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LRP5 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP14655b

Specification

LRP5 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession O75197

LRP5 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 4041

Other Names
Low-density lipoprotein receptor-related protein 5, LRP-5, LRP5, LR3, LRP7

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

LRP5 Antibody (C-term) Blocking Peptide - 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:15778503, PubMed:11719191, 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:25920554, PubMed:24706814, PubMed:14731402). 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:27228167, PubMed:16252235). 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.

LRP5 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

LRP5 Antibody (C-term) Blocking Peptide - Images

LRP5 Antibody (C-term) Blocking Peptide - Background

This gene encodes a transmembrane low-density lipoproteinreceptor that binds and internalizes ligands in the process ofreceptor-mediated endocytosis. This protein also acts as aco-receptor with Frizzled protein family members for transducingsignals by Wnt proteins and was originally cloned on the basis ofits association with type 1 diabetes mellitus in humans. Thisprotein plays a key role in skeletal homeostasis and many bonedensity related diseases are caused by mutations in this gene.Mutations in this gene also cause familial exudativevitreoretinopathy.

LRP5 Antibody (C-term) Blocking Peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Lee, D.Y., et al. Menopause 17(5):1064-1070(2010)Liu, J.M., et al. J. Clin. Endocrinol. Metab. 95 (9), E112-E120 (2010) :Paternoster, L., et al. J. Clin. Endocrinol. Metab. 95(8):3940-3948(2010)Stathopoulou, M.G., et al. J Am Diet Assoc 110(7):1078-1083(2010)