

LRRC21 (C-14): sc-103599

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. 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 21 (LRRC21), also designated leucine-rich repeat, immunoglobulin-like domain and transmembrane domain-containing protein 1 (LRIT1) or PAL, is a 623 amino acid protein that contains 6 LRR repeats. LRRC21 is expressed in retina and may play a role in phototransduction.

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 Deisenhofer, J. 1995. Proteins with leucine-rich repeats. *Curr. Opin. Struct. Biol.* 5: 409-416.
3. Kobe, B. and Kajava, A.V. 2001. The leucine-rich repeat as a protein recognition motif. *Curr. Opin. Struct. Biol.* 11: 725-732.
4. Kedzierski, Ł, Montgomery, J., Curtis, J. and Handman, E. 2004. Leucine-rich repeats in host-pathogen interactions. *Arch. Immunol. Ther. Exp.* 52: 104-112.
5. Enkhbayar, P., Kamiya, M., Osaki, M., Matsumoto, T. and Matsushima, N. 2004. Structural principles of leucine-rich repeat (LRR) proteins. *Proteins* 54: 394-403.
6. 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.
7. van Rooijen, E., Giles, R.H., Voest, E.E., van Rooijen, C., Schulte-Merker, S. and van Eeden, F.J. 2008. LRRC50, a conserved ciliary protein implicated in polycystic kidney disease. *J. Am. Soc. Nephrol.* 19: 1128-1138.

CHROMOSOMAL LOCATION

Genetic locus: LRIT1 (human) mapping to 10q23.1; Lrit1 (mouse) mapping to 14 B.

SOURCE

LRRC21 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of LRRC21 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 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-103599 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRRC21 (C-14) is recommended for detection of LRRC21 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other LRRC family members.

LRRC21 (C-14) is also recommended for detection of LRRC21 in additional species, including bovine and porcine.

Suitable for use as control antibody for LRRC21 siRNA (h): sc-90692, LRRC21 siRNA (m): sc-106185, LRRC21 shRNA Plasmid (h): sc-90692-SH, LRRC21 shRNA Plasmid (m): sc-106185-SH, LRRC21 shRNA (h) Lentiviral Particles: sc-90692-V and LRRC21 shRNA (m) Lentiviral Particles: sc-106185-V.

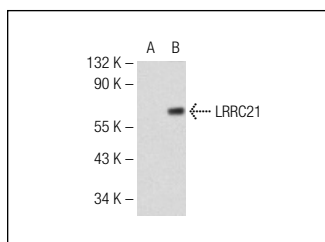
Molecular Weight of LRRC21: 68 kDa.

Positive Controls: LRRC21 (m): 293T Lysate: sc-121405.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



LRRC21 (C-14): sc-103599. Western blot analysis of LRRC21 expression in non-transfected: sc-117752 (A) and mouse LRRC21 transfected: sc-121405 (B) 293T whole cell lysates.

RESEARCH USE

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