

LRP5 (Y-20): sc-21389

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 coreceptor 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.

REFERENCES

- Hey, P.J., et al. 1998. Cloning of a novel member of the low-density lipoprotein receptor family. *Gene* 216: 103-111.
- Trommsdorff, M., et al. 1999. Reeler/disabled-like disruption of neuronal migration in knockout mice lacking the VLDL receptor and ApoE receptor 2. *Cell* 97: 689-701.
- Mikhailenko, I., et al. 1999. Functional domains of the very low density lipoprotein receptor: molecular analysis of ligand binding and acid-dependent ligand dissociation mechanisms. *J. Cell Sci.* 112: 3269-3281.
- Chen, D., et al. 1999. Molecular cloning of mouse Lrp7(Lr3) cDNA and chromosomal mapping of orthologous genes in mouse and human. *Genomics* 55: 314-321.

CHROMOSOMAL LOCATION

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

SOURCE

LRP5 (Y-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-21389 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

LRP5 (Y-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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

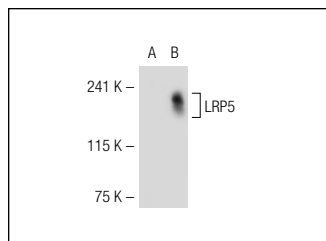
LRP5 (Y-20) is also recommended for detection of LRP5 in additional species, including equine, canine, bovine, porcine and avian.

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 of LRP5: 178 kDa.

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

DATA



LRP5 (Y-20): sc-21389. Western blot analysis of LRP5 expression in non-transfected: sc-117752 (A) and mouse LRP5 transfected: sc-121400 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Neth, P., et al. 2006. Wnt signaling regulates the invasion capacity of human mesenchymal stem cells. *Stem Cells* 24: 1892-1903.
- Honda, T., et al. 2010. PDZRN3 negatively regulates BMP-2-induced osteoblast differentiation through inhibition of Wnt signaling. *Mol. Biol. Cell* 21: 3269-3277.
- Kim, G.J., et al. 2010. Dicer is required for Sertoli cell function and survival. *Int. J. Dev. Biol.* 54: 867-875.
- Papathanasiou, I., et al. 2012. Bone morphogenetic protein-2-induced Wnt/β-catenin signaling pathway activation through enhanced low-density-lipoprotein receptor-related protein 5 catabolic activity contributes to hypertrophy in osteoarthritic chondrocytes. *Arthritis Res. Ther.* 14: R82.


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