SANTA CRUZ BIOTECHNOLOGY, INC.

LRF (H-6): sc-393012

BACKGROUND

LRF, formerly identified as Pokemon, is a poxvirus zinc finger (POZ) domain-containing transcription factor that influences cell differentiation. LRF (for leukemia/lymphoma related factor) is also known as zinc finger and BTB domain containing 7A, ZBTB7, TIP21, FBI1 and FBI-1. POZ-domain transcription factors contain a POZ or BTB type protein-protein interaction domain at their N-terminus and Krüppel-type zinc fingers at their C-terminus. LRF is inducible during both murine and human preadipocyte differentiation and may contribute to adipogenesis through influencing the switch from cellular proliferation to terminal differentiation. LRF can associate with active chromatin and stimulate TAT-activated HIV-1 transcription through interactions with the HIV-1 long terminal repeat. 3T3L1 cells stably overexpressing LRF show a reduction in DNA synthesis and in expression of cyclin A, cyclin-dependent kinase 2 and p107.

REFERENCES

1. Davies, J.M., et al. 1999. Novel BTB/POZ domain zinc-finger protein, LRF, is a potential target of the LAZ-3/Bcl-6 oncogene. Oncogene 18: 365-375.
2. Kukita, A., et al. 1999. Osteoclast-derived zinc finger (OCZF) protein with POZ domain, a possible transcriptional repressor, is involved in osteoclastogenesis. Blood 94: 1987-1997.
3. Pendergrast, P.S., et al. 2002. FBI-1 can stimulate HIV-1 Tat activity and is targeted to a novel subnuclear domain that includes the Tat-P-TEFβ-containing nuclear speckles. Mol. Biol. Cell 13: 915-929.
4. Lee, D.K., et al. 2002. POZ domain transcription factor, FBI-1, represses transcription of ADH5/FDH by interacting with the zinc finger and interfering with DNA binding activity of Sp1. J. Biol. Chem. 277: 26761-26768.
5. Pessler, F., et al. 2003. Flexible DNA binding of the BTB/POZ-domain protein FBI-1. J. Biol. Chem. 278: 29327-29335.

CHROMOSOMAL LOCATION

Genetic locus: ZBTB7A (human) mapping to 19p13.3; Zbtb7a (mouse) mapping to 10 C1.

SOURCE

LRF (H-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 524-560 at the C-terminus of LRF of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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-393012 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-393012 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

LRF (H-6) is recommended for detection of LRF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 LRF siRNA (h): sc-44574, LRF siRNA (m): sc-44575, LRF shRNA Plasmid (h): sc-44574-SH, LRF shRNA Plasmid (m): sc-44575-SH, LRF shRNA (h) Lentiviral Particles: sc-44574-V and LRF shRNA (m) Lentiviral Particles: sc-44575-V.

LRF (H-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

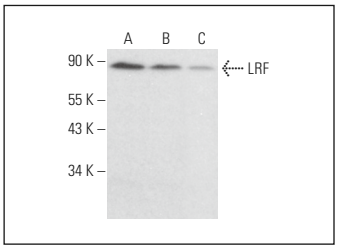
Molecular Weight of LRF: 72 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, K-562 whole cell lysate: sc-2203 or HEL 92.1.7 cell lysate: sc-2270.

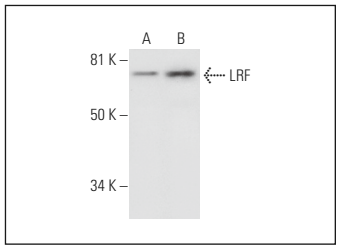
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



LRF (H-6): sc-393012. Western blot analysis of LRF expression in K-562 (**A**), HEL 92.1.7 (**B**) and MCF7 (**C**) whole cell lysates.



LRF (H-6): sc-393012. Western blot analysis of LRF expression in K-562 (**A**) and SK-MEL-28 (**B**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Christophersen, M.K., et al. 2017. SMIM1 variants rs1175550 and rs143702418 independently modulate Vel blood group antigen expression. Sci. Rep. 7: 40451.

RESEARCH USE

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