

LRP5 (m): 293T Lysate: sc-121400

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. LRP5 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

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. 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. Little, 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. Genet.* 70: 11-19.

CHROMOSOMAL LOCATION

Genetic locus: Lrp5 (mouse) mapping to 19 A.

PRODUCT

LRP5 (m): 293T Lysate represents a lysate of mouse LRP5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

LRP5 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive LRP5 antibodies. Recommended use: 10-20 µl per lane.

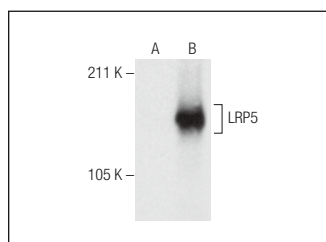
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

LRP5 (B-9): sc-390267 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse LRP5 expression in LRP5 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

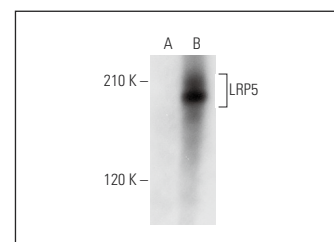
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-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.

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 (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.

RESEARCH USE

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

PROTOCOLS

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