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LRP6 Antibody (C-term H1497) Blocking Peptide

Synthetic peptide
Catalog # BP6158b

Specification

LRP6 Antibody (C-term H1497) Blocking Peptide - Product Information

Primary Accession O75581

LRP6 Antibody (C-term H1497) Blocking Peptide - Additional Information

Gene ID 4040

Other Names
Low-density lipoprotein receptor-related protein 6, LRP-6, LRP6

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6158b was selected from the C-term region of human LRP6. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

LRP6 Antibody (C-term H1497) Blocking Peptide - 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. 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 signalosomes and inhibiting AXIN1/GSK3-mediated phosphorylation and destruction of beta-catenin. 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. Chaperoned to the plasma membrane by MESD (By similarity).

Tissue Location
Widely coexpressed with LRP5 during embryogenesis and in adult tissues

LRP6 Antibody (C-term H1497) Blocking Peptide - Protocols

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

- Blocking Peptides

LRP6 Antibody (C-term H1497) Blocking Peptide - Images

LRP6 Antibody (C-term H1497) Blocking Peptide - Background

Low density lipoprotein (LDL) receptor-related protein (LRP), a member of the LDL receptor family, binds multiple classes of ligands and has been implicated in a broad range of normal and disease processes involving lipid metabolism, protease clearance, and cell migration. Structurally, members of the LDLR family share homology within their extracellular domains, which are highlighted by the presence of clusters of ligand-binding repeats. LRP is a large endocytic receptor that participates in several biological pathways and plays prominent roles in lipoprotein metabolism and in the catabolism of proteinases involved in coagulation and fibrinolysis. LRP also mediates the cellular entry of certain viruses and toxins and facilitates the activation of various lysosomal enzymes. All LRPs are expressed in the central nervous system and, for most receptors, animal models have shown that they are indispensable for successful neurodevelopment. The mechanisms by which they regulate the formation of the nervous system are varied and include the transduction of extracellular signals and the modulation of intracellular signal propagation, as well as cargo transport, the function most commonly attributed to this gene family.

LRP6 Antibody (C-term H1497) Blocking Peptide - References

He, X., et al., Development 131(8):1663-1677 (2004).Caricasole, A., et al., J. Biol. Chem. 278(39):37024-37031 (2003).Mao, B., et al., Nature 411(6835):321-325 (2001).Brown, S.D., et al., Biochem. Biophys. Res. Commun. 248(3):879-888 (1998).