1; LRP-5; LRP-7; OPTA1; PCLD4; VBCH2
Sequence	hFc(Glu99- Ala330) LRP5(Glu64 4-Gln1263)
Host	HEK293
Form/Format	Lyophilized from sterile PBS, pH 7.4. Normally 5%-8% trehalose is added as protectants before lyophilization.
Purity/Purification	Purified from cell culture supernatant by affinity chromatography The purity of the protein is greater than 95% as determined by SDS-PAGE and Coomassie blue staining.
Preparation and Storage	Store at -20 degree C to -80 degree C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80 degree C (Avoid repeated freezing and thawing).
Molecular Weight	179,145 Da
OMIM	144750
3D Structure	ModBase 3D Structure for O75197
Tag	N-Human Fc tag
Product Categories/Family for LRP5 recombinant protein	ECD 1182; ECD Proteins
Related Product Information for LRP5 recombinant protein	Recombinant human LRP5 Protein with N-terminal human Fc tag This gene encodes a transmembrane low-density lipoprotein receptor that binds and internalizes ligands in the process of receptor-mediated endocytosis. This protein also acts as a co-receptor with Frizzled protein family members for transducing signals by Wnt proteins and was originally cloned on the basis of its association with type 1 diabetes mellitus in humans. This protein plays a key role in skeletal homeostasis and many bone density related diseases are caused by mutations in this gene. Mutations in this gene also cause familial exudative vitreoretinopathy. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2014]
Other Notes	Small volumes of LRP5 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for LRP5 purchase	MBS189558 is a recombinant protein targeting LRP5. Also known as Human LRP5 Protein, hFc Tag. Host: HEK293.



SDS-Page of LRP5 recombinant protein

Figure 1. Human LRP5 Protein, hFc Tag on SDS-PAGE under reducing condition.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for LRP5. It may not necessarily be applicable to this product.

NCBI GI #	119709832
NCBI GeneID	4041
NCBI Accession #	NP_002326.2
UniProt Primary Accession #	O75197
UniProt Secondary Accession #	Q96TD6; Q9UES7; Q9UP66
UniProt Related Accession #	O75197
GenBank Nucleotide #	NM_002335.3
NCBI Official Full Name	low-density lipoprotein receptor-related protein 5 isoform 1
NCBI Official Synonym Full Names	low density lipoprotein receptor-related protein 5
NCBI Official Symbol	LRP5
NCBI Official Synonym Symbols	HBM; LR3; OPS; EVR1; EVR4; LRP7; OPPG; BMND1; LRP-5; OPTA1; VBCH2
UniProt Protein Name	Low-density lipoprotein receptor-related protein 5
Protein Family	Low-density lipoprotein receptor-related protein
UniProt Gene Name	LRP5
UniProt Synonym Gene Names	LR3; LRP7; LRP-5
UniProt Entry Name	LRP5_HUMAN
NCBI Protein Information	low-density lipoprotein receptor-related protein 5; low density lipoprotein receptor-related protein 7
NCBI Summary for LRP5	This gene encodes a transmembrane low-density lipoprotein receptor that binds and internalizes ligands in the process of receptor-mediated endocytosis. This protein also acts as a co-receptor with Frizzled protein family members for transducing signals by Wnt proteins and was originally cloned on the basis of its association with type 1 diabetes mellitus in humans. This protein plays a key role in skeletal homeostasis and many bone density related diseases are caused by mutations in this gene. Mutations in this gene also cause familial exudative vitreoretinopathy. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2014]

UniProt Comments for LRP5	LRP5: Component of the Wnt-Fzd-LRP5-LRP6 complex that triggers beta-catenin signaling through inducing aggregation of receptor- ligand complexes into ribosome-sized signalsomes. Cell-surface coreceptor of Wnt/beta-catenin signaling, which plays a pivotal role in bone formation. The Wnt-induced Fzd/LRP6 coreceptor complex recruits DVL1 polymers to the plasma membrane which, in turn, recruits the AXIN1/GSK3B-complex to the cell surface promoting the formation of signalsomes and inhibiting AXIN1/GSK3- mediated phosphorylation and destruction of beta-catenin. Appears be required for postnatal control of vascular regression in the eye. Required for posterior patterning of the epiblast during gastrulation. Homodimer; disulfide-linked. Forms phosphorylated oligomer aggregates on Wnt-signaling. Component of a Wnt-signaling complex that contains a WNT protein, a FZD protein and LRP5 or LRP6. Interacts with FZD8; the interaction is formed on WNT-binding and signaling. Interacts (via the phosphorylated PPPSP motif domains) with AXIN1; the interaction prevents inhibition of beta-catenin phosphorylation and signaling and is enhanced in the presence of GSK3B and WNT1 or WNT3A. Interacts (via beta-propeller regions 3 and 4) with DKK1; the interaction, enhanced by MESD and/or KREMEN, inhibits beta-catenin signaling by preventing GSK3-mediated phosphorylation of the PPPSP motifs and subsequent, AXIN1 binding. Interacts with MESD; the interaction prevents the formation of LRP5 aggregates, targets LRP5 to the plasma membrane and, when complexed with KREMEN2, increases DKK1 binding. Interacts with CSNK1E. Interacts with SOST; the interaction antagonizes canonical Wnt signaling. Interacts with APCDD1. Widely expressed, with the highest level of expression in the liver and in aorta. Belongs to the LDLR family. Protein type: Membrane protein, integral; Receptor, misc. Chromosomal Location of Human Ortholog: 11q13.4 Cellular Component: mitochondrion; endoplasmic reticulum; plasma membrane; integral to membrane; receptor complex Molecular Function: Wnt-protein binding; protein binding; Wnt receptor activity; toxin transporter activity; coreceptor activity Biological Process: response to peptide hormone stimulus; somatic stem cell maintenance; positive regulation of transcription, DNA-dependent; Wnt receptor signaling pathway through beta-catenin; bone remodeling; anatomical structure regression; regulation of apoptosis; anterior/posterior pattern formation; regulation of blood pressure; positive regulation of cell proliferation; positive regulation of mesenchymal cell proliferation; negative regulation of osteoblast differentiation; cell migration involved in gastrulation; embryonic limb morphogenesis; cholesterol metabolic process; Wnt receptor signaling pathway; positive regulation of mitosis; regulation of bone remodeling; endocytosis; gastrulation with mouth forming second; osteoblast development; bone marrow development; glucose catabolic process; cholesterol homeostasis; embryonic retina morphogenesis in camera-type eye; positive regulation of osteoblast proliferation; positive regulation of fat cell differentiation; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription factor activity; embryonic digit morphogenesis; embryonic camera-type eye morphogenesis; retina morphogenesis in camera-type eye Disease: Osteoporosis-pseudoglioma Syndrome; Van Buchem Disease, Type 2; Exudative Vitreoretinopathy 1; Osteopetrosis, Autosomal Dominant 1; Exudative Vitreoretinopathy 4; Osteoporosis; Bone Mineral Density Quantitative Trait Locus 1; Endosteal Hyperostosis, Autosomal Dominant
Research Articles on LRP5	**1.** LRP5 negatively regulates differentiation of monocytes through abrogation of Wnt signaling.
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