LRP5 Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	LRP5, Blocking Peptide
Full Product Name	LRP5 Blocking Peptide
Product Gene Name	LRP5 blocking peptide
Product Synonym Names	BMND1; EVR1; EVR4; HBM; Low density lipoprotein receptor related protein 5; Low density lipoprotein receptor related protein 7; Low-density lipoprotein receptor-related protein 5; LR3; LRP-5; Lrp5; LRP5_HUMAN; LRP7; OPPG; OPS; OPTA1; Osteoporosis pseudoglioma syndrome; VBCH2
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	LRP5 peptide (MBS9616635) is used for blocking the activity of LRP5 antibody (MBS9613353)
Molecular Weight	179,145 Da
OMIM	144750
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for LRP5 blocking peptide	Blocking/Control
Related Product Information for LRP5 blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of LRP5 blocking peptide 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	MBS9616635 is a blocking peptide targeting LRP5.

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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