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Anti-LRP5 Antibody

Catalog # ABO11582

Product Information

Application	WB
Primary Accession	O75197
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Low-density lipoprotein receptor-related protein 5(LRP5) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	4041
Other Names	Low-density lipoprotein receptor-related protein 5, LRP-5, LRP5, LR3, LRP7
Calculated MW	179145
Application Details	Western blot, 0.1-0.5 □g/ml, Mouse, Rat, Human
Subcellular Localization	Membrane; Single-pass type I membrane protein. Endoplasmic reticulum . Chaperoned to the plasma membrane by MESD. .
Tissue Specificity	Widely expressed, with the highest level of expression in the liver and in aorta. .
Source	Eukaryota
Protein Name	Low-density lipoprotein receptor-related protein 5
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human LRP5(1201-1215aa IHAVEEVSLEEFSAH), identical to the related mouse and rat sequences.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also

	be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the LDLR family.

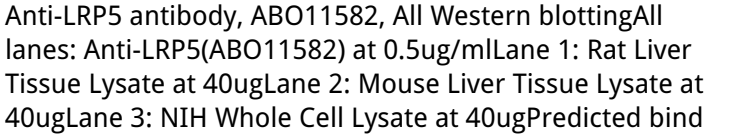
Protein Information

Name	LRP5 {ECO:0000303|PubMed:24706814, ECO:0000312|HGNC:HGNC:6697}
Function	Acts as a coreceptor with members of the frizzled family of seven-transmembrane spanning receptors to transduce signal by Wnt proteins (PubMed:11336703, PubMed:11448771, PubMed:11719191, PubMed:15778503, PubMed:15908424, PubMed:16252235). Activates the canonical Wnt signaling pathway that controls cell fate determination and self-renewal during embryonic development and adult tissue regeneration (PubMed:11336703, PubMed:11719191). In particular, may play an important role in the development of the posterior patterning of the epiblast during gastrulation (By similarity). During bone development, regulates osteoblast proliferation and differentiation thus determining bone mass (PubMed:11719191). Mechanistically, the formation of the signaling complex between Wnt ligand, frizzled receptor and LRP5 coreceptor promotes the recruitment of AXIN1 to LRP5, stabilizing beta-catenin/CTNNB1 and activating TCF/LEF-mediated transcriptional programs (PubMed:11336703, PubMed:14731402, PubMed:24706814, PubMed:25920554). Acts as a coreceptor for non-Wnt proteins, such as norrin/NDP. Binding of norrin/NDP to frizzled 4/FZD4- LRP5 receptor complex triggers beta-catenin/CTNNB1-dependent signaling known to be required for retinal vascular development (PubMed:16252235, PubMed:27228167). Plays a role in controlling postnatal vascular regression in retina via macrophage-induced endothelial cell apoptosis (By similarity).
Cellular Location	Membrane {ECO:0000250|UniProtKB:Q91VN0}; Single- pass type I membrane protein {ECO:0000250|UniProtKB:Q91VN0} Endoplasmic reticulum. Note=Chaperoned to the plasma membrane by MESD. {ECO:0000250|UniProtKB:Q91VN0}
Tissue Location	Widely expressed, with the highest level of expression in the liver and in aorta.

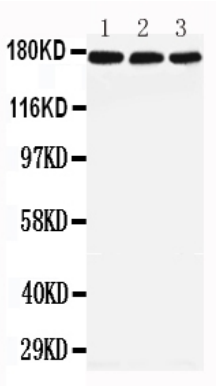
Background

Low-density lipoprotein receptor-related protein 5 is a protein that in humans is encoded by the LRP5 gene. It is mapped to 11q13.2. LRP5 is 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 diabetes mellitus type 1 in humans. This protein plays a key role in skeletal homeostasis. In addition to that, the binding of axin to LRP5 is an important part of the Wnt signal transduction pathway, and it also acts as a target for the inhibitory effects of Dickkopf, another developmental protein, on Wnt signaling.

Images



Anti-LRP5 antibody, ABO11582, All Western blottingAll lanes: Anti-LRP5(ABO11582) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 40ugLane 2: Mouse Liver Tissue Lysate at 40ugLane 3: NIH Whole Cell Lysate at 40ugPredicted bind



size: 179KDObserved bind size: 179KD