SANTA CRUZ BIOTECHNOLOGY, INC.

LRP5 (H-105): sc-134463

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the LDL receptor gene family, including LDLR (low density lipoprotein receptor), LRPs (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 and mutations in LRP5 cause the autosomal recessive disorder osteoporosis-pseudoglioma syndrome (OPPG). The gene which encodes LRP5 maps to human chromosome 11q13.2.

REFERENCES

1. Hey, P.J., et al. 1998. Cloning of a novel member of the low-density lipoprotein receptor family. Gene 216: 103-111.
2. 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.
3. Mikhailenko, I., et al. 1999. Functional domains of the very low density lipo-protein receptor: molecular analysis of ligand binding and acid-dependent ligand dissociation mechanisms. J. Cell Sci. 112: 3269-3281.
4. 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.
5. Mao, J., et al. 2001. Low-density lipoprotein receptor-related protein-5 binds to Axin and regulates the canonical Wnt signaling pathway. Mol. Cell 7: 801-809.
6. Gong, Y., et. al. 2001. LDL receptor-related protein 5 (LRP5) affects bone accrual and eye development. Cell 107: 513-523.
7. ittle, R.D., et al. 2002. A mutation in the LDL receptor-related protein 5 gene results in the autosomal dominant high-bone-mass trait. Am. J. Hum. Gen. 70: 11-19.

CHROMOSOMAL LOCATION

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

SOURCE

LRP5 (H-105) is a rabbit polyclonal antibody raised against amino acids 1371-1475 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.

APPLICATIONS

LRP5 (H-105) 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).

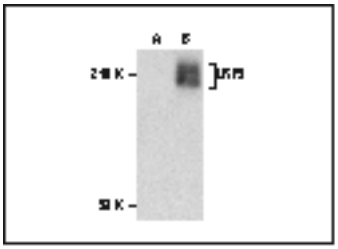
LRP5 (H-105) is also recommended for detection of LRP5 in additional species, including equine, canine, bovine and porcine.

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 of LRP5: 178 kDa.

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

DATA



SELECT PRODUCT CITATIONS

1. Tran, T.H., et al. 2012. Heparan sulfate 6-O-endosulfatases (Sulfs) coordinate the Wnt signaling pathways to regulate myoblast fusion during skeletal muscle regeneration. J. Biol. Chem. 287: 32651-32664.

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.