

# LRRFIP1 (J-14): sc-101168

## 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

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.
3. Khachigian, L.M., et al. 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., et al. 2003. GCF2: expression and molecular analysis of repression. *Biochim. Biophys. Acta* 1629: 15-25.
5. Suriano, A.R., et al. 2005. GCF2/LRRFIP1 represses tumor necrosis factor  $\alpha$  expression. *Mol. Cell. Biol.* 25: 9073-9081.

## CHROMOSOMAL LOCATION

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

## SOURCE

LRRFIP1 (J-14) is a mouse monoclonal antibody raised against recombinant LRRFIP1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

LRRFIP1 (J-14) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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.

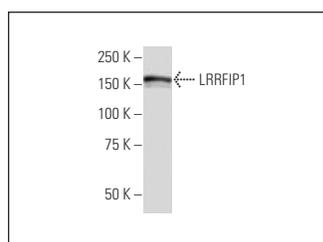
Molecular Weight of LRRFIP1 isoforms: 85/120/160 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, A-431 whole cell lysate: sc-2201 or Jurkat whole cell lysate: sc-2204.

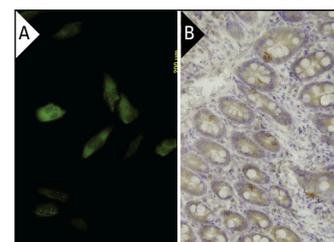
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



LRRFIP1 (J-14): sc-101168. Western blot analysis of LRRFIP1 expression in HeLa nuclear extract.



LRRFIP1 (J-14): sc-101168. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human small intestine tissue showing cytoplasmic localization (B).

## SELECT PRODUCT CITATIONS

1. Wang, Z., et al. 2020. Integrated analysis of RNA-binding proteins in glioma. *Cancers* 12: 892.

## RESEARCH USE

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