

Anti-LRP6 antibody



Description	Unconjugated Rabbit polyclonal to LRP6
Model	STJ190146
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human LRP6 protein.
Immunogen Region	1420-1500aa
Gene ID	4040
Gene Symbol	LRP6
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	LRP6 Polyclonal Antibody detects endogenous levels of protein.
Tissue Specificity	Widely coexpressed with LRP5 during embryogenesis and in adult tissues.
Purification	LRP6 antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Low-density lipoprotein receptor-related protein 6 LRP-6
Molecular Weight	177 kDa
Clonality	Polyclonal
Conjugation	Unconjugated

Isotype	IgG
Formulation	Liquid form in PBS containing 50% glycerol, and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:6698OMIM:603507
Alternative Names	Low-density lipoprotein receptor-related protein 6 LRP-6
Function	Component of the Wnt-Fzd-LRP5-LRP6 complex that triggers beta-catenin signaling through inducing aggregation of receptor-ligand complexes into ribosome-sized signalsomes. Cell-surface coreceptor of Wnt/beta-catenin signaling, which plays a pivotal role in bone formation. 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 signalsomes and inhibiting AXIN1/GSK3-mediated phosphorylation and destruction of beta-catenin. Required for posterior patterning of the epiblast during gastrulation .
Sequence and Domain Family	The YWTD-EGF-like domains 1 and 2 are required for the interaction with Wnt-frizzled complex. The YWTD-EGF-like domains 3 and 4 are required for the interaction with DKK1. The PPPSP motifs play a central role in signal transduction by being phosphorylated, leading to activate the Wnt signaling pathway.
Cellular Localization	Cell membrane Membrane raft. 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-signalsomes. Chaperoned to the plasma membrane by MESD .
Post-translational Modifications	Dual phosphorylation of cytoplasmic PPPSP motifs sequentially by GSK3 and CK1 is required for AXIN1-binding, and subsequent stabilization and activation of beta-catenin via preventing GSK3-mediated phosphorylation of beta-catenin. Phosphorylated, in vitro, by GRK5/6 within and outside the PPPSP motifs. Phosphorylation at Ser-1490 by CDK14 during G2/M phase leads to regulation of the Wnt signaling pathway during the cell cycle. Phosphorylation by GSK3B is induced by RPSO1 binding and inhibited by DKK1. Phosphorylated, in vitro, by casein kinase I on Thr-1479. Undergoes gamma-secretase-dependent regulated intramembrane proteolysis (RIP). The extracellular domain is first released by shedding, and then, through the action of gamma-secretase, the intracellular domain (ICD) is released into the cytoplasm where it is free to bind to GSK3B and to activate canonical Wnt signaling.; Palmitoylation on the two sites near the transmembrane domain leads to release of LRP6 from the endoplasmic reticulum. Mono-ubiquitinated which retains LRP6 in the endoplasmic reticulum. Ubiquitinated by ZNRF3, leading to its degradation by the proteasome. N-glycosylation is required for cell surface location.

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