

LRP130 (F-7): sc-166178

BACKGROUND

The leucine-rich (LRR) repeat is a 20-30 amino acid motif that forms a hydrophobic α/β horseshoe fold, allowing it to accommodate several leucine residues within a tightly packed core. All LRR repeats contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. Leucine-rich protein (LRP130) is a cytoplasmic mRNA-binding protein likely to be involved in the processing of mitochondrial DNA transcripts. Defects in the LRPPRC gene that encodes LRP130 result in the French-Canadian type of Leigh syndrome, a severe neurological disorder characterized by lesions in the subcortical region of the brain. LRP130 also interacts with the low-affinity receptor for leukemia inhibitory factor to produce an intracellular signal cascade.

CHROMOSOMAL LOCATION

Genetic locus: LRPPRC (human) mapping to 2p21; Lrpprc (mouse) mapping to 17 E4.

SOURCE

LRP130 (F-7) is a mouse monoclonal antibody raised against amino acids 974-1273 mapping at the C-terminus of LRP130 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-166178 X, 200 μ g/0.1 ml.

LRP130 (F-7) is available conjugated to agarose (sc-166178 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166178 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166178 PE), fluorescein (sc-166178 FITC), Alexa Fluor® 488 (sc-166178 AF488), Alexa Fluor® 546 (sc-166178 AF546), Alexa Fluor® 594 (sc-166178 AF594) or Alexa Fluor® 647 (sc-166178 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166178 AF680) or Alexa Fluor® 790 (sc-166178 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

LRP130 (F-7) is recommended for detection of LRP130 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 LRP130 siRNA (h): sc-44734, LRP130 siRNA (m): sc-44735, LRP130 shRNA Plasmid (h): sc-44734-SH, LRP130 shRNA Plasmid (m): sc-44735-SH, LRP130 shRNA (h) Lentiviral Particles: sc-44734-V and LRP130 shRNA (m) Lentiviral Particles: sc-44735-V.

LRP130 (F-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

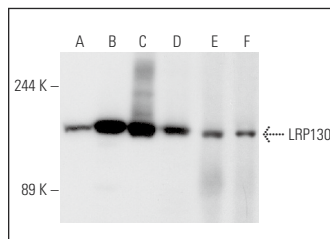
Molecular Weight of LRP130: 137 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or mouse liver extract: sc-2256.

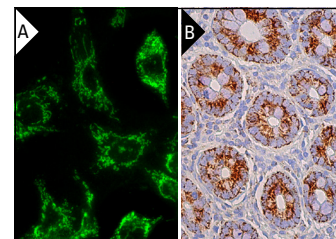
STORAGE

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

DATA



LRP130 (F-7): sc-166178. Western blot analysis of LRP130 expression in HeLa (A) and Hep G2 (B) nuclear extracts and Hep G2 (C) and HeLa (D) whole cell lysates and mouse liver (E) and rat liver (F) tissue extracts.



LRP130 (F-7): sc-166178. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Rolland, S.G., et al. 2013. Impaired complex IV activity in response to loss of LRPPRC function can be compensated by mitochondrial hyperfusion. *Proc. Natl. Acad. Sci. USA* 110: E2967-E2976.
2. Zou, J., et al. 2014. Autophagy inhibitor LRPPRC suppresses mitophagy through interaction with mitophagy initiator Parkin. *PLoS ONE* 9: e94903.
3. Samson, A.L., et al. 2016. Physicochemical properties that control protein aggregation also determine whether a protein is retained or released from necrotic cells. *Open Biol.* 6: 160098.
4. Zou, J., et al. 2019. Correction: the viral restriction factor tetherin prevents leucine-rich pentatricopeptide repeat-containing protein (LRPPRC) from association with beclin 1 and B-cell CLL/lymphoma 2 (Bcl-2) and enhances autophagy and mitophagy. *J. Biol. Chem.* 294: 5211.
5. Li, W., et al. 2020. LRPPRC sustains Yap-P27-mediated cell ploidy and P62-HDAC6-mediated autophagy maturation and suppresses genome instability and hepatocellular carcinomas. *Oncogene* 39: 3879-3892.
6. Liu, S., et al. 2021. Glycerol-3-phosphate biosynthesis regenerates cytosolic NAD⁺ to alleviate mitochondrial disease. *Cell Metab.* 33: 1974-1987.e9.
7. Saha, B., et al. 2022. Interactomic analysis reveals a homeostatic role for the HIV restriction factor TRIM5 α in mitophagy. *Cell Rep.* 39: 110797.
8. Zhou, W., et al. 2023. The RNA-binding protein LRPPRC promotes resistance to CDK4/6 inhibition in lung cancer. *Nat. Commun.* 14: 4212.
9. Yu, Y., et al. 2024. LRPPRC promotes glycolysis by stabilising LDHA mRNA and its knockdown plus glutamine inhibitor induces synthetic lethality via m⁶A modification in triple-negative breast cancer. *Clin. Transl. Med.* 14: e1583.

RESEARCH USE

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

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