



LRRC14 (C-15): sc-87984

BACKGROUND

Leucine-rich repeats (LRRs) are 20-29 amino acid motifs that mediate protein-protein interactions. The primary function of these motifs is to provide a versatile structural framework for the formation of these protein-protein interactions. LRRs are present in a variety of proteins with diverse structure and function, including innate immunity and nervous system development. Several human diseases are associated with mutations in genes encoding LRR-containing proteins. The leucine-rich repeat-containing protein 14 (LRRC14) is a 493 amino acid protein that contains 6 LRR repeats. The gene encoding LRRC14 maps to chromosome 8, which encodes approximately 800 genes. Translocation of portions of chromosome 8 with amplifications of the c-Myc gene are found in some leukemias and lymphomas, and typically associated with a poor prognosis. Chromosome 8 is also associated with trisomy 8, Pfeiffer syndrome, congenital hypothyroidism and Waardenburg syndrome.

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. Selicorni, A., Gueneri, S., Ratti, A. and Pizzuti, A. 2002. Cytogenetic mapping of a novel locus for type II Waardenburg syndrome. *Hum. Genet.* 110: 64-67.
3. 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.
4. Chen, Y., Aulia, S., Li, L. and Tang, B.L. 2006. AMIGO and friends: an emerging family of brain-enriched, neuronal growth modulating, type I transmembrane proteins with leucine-rich repeats (LRR) and cell adhesion molecule motifs. *Brain Res. Rev.* 51: 265-274.
5. Mossafa, H., Damotte, D., Jenabian, A., Delarue, R., Vincenneau, A., Amouroux, I., Jeandel, R., Khoury, E., Martelli, J.M., Samson, T., Tapia, S., Flandrin, G. and Troussard, X. 2006. Non-Hodgkin's lymphomas with Burkitt-like cells are associated with c-Myc amplification and poor prognosis. *Leuk. Lymphoma* 47: 1885-1893.
6. Agrelo, R., Cheng, W.H., Setien, F., Roperio, S., Espada, J., Fraga, M.F., Herranz, M., Paz, M.F., Sanchez-Cespedes, M., Artiga, M.J., Guerrero, D., Castells, A., von Kobbe, C., Bohr, V.A. and Esteller, M. 2006. Epigenetic inactivation of the premature aging Werner syndrome gene in human cancer. *Proc. Natl. Acad. Sci. USA* 103: 8822-8827.
7. Dolan, J., Walshe, K., Alsbury, S., Hokamp, K., O'Keefe, S., Okafuji, T., Miller, S.F., Tear, G. and Mitchell, K.J. 2007. The extracellular leucine-rich repeat superfamily; a comparative survey and analysis of evolutionary relationships and expression patterns. *BMC Genomics* 8: 320.
8. Ko, J. and Kim, E. 2007. Leucine-rich repeat proteins of synapses. *J. Neurosci. Res.* 85: 2824-2832.

CHROMOSOMAL LOCATION

Genetic locus: LRRC14 (human) mapping to 8q24.3; Lrrc14 (mouse) mapping to 15 D3.

SOURCE

LRRC14 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LRRC14 of human origin.

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-87984 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRRC14 (C-15) is recommended for detection of LRRC14 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.

LRRC14 (C-15) is also recommended for detection of LRRC14 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LRRC14 siRNA (h): sc-77597, LRRC14 siRNA (m): sc-149053, LRRC14 shRNA Plasmid (h): sc-77597-SH, LRRC14 shRNA Plasmid (m): sc-149053-SH, LRRC14 shRNA (h) Lentiviral Particles: sc-77597-V and LRRC14 shRNA (m) Lentiviral Particles: sc-149053-V.

Molecular Weight of LRRC14: 55 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.