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Goat Anti-LRP5 Antibody

Peptide-affinity purified goat antibody

Catalog # AF1635a

Specification

Goat Anti-LRP5 Antibody - Product Information

Application	**IHC, E**
Primary Accession	O75197
Other Accession	NP_002326, 4041
Reactivity	**Human**
Predicted	**Mouse, Rat**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**179145**

Goat Anti-LRP5 Antibody - Additional Information

Gene ID 4041

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

Dilution
IHC~~1:100~500
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-LRP5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-LRP5 Antibody - 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:<a

href="http://www.uniprot.org/citations/11336703" target="_blank">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.

Goat Anti-LRP5 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-LRP5 Antibody - Images

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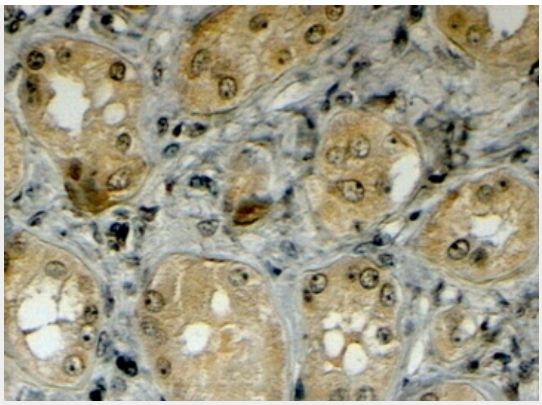

AF1635a (4 µg/ml) staining of paraffin embedded Human Kidney. Steamed antigen retrieval with citrate buffer pH 6, HRP-staining.

Goat Anti-LRP5 Antibody - Background

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.

Goat Anti-LRP5 Antibody - References

Low-density lipoprotein receptor-related protein 5 polymorphisms are associated with bone mineral density in Greek postmenopausal women: an interaction with calcium intake. Stathopoulou MG, et al. J Am Diet Assoc, 2010 Jul. PMID 20630166.
Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.
Association between polymorphisms in Wnt signaling pathway genes and bone mineral density in postmenopausal Korean women. Lee DY, et al. Menopause, 2010 Sep-Oct. PMID 20613673.
Analysis of recently identified osteoporosis susceptibility genes in Han Chinese women. Liu JM, et al. J Clin Endocrinol Metab, 2010 Sep. PMID 20554715.
OPG and RANK polymorphisms are both associated with cortical bone mineral density: findings from a metaanalysis of the Avon longitudinal study of parents and children and gothenburg osteoporosis and obesity determinants cohorts. Paternoster L, et al. J Clin Endocrinol Metab, 2010 Aug. PMID 20534768.