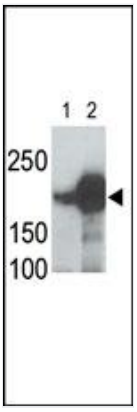
LRP5 Antibody – Rabbit Polyclonal

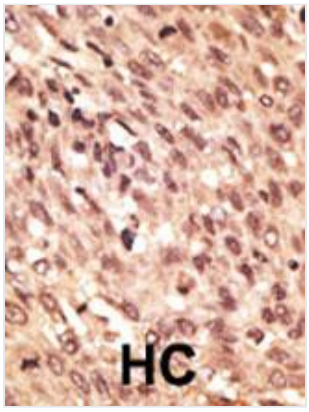
PRODUCT OVERVIEW

Product Name	LRP5, Polyclonal Antibody
Full Product Name	LRP5 Antibody (C-term)
Product Gene Name	anti-LRP5 antibody
Product Synonym Names	Low-density lipoprotein receptor-related protein 5; LRP-5; LRP5; LR3; LRP7
Clonality	Polyclonal
Isotype	Rabbit Ig
Host	Rabbit
Species Reactivity	Human, mouse
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Concentration	Vial Concentration: 2 (lot specific)
Specificity	This LRP5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1538-1567 amino acids from the C-terminal region of human LRP5.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Antibody/Peptide Pairs	LRP5 peptide (MBS9225920) is used for blocking the activity of LRP5 antibody (MBS9205027)
Molecular Weight	179145
Immunogen Sequence Positions	1538-1567
OMIM	144750
3D Structure	ModBase 3D Structure for O75197
Antigen Type	Synthetic Peptide
Antigen Source	HUMAN
Product Categories/Family for anti-LRP5 antibody	Cardiovascular; Metabolism; Neuroscience; Signal Transduction
Applications Tested/Suitable for anti-LRP5 antibody	Western Blot (WB), ELISA (EIA), Immunohistochemistry (IHC)
Application Notes for anti-LRP5 antibody	WB~~1:1000

Related Product Information for anti-LRP5 antibody	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. 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. 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.
Product References and Citations for anti-LRP5 antibody	Grimsley PG, et al. Trends Cardiovasc Med. 1998:363 Strickland DK & Ranganathan S. J Thromb Haemost. 2003:1663 May P and Herz J. Traffic. 2003:291
Other Notes	Small volumes of anti-LRP5 antibody 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	MBS9205027 is an antibody targeting LRP5. Also known as LRP5 Antibody (C-term). Reactive in Human, mouse. Host: Rabbit.



Western Blot (WB) of anti-LRP5 antibody
LRP5 Antibody (C-term) is used in Western blot to detect recombinant human LRP5 (Lane 1) and mouse LRP5 (Lane 2) proteins in transfected 293 cell lysates. Data is kindly provided by Drs. V. Harris and S. Aaronson from the Mount Sinai School of Medicine (New York, NY).



Immunohistochemistry (IHC) of anti-LRP5 antibody
Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

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
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: Receptor, misc.; Membrane protein, integral Chromosomal Location of Human Ortholog: 11q13.4 Cellular Component: mitochondrion; endoplasmic reticulum; integral to membrane; plasma 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; anterior/posterior pattern formation; regulation of apoptosis; 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: Van Buchem Disease, Type 2; Osteoporosis-pseudoglioma Syndrome; Exudative Vitreoretinopathy 1; Osteopetrosis, Autosomal Dominant 1; Exudative Vitreoretinopathy 4; Bone Mineral Density Quantitative Trait Locus 1; Osteoporosis; Endosteal Hyperostosis, Autosomal Dominant

Research Articles on LRP5	**1.** The Ala1330Val polymorphism in LRP5 is weakly associated with lower lumbar spine bone density in Tunisian post-menopausal women.
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