SANTA CRUZ BIOTECHNOLOGY, INC.

Lrrfip1 (R-300): sc-68386

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The Power to Question

BACKGROUND

LRRFIP1 (also designated GCF2) is an 738 amino acid human protein whose rodent counterpart is known as Lrrfip1 (also designated FLAP in mouse). LRRFIP1 is a transcriptional repressor which will preferentially bind to the GC-rich consensus sequence (5'-AGCCCCCGGCG-3') and may also regulate expression of TNF, EGFR and PDGF-A. LRRFIP1 is also believed to control smooth muscle cell proliferation following arterial injury through PDGF-A repression. The N-terminus of LRRFIP1 shows high homology to the coiled-coil domain of FLAP, a protein which binds the leucine-rich repeat (LRR) of Flightless I, and the interaction of LRRFIP1 with the LRR of Flightless I has been confirmed. LRRFIP1 does not bind single-stranded DNA or RNA significantly and binds double-stranded DNA weakly. In contrast, LRRFIP1 binds double-stranded RNA with high affinity, and two molecules of LRRFIP1 bind the TaR stem. The RNA binding domain has been identified and encompasses a lysine-rich motif. Flightless I has a C-terminal TaR-like domain which binds Actin and therefore the association of LRRFIP1 with the LRR of Flightless I may provide a link between the Actin cytoskeleton and RNA in mammalian cells.

REFERENCES

1. Reed, A.L., et al. 1998. Molecular cloning and characterization of a transcription regulator with homology to GC-binding factor. J. Biol. Chem. 273: 21594-21602.
2. Wilson, S.A., et al. 1998. TRIP: a novel double-stranded RNA binding protein which interacts with the leucine-rich repeat of Flightless I. Nucleic Acids Res. 26: 3460-3467.

CHROMOSOMAL LOCATION

Genetic locus: Lrrfip1 (rat) mapping to 9q36.

SOURCE

Lrrfip1 (R-300) is a rabbit polyclonal antibody raised against amino acids 241-540 mapping within an internal region of Lrrfip1 of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-68386 X, 200 µg/0.1 ml.

APPLICATIONS

Lrrfip1 (R-300) is recommended for detection of Lrrfip1 of rat 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). Lrrfip1 (R-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

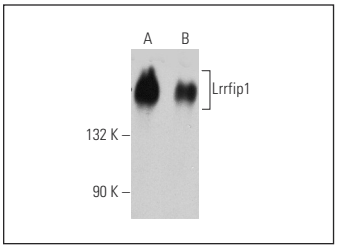
Molecular Weight of Lrrfip1 isoforms: 85/120/160 kDa.

Positive Controls: NRK whole cell lysate: sc-364197m or A-10 cell lysate: sc-3806.

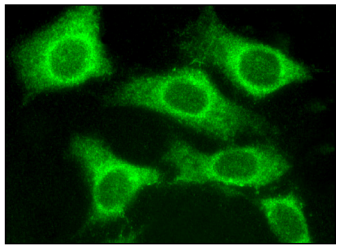
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Lrrfip1 (R-300): sc-68386. Western blot analysis of Lrrfip1 expression in NRK (**A**) and A-10 (**B**) whole cell lysates.



Lrrfip1 (R-300): sc-68386. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Gubern, C., et al. 2014. Characterization of Gcf2/Lrrfip1 in experimental cerebral ischemia and its role as a modulator of Akt, mTOR and β-catenin signaling pathways. Neuroscience 268: 48-65.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.