



LRRC4 (N-16): sc-104359

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. 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 1 Ig-like (immunoglobulin-like) domain and 9 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., Tachi, N., Kuroki, Y., Enkhbayar, P., Osaki, M., Kamiya, M. and Kretsinger, R.H. 2005. Structural analysis of leucine-rich-repeat variants in proteins associated with human diseases. *Cell. Mol. Life Sci.* 62: 2771-2791.
3. Zhang, Q., Wang, J., Fan, S., Wang, L., Cao, L., Tang, K., Peng, C., Li, Z., Li, W., Gan, K., Liu, Z., Li, X., Shen, S. and Li, G. 2005. Expression and functional characterization of LRRC4, a novel brain-specific member of the LRR superfamily. *FEBS Lett.* 579: 3674-3682.
4. Wu, M., Huang, C., Gan, K., Huang, H., Chen, Q., Ouyang, J., Tang, Y., Li, X., Yang, Y., Zhou, H., Zhou, Y., Zeng, Z., Xiao, L., Li, D., Tang, K., Shen, S. and Li, G. 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- κ B pathway. *Mol. Biol. Cell.* 17: 3534-3542.
5. Chen, Q., Wu, M.H., Zhou, Y.H., Tang, Y.L., Huang, C., Li, X.L. and Li, G.Y. 2007. Inhibitory effect of LRRC4 on the mobility and invasion of glioblastomas through the SDF-1 α /CXCR4 axis. *Zhong Nan Da Xue Xue Bao Yi Xue Ban* 32: 735-741.
6. Zhang, Z., Li, D., Wu, M., Xiang, B., Wang, L., Zhou, M., Chen, P., Li, X., Shen, S. and Li, G. 2008. Promoter hypermethylation-mediated inactivation of LRRC4 in gliomas. *BMC Mol. Biol.* 9: 99.

CHROMOSOMAL LOCATION

Genetic locus: LRRC4 (human) mapping to 7q32.1; *Lrrc4* (mouse) mapping to 6 A3.3.

SOURCE

LRRC4 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of LRRC4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104359 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRRC4 (N-16) is recommended for detection of LRRC4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other LRRC family members.

Suitable for use as control antibody for LRRC4 siRNA (h): sc-89808, LRRC4 siRNA (m): sc-106186, LRRC4 shRNA Plasmid (h): sc-89808-SH, LRRC4 shRNA Plasmid (m): sc-106186-SH, LRRC4 shRNA (h) Lentiviral Particles: sc-89808-V and LRRC4 shRNA (m) Lentiviral Particles: sc-106186-V.

Molecular Weight of LRRC4: 73 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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