

Lrrfip1 (34): sc-135910

BACKGROUND

LRRFIP1 (also designated GCF2) is a 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'-AGCCCCGGCG-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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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.
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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.
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CHROMOSOMAL LOCATION

Genetic locus: Lrrfip1 (mouse) mapping to 1 D.

SOURCE

Lrrfip1 (34) is a mouse monoclonal antibody raised against amino acids 516-622 of Lrrfip1 of mouse origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

APPLICATIONS

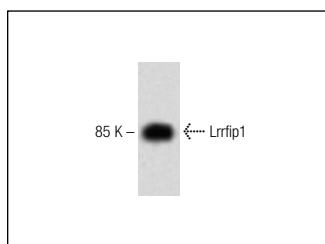
Lrrfip1 (34) is recommended for detection of Lrrfip1 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Lrrfip1 siRNA (m2): sc-270289, Lrrfip1 shRNA Plasmid (m2): sc-270289-SH and Lrrfip1 shRNA (m2) Lentiviral Particles: sc-270289-V.

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

Positive Controls: RSV-3T3 cell lysate.

DATA



Lrrfip1 (34): sc-135910. Western blot analysis of Lrrfip1 expression in RSV-3T3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Yang, P., An, H., Liu, X., Wen, M., Zheng, Y., Rui, Y. and Cao, X. 2010. The cytosolic nucleic acid sensor LRRFIP1 mediates the production of type I interferon via a β -catenin-dependent pathway. *Nat. Immunol.* 11: 487-494.
2. Jin, J., Yu, Q., Han, C., Hu, X., Xu, S., Wang, Q., Wang, J., Li, N. and Cao, X. 2013. LRRFIP2 negatively regulates NLRP3 inflammasome activation in macrophages by promoting Flightless-I-mediated caspase-1 inhibition. *Nat. Commun.* 4: 2075.

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. Not for resale.

PROTOCOLS

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