

LRP5 (C-20): sc-21390

BACKGROUND

Members of the LDL receptor gene family, including LDLR (low density lipoprotein receptor), LRP5 (low density lipoprotein related proteins), Megalin (also designated GP330), VLDLR (very low density lipoprotein receptor) and ApoER2, are characterized by a cluster of cysteine-rich class A repeats, epidermal growth factor (EGF)-like repeats, YWTD repeats and an O-linked sugar domain. Of the known family members, LRP5 is most closely related to LRP1. However, LRP5 has a unique organization of EGF and LDLR repeats compared to other LDLR family members and likely represents a new category in this family. LRP is expressed in rat tibia in areas of the bone that are involved in remodeling. LRP5 is a Wnt co-receptor that binds to Axin and regulates the canonical Wnt signaling pathway. LRP5 affects bone mass accrual during growth. Mutations in LRP5 cause the autosomal recessive disorder osteoporosis-pseudoglioma syndrome (OPPG). The gene which encodes LRP5 maps to human chromosome 11q13.2.

CHROMOSOMAL LOCATION

Genetic locus: LRP5 (human) mapping to 11q13.2; Lrp5 (mouse) mapping to 19 A.

SOURCE

LRP5 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LRP5 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21390 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRP5 (C-20) is recommended for detection of LRP5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LRP5 (C-20) is also recommended for detection of LRP5 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for LRP5 siRNA (h): sc-43900, LRP5 siRNA (m): sc-149050, LRP5 shRNA Plasmid (h): sc-43900-SH, LRP5 shRNA Plasmid (m): sc-149050-SH, LRP5 shRNA (h) Lentiviral Particles: sc-43900-V and LRP5 shRNA (m) Lentiviral Particles: sc-149050-V.

Molecular Weight: 178 kDa.

Positive Controls: LRP5 (m): 293T Lysate: sc-121400.

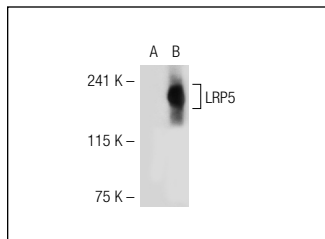
RESEARCH USE

For research use only, not for use in diagnostic procedures.

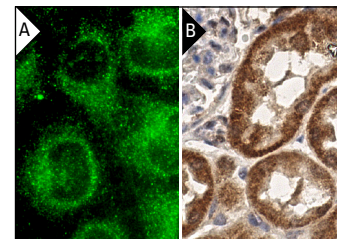
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



LRP5 (C-20): sc-21390. Western blot analysis of LRP5 expression in non-transfected: sc-117752 (A) and mouse LRP5 transfected: sc-121400 (B) 293T whole cell lysates.



LRP5 (C-20): sc-21390. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (B).

SELECT PRODUCT CITATIONS

- Björklund, P., et al. 2007. An LRP5 receptor with internal deletion in hyperparathyroid tumors with implications for deregulated WNT/ β -catenin signaling. *PLoS Med.* 4: e328.
- Ahlemeyer, B., et al. 2007. Differential expression of peroxisomal matrix and membrane proteins during postnatal development of mouse brain. *J. Comp. Neurol.* 505: 1-17.
- Björklund, P., et al. 2009. The internally truncated LRP5 receptor presents a therapeutic target in breast cancer. *PLoS ONE* 4: e4243.
- Kasaai, B., et al. 2012. Spatial and temporal localization of WNT signaling proteins in a mouse model of distraction osteogenesis. *J. Histochem. Cytochem.* 60: 219-228.
- Palsgaard, J., et al. 2012. Cross-talk between Insulin and Wnt signaling in preadipocytes: role of Wnt co-receptor low density lipoprotein receptor-related protein-5 (LRP5). *J. Biol. Chem.* 287: 12016-12026.
- Nagaoka, T., et al. 2013. Cripto-1 enhances the canonical Wnt/ β -catenin signaling pathway by binding to LRP5 and LRP6 co-receptors. *Cell. Signal.* 25: 178-189.
- Ozeki, N., et al. 2014. IL-1 β -induced, matrix metalloproteinase-3-regulated proliferation of embryonic stem cell-derived odontoblastic cells is mediated by the Wnt5 signaling pathway. *Exp. Cell Res.* 328: 69-86.
- Ozeki, N., et al. 2015. Polyphosphate-induced matrix metalloproteinase-3-mediated proliferation in rat dental pulp fibroblast-like cells is mediated by a Wnt5 signaling cascade. *Biosci. Trends* 9: 160-168.

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Try **LRP5 (B-9): sc-390267** or **LRP5 (F-11): sc-514713**, our highly recommended monoclonal alternatives to LRP5 (C-20).