

# LRRC49 (G-15): sc-163039

## BACKGROUND

The leucine-rich (LRR) repeat is a 20-30 amino acid motif that forms a hydrophobic  $\alpha/\beta$  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. LRRC49 (leucine-rich repeat-containing protein 49), also known as PGs4 (Tubulin polyglutamylase complex subunit 4), is a 686 amino acid cytoskeleton protein that contains eight LRR repeats. LRRC49 is a component of the neuronal Tubulin polyglutamylase complex, which contains at least GTRGE022, PGs2, TLL1, LRRC49 and PGs5.

## 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. Kajava, A.V. 1998. Structural diversity of leucine-rich repeat proteins. *J. Mol. Biol.* 277: 519-527.
4. Kobe, B. and Kajava, A.V. 2001. The leucine-rich repeat as a protein recognition motif. *Curr. Opin. Struct. Biol.* 11: 725-732.
5. Hughes, J.M., et al. 2004. Vascular leucocyte adhesion molecules unaltered in the human retina in diabetes. *Br. J. Ophthalmol.* 88: 566-572.
6. 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.

## CHROMOSOMAL LOCATION

Genetic locus: LRRC49 (human) mapping to 15q23; Lrrc49 (mouse) mapping to 9 B.

## SOURCE

LRRC49 (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LRRC49 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-163039 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

LRRC49 (G-15) is recommended for detection of LRRC49 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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.

LRRC49 (G-15) is also recommended for detection of LRRC49 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LRRC49 siRNA (h): sc-89971, LRRC49 siRNA (m): sc-149088, LRRC49 shRNA Plasmid (h): sc-89971-SH, LRRC49 shRNA Plasmid (m): sc-149088-SH, LRRC49 shRNA (h) Lentiviral Particles: sc-89971-V and LRRC49 shRNA (m) Lentiviral Particles: sc-149088-V.

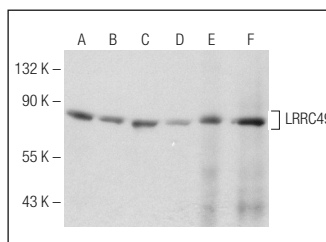
Molecular Weight of LRRC49: 79 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-87 MG cell lysate: sc-2411 or Hep G2 cell lysate: sc-2227.

## 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



LRRC49 (G-15): sc-163039. Western blot analysis of LRRC49 expression in HeLa (A), U-87 MG (B), Hep G2 (C) and DU 145 (D) whole cell lysates and rat brain (E) and mouse brain (F) tissue extracts.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## RESEARCH USE

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