SANTA CRUZ BIOTECHNOLOGY, INC.

LRP5 (B-9): sc-390267

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.

CHROMOSOMAL LOCATION

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

SOURCE

LRP5 (B-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1417-1455 within a C-terminal cytoplasmic domain of LRP5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LRP5 (B-9) is available conjugated to agarose (sc-390267 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390267 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390267 PE), fluorescein (sc-390267 FITC), Alexa Fluor® 488 (sc-390267 AF488), Alexa Fluor® 546 (sc-390267 AF546), Alexa Fluor® 594 (sc-390267 AF594) or Alexa Fluor® 647 (sc-390267 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390267 AF680) or Alexa Fluor® 790 (sc-390267 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390267 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

LRP5 (B-9) is recommended for detection of LRP5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

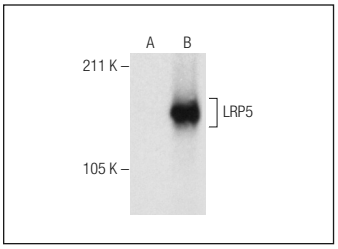
LRP5 (B-9) is also recommended for detection of LRP5 in additional species, including equine, bovine and porcine.

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.

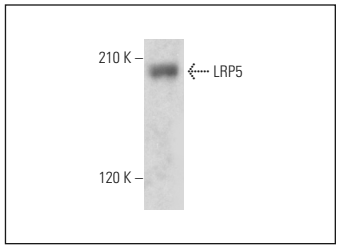
Molecular Weight of LRP5: 178 kDa.

Positive Controls: LRP5 (m): 293T Lysate: sc-121400 or NRK whole cell lysate: sc-364197.

DATA



LRP5 (B-9): sc-390267. Western blot analysis of LRP5 expression in non-transfected: sc-117752 (**A**) and mouse LRP5 transfected: sc-121400 (**B**) 293T whole cell lysates.



LRP5 (B-9): sc-390267. Western blot analysis of LRP5 expression in NRK whole cell lysate.

SELECT PRODUCT CITATIONS

1. Stolz, A., et al. 2015. Wnt-mediated protein stabilization ensures proper mitotic microtubule assembly and chromosome segregation. EMBO Rep. 16: 490-499.
2. Tuladhar, R., et al. 2019. CRISPR-Cas9-based mutagenesis frequently provokes on-target mRNA misregulation. Nat. Commun. 10: 4056.
3. He, X., et al. 2020. A novel role of LRP5 in tubulointerstitial fibrosis through activating TGF-β/Smad signaling. Signal Transduct. Target. Ther. 5: 45.
4. Ju, S., et al. 2021. LRP5 regulates HIF-1α stability via interaction with PHD2 in ischemic myocardium. Int. J. Mol. Sci. 22: 6581.
5. Jin, C.L., et al. 2022. Lysine interacts with frizzled7 to activate β-catenin in satellite cell-participated skeletal muscle growth. J. Agric. Food Chem. 70: 3745-3756.
6. Lung, J., et al. 2022. Lipid droplets in lung cancers are crucial for the cell growth and starvation survival. Int. J. Mol. Sci. 23: 12533.

RESEARCH USE

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