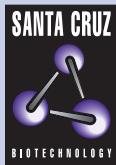


NLRR4 (C-16): sc-98045



BACKGROUND

NLRR4 (Neuronal leucine-rich repeat protein 4) is a 740 amino acid single-pass type-I transmembrane protein that contains one fibronectin type-III protein and ten LRR (leucine-rich) repeats. Leucine-rich repeats are 20-30 amino acid stretches that are unusually rich in the hydrophobic amino acid leucine and are frequently involved in the formation of protein-protein interactions. NLRR4 deficient mice show impaired memory retention in hippocampus-dependent tasks, showing that it may be involved in long-term memory. The gene encoding NLRR4 maps to human chromosome 20, which contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

1. Kobe, B. and Deisenhofer, J. 1994. The leucine-rich repeat: a versatile binding motif. *Trends Biochem. Sci.* 19: 415-421.
2. Kobe, B. and Kajava, A.V. 2001. The leucine-rich repeat as a protein recognition motif. *Curr. Opin. Struct. Biol.* 11: 725-732.
3. Deloukas, P., Matthews, L.H., Ashurst, J., Burton, J., Gilbert, J.G., Jones, M., et al. 2001. The DNA sequence and comparative analysis of human chromosome 20. *Nature* 414: 865-871.
4. Gerhard, D.S., Wagner, L., Feingold, E.A., Shenmen, C.M., Grouse, L.H., Schuler, G., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the mammalian gene collection (MGC). *Genome Res.* 14: 2121-2127.
5. Ota, T., Suzuki, Y., Nishikawa, T., Otsuki, T., Sugiyama, T., Irie, R., Wakamatsu, A., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat. Genet.* 36: 40-45.
6. Enkhbayar, P., Kamiya, M., Osaki, M., Matsumoto, T. and Matsushima, N. 2004. Structural principles of leucine-rich repeat (LRR) proteins. *Proteins* 54: 394-403.
7. Bando, T., Sekine, K., Kobayashi, S., Watabe, A.M., Rump, A., Tanaka, M., Suda, Y., Kato, S., Morikawa, Y., Manabe, T. and Miyajima, A. 2005. Neuronal leucine-rich repeat protein 4 functions in hippocampus-dependent long-lasting memory. *Mol. Cell. Biol.* 25: 4166-4175.
8. Wei, T., Gong, J., Jamitzky, F., Heckl, W.M., Stark, R.W. and Rössle, S.C. 2008. LRRML: a conformational database and an XML description of leucine-rich repeats (LRRs). *BMC Struct. Biol.* 8: 47.

CHROMOSOMAL LOCATION

Genetic locus: LRRN4 (human) mapping to 20p12.3.

SOURCE

NLRR4 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of NLRR4 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-98045 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NLRR4 (C-16) is recommended for detection of NLRR4 of 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).

Suitable for use as control antibody for NLRR4 siRNA (h): sc-75932, NLRR4 shRNA Plasmid (h): sc-75932-SH and NLRR4 shRNA (h) Lentiviral Particles: sc-75932-V.

Molecular Weight of NLRR4: 79 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.

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.