SANTA CRUZ BIOTECHNOLOGY, INC.

LRRN2 (I-13): sc-164927

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The Power to Question

BACKGROUND

Leucine-rich repeats (LRRs) are 20-30 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 the genes encoding LRR-containing proteins. LRRN2 (leucine-rich repeat neuronal protein 2), also known as GAC1 (glioma amplified on chromosome 1 protein) and LRRN5 (leucine-rich repeat neuronal protein 5), is a 713 amino acid single-pass membrane protein that contains one Ig-like C2-type (immunoglobulin-like) domain and 11 LRR (leucine-rich) repeats. The gene encoding GAC1 is amplified and overexpressed in malignant gliomas.

REFERENCES

1. Taguchi, A., et al. 1996. Molecular cloning of novel leucine-rich repeat proteins and their expression in the developing mouse nervous system. Brain Res. Mol. Brain Res. 35: 31-40.
2. Almeida, A., et al. 1998. GAC1, a new member of the leucine-rich repeat superfamily on chromosome band 1q32.1, is amplified and overexpressed in malignant gliomas. Oncogene 16: 2997-3002.
3. Kobe, B., et al. 2001. The leucine-rich repeat as a protein recognition motif. Curr. Opin. Struct. Biol. 11: 725-732.
4. Ohira, M., et al. 2003. Neuroblastoma oligo-capping cDNA project: toward the understanding of the genesis and biology of neuroblastoma. Cancer Lett. 197: 63-68.
5. Hamano, S., et al. 2004. Identification of novel human neuronal leucine-rich repeat (hNLRR) family genes and inverse association of expression of Nbla10449/hNLRR-1 and Nbla10677/hNLRR-3 with the prognosis of primary neuroblastomas. Int. J. Oncol. 24: 1457-1466.
6. Haines, B.P., et al. 2005. The NLRR gene family and mouse development: modified differential display PCR identifies NLRR-1 as a gene expressed in early somitic myoblasts. Dev. Biol. 281: 145-159.
7. Ko, J. and Kim, E. 2007. Leucine-rich repeat proteins of synapses. J. Neurosci. Res. 85: 2824-2832.
8. Andreae, L.C., et al. 2009. Chick Lrrn2, a novel downstream effector of Hoxb1 and Shh, functions in the selective targeting of rhombomere 4 motor neurons. Neural Dev. 4: 27.

CHROMOSOMAL LOCATION

Genetic locus: LRRN2 (human) mapping to 1q32.1; Lrrn2 (mouse) mapping to 1 E4.

SOURCE

LRRN2 (I-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of LRRN2 of human origin.

RESEARCH USE

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

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-164927 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRRN2 (I-13) is recommended for detection of LRRN2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 LRRN family members.

Suitable for use as control antibody for LRRN2 siRNA (h): sc-88490, LRRN2 siRNA (m): sc-149117, LRRN2 shRNA Plasmid (h): sc-88490-SH, LRRN2 shRNA Plasmid (m): sc-149117-SH, LRRN2 shRNA (h) Lentiviral Particles: sc-88490-V and LRRN2 shRNA (m) Lentiviral Particles: sc-149117-V.

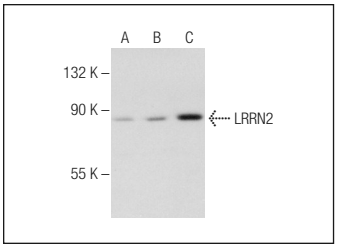
Molecular Weight of LRRN2: 79 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SW480 cell lysate: sc-2219 or THP-1 cell lysate: sc-2238.

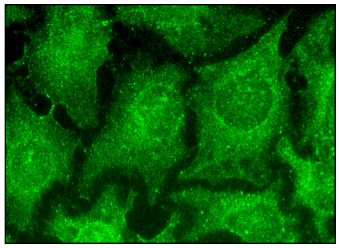
RECOMMENDED SECONDARY REAGENTS

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



LRRN2 (I-13): sc-164927. Western blot analysis of LRRN2 expression in HeLa (**A**), SW480 (**B**) and THP-1 (**C**) whole cell lysates.



LRRN2 (I-13): sc-164927. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization.

STORAGE

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