SANTA CRUZ BIOTECHNOLOGY, INC.

Lrrfip1 (K-19): sc-66680

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., 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 molec-ular analysis of repression. Biochim. Biophys. Acta 1629: 15-25.
5. Suriano, A.R., et al. 2005. GCF2/LRRFIP1 represses tumor necrosis factor α expression. Mol. Cell. Biol. 25: 9073-9081.

CHROMOSOMAL LOCATION

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

SOURCE

Lrrfip1 (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus 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-66680 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-66680 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Lrrfip1 (K-19) 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 (K-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

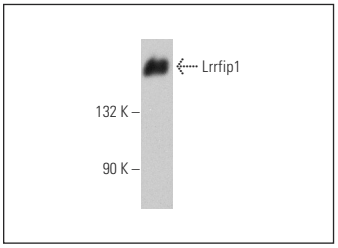
Molecular Weight of Lrrfip1 isoforms: 85/120/160 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Lrrfip1 (K-19): sc-66680. Western blot analysis of Lrrfip1 expression in KNRK whole cell lysate.

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.