SANTA CRUZ BIOTECHNOLOGY, INC.

# LRP5 (F-11): sc-514713

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 lipoprotein 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. Gong, Y., et. al. 2001. LDL receptor-related protein 5 (LRP5) affects bone accrual and eye development. Cell 107: 513-523.


## CHROMOSOMAL LOCATION

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

## SOURCE

LRP5 (F-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1549-1574 within a C-terminal cytoplasmic domain of LRP5 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2b}$ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514713 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

LRP5 (F-11) 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).

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.

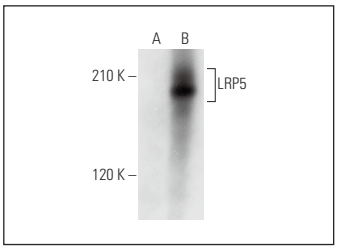
Molecular Weight of LRP5: 178 kDa.

Positive Controls: LRP5 (m): 293T Lysate: sc-121400, C6 whole cell lysate: sc-364373 or c4 whole cell lysate: sc-364186.

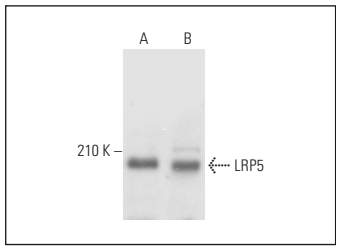
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




LRP5 (F-11): sc-514713. Western blot analysis of LRP5 expression in non-transfected: sc-117752 (**A**) and mouse LRP5 transfected: sc-121400 (**B**) 293T whole cell lysates.




LRP5 (F-11): sc-514713. Western blot analysis of LRP5 expression in c4 (**A**) and C6 (**B**) whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Xu, X., et al. 2022. Dickkopf-1 exerts protective effects by inhibiting PANoptosis and retinal neovascularization in diabetic retinopathy. Biochem. Biophys. Res. Commun. 617: 69-76.


## STORAGE

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