SANTA CRUZ BIOTECHNOLOGY, INC.

GCF2 (H-227): sc-68385

SANTA CRUZ BIOTECHNOLOGY

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., Yamazaki, H., Kaufman, J.D., Rubinstein, Y., Murphy, B. and Johnson, A.C. 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., Brown, E.C., Kingsman, A.J. and Kingsman, S.M. 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.
3. Khachigian, L.M., Santiago, F.S., Rafty, L.A., Chan, O.L., Delbridge, G.J., Bobik, A., Collins, T. and Johnson, A.C. 1999. GC factor 2 represses platelet-derived growth factor A-chain gene transcription and is itself induced by arterial injury. Circ. Res. 84: 1258-1267.
4. Rikiyama, T., Curtis, J., Oikawa, M., Zimonjic, D.B., Popescu, N., Murphy, B.A., Wilson, M.A. and Johnson, A.C. 2003. GCF2: expression and molecular analysis of repression. Biochim. Biophys. Acta 1629: 15-25.
5. Suriano, A.R., Sanford, A.N., Kim, N., Oh, M., Kennedy, S., Henderson, M.J., Dietzmann, K. and Sullivan, K.E. 2005. GCF2/LRRFIP1 represses tumor necrosis factor α expression. Mol. Cell. Biol. 25: 9073-9081.

CHROMOSOMAL LOCATION

Genetic locus: LRRFIP1 (human) mapping to 2q37.3.

SOURCE

LRRFIP1 (H-227) is a rabbit polyclonal antibody raised against amino acids 581-808 mapping at the C-terminus of LRRFIP1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-68385 X, 200 µg/0.1 ml.

APPLICATIONS

LRRFIP1 (H-227) is recommended for detection of LRRFIP1 of 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).

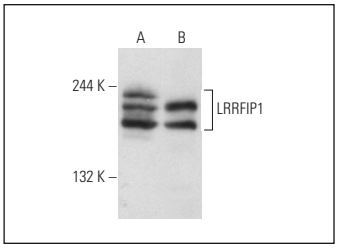
Suitable for use as control antibody for LRRFIP1 siRNA (h2): sc-270288, LRRFIP1 shRNA Plasmid (h2): sc-270288-SH and LRRFIP1 shRNA (h2) Lentiviral Particles: sc-270288-V.

LRRFIP1 (H-227) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

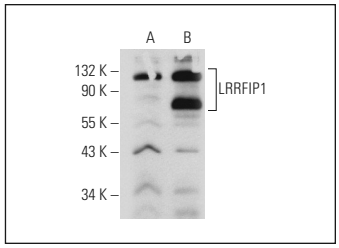
Molecular Weight of LRRFIP1 isoforms: 85/120/160 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, LRRFIP1 (h3): 293T Lysate: sc-177274 or Jurkat whole cell lysate: sc-2204.

DATA



LRRFIP1 (H-227): sc-68385. Western blot analysis of LRRFIP1 expression in HeLa (**A**) and Jurkat (**B**) whole cell lysates.



LRRFIP1 (H-227): sc-68385. Western blot analysis of LRRFIP1 expression in non-transfected: sc-117752 (**A**) and human LRRFIP1 transfected: sc-177272 (**B**) 293T whole cell lysates.

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.