Phospho-LRP6 (Thr1479) Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	LRP6, Blocking Peptide
Full Product Name	Phospho-LRP6 (Thr1479) Blocking Peptide
Product Gene Name	LRP6 blocking peptide
Product Synonym Names	ADCAD2; C030016K15Rik; Cd; FLJ90062; FLJ90421; Low density lipoprotein receptor related protein 6; Low-density lipoprotein receptor-related protein 6; LRP-6; LRP6; LRP6_HUMAN; OTTHUMP00000238979; OTTHUMP00000238980; OTTHUMP00000238982
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	LRP6 (Thr1479) peptide (MBS9619306) is used for blocking the activity of LRP6 (Thr1479) antibody (MBS9614344)
Molecular Weight	180,429 Da
Chromosome Location	Chromosome: 12; NC_000012.11 (12268959..12419811, complement). Location: 12p13.2
OMIM	603507
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 LRP6 blocking peptide	Blocking/Control
Related Product Information for LRP6 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 LRP6 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 LRP6 purchase	MBS9619306 is a blocking peptide targeting LRP6. Also known as Phospho-LRP6 (Thr1479) Blocking Peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for LRP6. It may not necessarily be applicable to this product.

NCBI GI #	148727288
NCBI GeneID	4040
NCBI Accession #	NP_002327.2

UniProt Primary Accession #	O75581
UniProt Secondary Accession #	Q17RZ2
UniProt Related Accession #	O75581
GenBank Nucleotide #	NM_002336.2
NCBI Official Full Name	low-density lipoprotein receptor-related protein 6
NCBI Official Synonym Full Names	low density lipoprotein receptor-related protein 6
NCBI Official Symbol	LRP6
NCBI Official Synonym Symbols	ADCAD2
UniProt Protein Name	Low-density lipoprotein receptor-related protein 6
Protein Family	Low-density lipoprotein receptor-related protein
UniProt Gene Name	LRP6
UniProt Synonym Gene Names	LRP-6
UniProt Entry Name	LRP6_HUMAN
NCBI Protein Information	low-density lipoprotein receptor-related protein 6; LRP-6
NCBI Summary for LRP6	This gene encodes a member of the low density lipoprotein (LDL) receptor gene family. LDL receptors are transmembrane cell surface proteins involved in receptor-mediated endocytosis of lipoprotein and protein ligands. The protein encoded by this gene functions as a receptor or, with Frizzled, a co-receptor for Wnt and thereby transmits the canonical Wnt/beta-catenin signaling cascade. Through its interaction with the Wnt/beta-catenin signaling cascade this gene plays a role in the regulation of cell differentiation, proliferation, and migration and the development of many cancer types. This protein undergoes gamma-secretase dependent RIP- (regulated intramembrane proteolysis) processing but the precise locations of the cleavage sites have not been determined.[provided by RefSeq, Dec 2009]

UniProt Comments for LRP6	LRP6: 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. Required for posterior patterning of the epiblast during gastrulation. Homodimer; disulfide-linked. Forms phosphorylated oligomer aggregates on Wnt-signaling. Forms a WNT-signaling complex formed of a WNT protein, a FZD protein and LRP5 or LRP6. Interacts (via the extracellular domain) with WNT1; the interaction is enhanced by prior formation of the Wnt/Fzd complex. Interacts (via the beta-propeller regions 3 and 4) with WNT3A. Interacts (via the beta-propeller regions 1 and 2) with WNT9B. Interacts with FZD5; the interaction forms a coreceptor complex for Wnt signaling and is inhibited by DKK1 and C1orf187. Interacts (via beta propeller region) with DKK1; the interaction inhibits FZD5/LRP6 complex formation. Interacts with DKK2. Interacts with C1orf187/DRAXIN; the interaction inhibits Wnt signaling. Interacts (via the phosphorylated PPPSP motifs) with AXIN1; the interaction recruits the AXIN1/GSK3B complex to cell surface LRP6 signalsomes. Interacts with GRB10; the interaction prevents AXIN1 binding, thus negatively regulating the Wnt signaling pathway. Interacts (via the extracellular domain) with RSPO1; the interaction activates Wnt/beta-catenin signaling. Interacts (via the extracellular domain) with RSPO3 (via the cysteine rich domain); the interaction activates Wnt/beta-catenin signaling. Interacts (via the beta- propeller regions 1 and 2) with SOST; the interaction competes with DKK1 for binding for inhibiting beta-catenin signaling. Interacts with MESD; the interaction prevents the formation of LRP6 aggregates and targets LRP6 to the plasma membrane. Interacts (via the cytoplasmic domain) with CSNKIE; the interaction phosphorylates LRP6, binds AXIN1 and inhibits AXIN1/GSK3B-mediated phosphorylation of beta-catenin. Interacts with MACF1. Decreased levels on WNT3A stimulation. Widely co-expressed with LRP5 during embryogenesis and in adult tissues. Belongs to the LDLR family. Protein type: Receptor, misc.; Membrane protein, integral Chromosomal Location of Human Ortholog: 12p13.2 Cellular Component: Golgi apparatus; cell surface; endoplasmic reticulum; early endosome; extracellular region; integral to membrane; caveola; cell soma; early endosome membrane; plasma membrane; synapse; cytoplasmic vesicle; receptor complex Molecular Function: low-density lipoprotein receptor activity; identical protein binding; Wnt-protein binding; Wnt receptor activity; protein binding; protein homodimerization activity; kinase inhibitor activity; frizzled binding; toxin transporter activity; apolipoprotein binding; receptor binding Biological Process: radial glial cell differentiation in the forebrain; regulation of fat cell differentiation; positive regulation of apoptosis; positive regulation of transcription, DNA-dependent; cerebellum morphogenesis; Wnt receptor signaling pathway through beta-catenin; embryonic pattern specification; bone remodeling; Wnt receptor signaling pathway in forebrain neuroblast division; anterior/posterior pattern formation; cell-cell adhesion; elevation of cytosolic calcium ion concentration; response to folic acid; convergent extension; positive regulation of mesenchymal cell proliferation; midbrain development; embryonic limb morphogenesis; external genitalia morphogenesis; neural crest formation; positive regulation of cell cycle; negative regulation of fat cell differentiation; midbrain-hindbrain boundary development; negative regulation of protein kinase activity; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription factor activity; cerebral cortex development; embryonic digit morphogenesis; regulation of ossification; embryonic forelimb morphogenesis; response to peptide hormone stimulus; thalamus development; palate development; embryonic hindlimb morphogenesis; synaptic transmission; negative regulation of protein amino acid phosphorylation; positive regulation of bone resorption; heart looping; neural crest cell differentiation; cell migration involved in gastrulation; negative regulation of epithelial cell proliferation; Wnt receptor signaling pathway; gastrulation with mouth forming second; positive regulation of ossification; odontogenesis of dentine-containing teeth; formation of radial glial scaffolds; cerebral cortex cell migration; embryonic retina morphogenesis in camera-type eye; neural tube closure; embryonic camera-type eye morphogenesis Disease: Coronary Artery Disease, Autosomal Dominant 2
Research Articles on LRP6	**1.** Data indicate that LRP6, BCL2L14, DUSP16, CREBL2, and CDKN1B were involed in centromeric (12p11.21-12p13.2) deletion in ETV6-RUNX1 B-cell precursor acute lymphoblastic leukemia (BCP-ALL).
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