LRRC4 (C-11): sc-376475

SANTA CRUZ® BIOTECHNOLOGY

The Power to Question

BACKGROUND

The leucine-rich repeat (LRR) 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 LRRs contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. The primary function of these motifs is to provide a versatile structural framework to mediate the formation of protein-protein interactions. The leucine-rich repeat-containing protein 4 (LRRC4), also designated brain tumor-associated protein BAG, Nasopharyngeal carcinoma-associated gene 14 protein (NAG14) or Netrin-G2 ligand (NGL-2), contains one Ig-like (immunoglobulin-like) domain and nine LRR (leucine-rich repeats). LRRC4 is specifically expressed in brain. Methylation of the LRRC4 gene occurs frequently in gliomas, making LRRC4 a biomarker for diagnosis or a potential therapeutic target.

REFERENCES

1. Kobe, B. and Kajava, A.V. 2001. The leucine-rich repeat as a protein recognition motif. Curr. Opin. Struct. Biol. 11: 725-732.

2. Matsushima, N., et al. 2005. Structural analysis of leucine-rich-repeat variants in proteins associated with human diseases. Cell. Mol. Life Sci. 62: 2771-2791.

3. Zhang, Q., et al. 2005. Expression and functional characterization of LRRC4, a novel brain-specific member of the LRR superfamily. FEBS Lett. 579: 3674-3682.

4. Wu, M., et al. 2006. LRRC4, a putative tumor suppressor gene, requires a functional leucine-rich repeat cassette domain to inhibit proliferation of glioma cells *in vitro* by modulating the extracellular signal-regulated kinase/protein kinase B/nuclear factor-κB pathway. Mol. Biol. Cell 17: 3534-3542.

5. Chen, Q., et al. 2007. Inhibitory effect of LRRC4 on the mobility and invasion of glioblastomas through the SDF-1α/CXCR4 axis. Zhong Nan Da Xue Xue Bao Yi Xue Ban 32: 735-741.

CHROMOSOMAL LOCATION

Genetic locus: LRRC4 (human) mapping to 7q32.1.

SOURCE

LRRC4 (C-11) is a mouse monoclonal antibody raised against amino acids 458-525 mapping within an internal region of LRRC4 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.

LRRC4 (C-11) is available conjugated to agarose (sc-376475 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376475 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376475 PE), fluorescein (sc-376475 FITC), Alexa Fluor® 488 (sc-376475 AF488), Alexa Fluor® 546 (sc-376475 AF546), Alexa Fluor® 594 (sc-376475 AF594) or Alexa Fluor® 647 (sc-376475 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376475 AF680) or Alexa Fluor® 790 (sc-376475 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

LRRC4 (C-11) is recommended for detection of LRRC4 of 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 LRRC4 siRNA (h): sc-89808, LRRC4 shRNA Plasmid (h): sc-89808-SH and LRRC4 shRNA (h) Lentiviral Particles: sc-89808-V.

Molecular Weight of LRRC4: 73 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or SK-N-SH cell lysate: sc-2410.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA
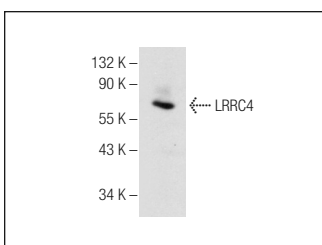
LRRC4 (C-11): sc-376475. Western blot analysis of LRRC4 expression in IMR-32 whole cell lysate.
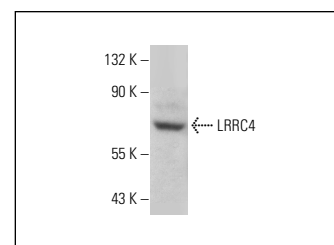
LRRC4 (C-11): sc-376475. Western blot analysis of LRRC4 expression in SK-N-SH whole cell lysate.

SELECT PRODUCT CITATIONS

1. Xue, Y., et al. 2020. Dexmedetomidine protects PC12 cells from ropivacaine injury through miR-381/LRRC4 /SDF-1/CXCR4 signaling pathway. Regen. Ther. 14: 322-329.

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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA