

LRP6 Antibody (C-term T1546)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP6158a

Product Information

Application	WB, IHC-P, E
Primary Accession	O75581
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	180429
Antigen Region	1531-1560

Additional Information

Gene ID	4040
Other Names	Low-density lipoprotein receptor-related protein 6, LRP-6, LRP6
Target/Specificity	This LRP6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1531-1560 amino acids from the C-terminal region of human LRP6.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
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.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	LRP6 Antibody (C-term T1546) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LRP6
Function	Component of the Wnt-Fzd-LRP5-LRP6 complex that triggers beta-catenin signaling through inducing aggregation of receptor-ligand complexes into ribosome-sized signalosomes (PubMed: 11357136 , PubMed: 11448771 , PubMed: 15778503 , PubMed: 16341017 , PubMed: 16513652 , PubMed: 17326769 , PubMed: 17400545 , PubMed: 19107203 , PubMed: 19293931 , PubMed: 19801552 , PubMed: 28341812). Cell-surface

coreceptor of Wnt/beta- catenin signaling, which plays a pivotal role in bone formation (PubMed:[11357136](#), PubMed:[11448771](#), PubMed:[15778503](#), PubMed:[16341017](#), PubMed:[16513652](#), PubMed:[17326769](#), PubMed:[17400545](#), PubMed:[19107203](#), PubMed:[19293931](#), PubMed:[19801552](#), PubMed:[28341812](#)). 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 signalosomes and inhibiting AXIN1/GSK3-mediated phosphorylation and destruction of beta-catenin (PubMed:[16513652](#)). Required for posterior patterning of the epiblast during gastrulation (By similarity).

Cellular Location

Cell membrane; Single-pass type I membrane protein Endoplasmic reticulum. Membrane raft. Note=On Wnt signaling, undergoes a cycle of caveolin- or clathrin-mediated endocytosis and plasma membrane location. Released from the endoplasmic reticulum on palmitoylation Mono-ubiquitination retains it in the endoplasmic reticulum in the absence of palmitoylation. On Wnt signaling, phosphorylated, aggregates and colocalizes with AXIN1 and GSK3B at the plasma membrane in LRP6- signalosomes (By similarity). Chaperoned to the plasma membrane by HSP90B1 and MESD (PubMed:[23572575](#)). {ECO:0000250 | UniProtKB:O88572, ECO:0000269 | PubMed:[23572575](#)}

Tissue Location

Widely coexpressed with LRP5 during embryogenesis and in adult tissues

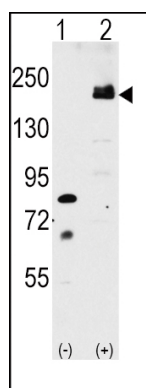
Background

LRP6 is essential for the Wnt/beta catenin signaling pathway, probably by acting as a coreceptor together with Frizzled for Wnt. It is a specific, high-affinity receptor for DKK1 and DKK2, but not DKK3. The interaction with DKK1 blocks LRP6-mediated Wnt/beta catenin signaling via LRP6 removal via Kremen proteins-mediated endocytosis.

References

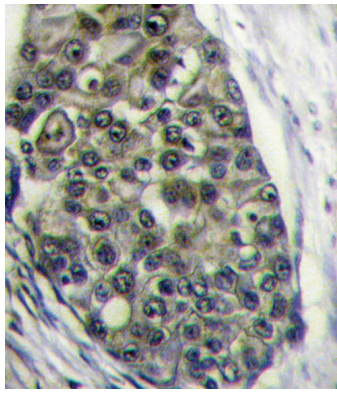
Liu, G., et al., Mol. Cell. Biol. 23(16):5825-5835 (2003). Tamai, K., et al., Nature 407(6803):530-535 (2000). Brown, S.D., et al., Biochem. Biophys. Res. Commun. 248(3):879-888 (1998).

Images



Western blot analysis of LRP6 (arrow) using rabbit polyclonal LRP6 Antibody (C-term T1546) (Cat# AP6158a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the LRP6 gene (Lane 2) (Origene Technologies).

Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with LRP6 Antibody (C-term T1546)(Cat.#AP6158a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This



data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- [LRP6 protein regulates low density lipoprotein \(LDL\) receptor-mediated LDL uptake.](#)
- [Wild-type LRP6 inhibits, whereas atherosclerosis-linked LRP6R611C increases PDGF-dependent vascular smooth muscle cell proliferation.](#)
- [LRP6 overexpression defines a class of breast cancer subtype and is a target for therapy.](#)

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