SANTA CRUZ BIOTECHNOLOGY, INC.

LRRFIP1 (32): sc-135917

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

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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.
6. Sjöblom, T., Jones, S., Wood, L.D., Parsons, D.W., Lin, J., Barber, T.D., Mandelker, D., Leary, R.J., Ptak, J., Silliman, N., Szabo, S., Buckhaults, P., Farrell, C., Meeh, P., Markowitz, S.D., Willis, J., Dawson, D., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. Science 314: 268-274.

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 for detailed protocols and support products.

CHROMOSOMAL LOCATION

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

SOURCE

LRRFIP1 (32) is a mouse monoclonal antibody raised against amino acids 210-415 of LRRFIP1 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

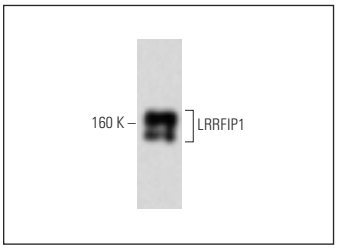
LRRFIP1 (32) is recommended for detection of LRRFIP1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for LRRFIP1 siRNA (h): sc-63161, LRRFIP1 shRNA Plasmid (h): sc-63161-SH and LRRFIP1 shRNA (h) Lentiviral Particles: sc-63161-V.

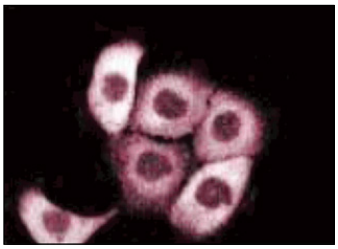
Molecular Weight of LRRFIP1 isoforms: 85/120/160 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa nuclear extract: sc-2120 or A-431 whole cell lysate: sc-2201.

DATA



LRRFIP1 (32): sc-135917. Western blot analysis of LRRFIP1 expression in A-431 whole cell lysate.



LRRFIP1 (32): sc-135917. Immunofluorescence staining of A-431 cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Tamassia, N., Bazzoni, F., Le Moigne, V., Calzetti, F., Masala, C., Grisendi, G., Bussmeyer, U., Scutera, S., De Gironcoli, M., Costantini, C., Musso, T. and Cassatella, M.A. 2012. IFN-β expression is directly activated in human neutrophils transfected with plasmid DNA and is further increased via TLR-4-mediated signaling. J. Immunol. 189: 1500-1509.

RESEARCH USE

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