

LRP5 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1686a**Specification****LRP5 Antibody - Product Information**

Application	WB, FC, E
Primary Accession	O75197
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	179kDa KDa

Description

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.

Immunogen

Purified recombinant fragment of human LRP5 expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

LRP5 Antibody - Additional Information

Gene ID 4041

Other Names

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

Dilution

WB~~1/500 - 1/2000

FC~~1/200 - 1/400

E~~1/10000

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

LRP5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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: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.

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 Cytometry](#)
- [Cell Culture](#)

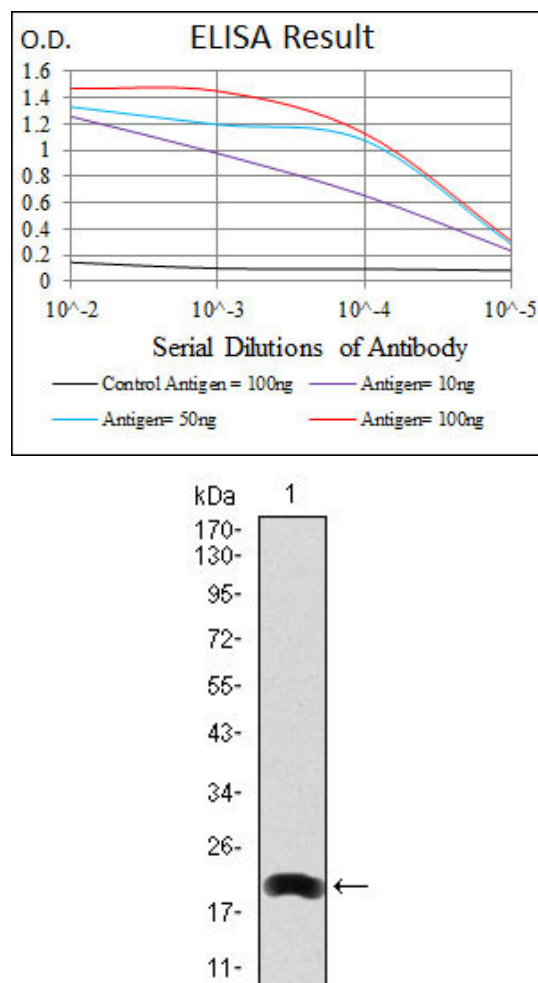


Figure 1: Western blot analysis using LRP5 mAb against human LRP5 (AA: 1422-1615) recombinant protein. (Expected MW is 20.8 kDa)

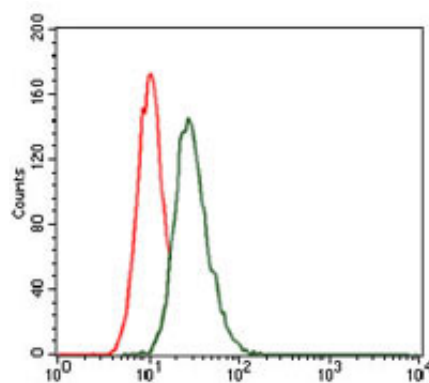


Figure 2: Flow cytometric analysis of HeLa cells using LRP5 mouse mAb (green) and negative control (red).

LRP5 Antibody - References

1. Bone. 2010 Apr;46(4):940-5.
2. Endocr J. 2009;56(4):625-31.