

LRF (13E9): sc-33683

BACKGROUND

LRF, formerly identified as Pokeman, 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. 3T3-L1 cells stably overexpressing LRF show a reduction in DNA synthesis and in expression of cyclin A, cyclin-dependent kinase 2 and p107.

CHROMOSOMAL LOCATION

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

SOURCE

LRF (13E9) is a Armenian hamster monoclonal antibody raised against a synthetic peptide corresponding to amino acids 1-20 of LRF of human 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-33683 X, 200 µg/0.1 ml; or azide-free for neutralizing/blocking, sc-33683 L, 200 µg/0.1 ml.

LRF (13E9) is available conjugated to agarose (sc-33683 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33683 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33683 PE), fluorescein (sc-33683 FITC), Alexa Fluor® 488 (sc-33683 AF488), Alexa Fluor® 546 (sc-33683 AF546), Alexa Fluor® 594 (sc-33683 AF594) or Alexa Fluor® 647 (sc-33683 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33683 AF680) or Alexa Fluor® 790 (sc-33683 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

LRF (13E9) is recommended for detection of LRF of mouse, rat and 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 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.

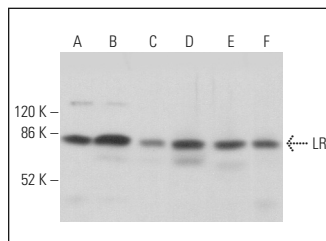
LRF (13E9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LRF: 72 kDa.

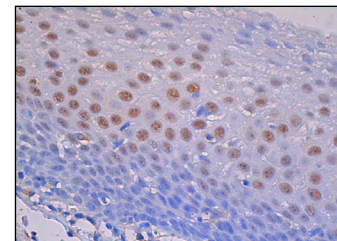
STORAGE

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

DATA



LRF (13E9): sc-33683. Western blot analysis of LRF expression in K-562 (A), HEL 92.1.7 (B), C3H/10T1/2 (C), C6 (D) and PC-12 (E) whole cell lysates and mouse brain tissue extract (F).



LRF (13E9) HRP: sc-33683 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of squamous epithelial cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

- Dobson, N.R., et al. 2012. Leukemia/lymphoma-related factor regulates oligodendrocyte lineage cell differentiation in developing white matter. *Glia* 60: 1378-1390.
- Liu, X.S., et al. 2014. ZBTB7A acts as a tumor suppressor through the transcriptional repression of glycolysis. *Genes Dev.* 28: 1917-1928.
- Liu, X.S., et al. 2016. Somatic human ZBTB7A zinc finger mutations promote cancer progression. *Oncogene* 35: 3071-3078.
- Davidson, N.L., et al. 2017. Leukemia/lymphoma-related factor (LRF) exhibits stage- and context-dependent transcriptional controls in the oligodendrocyte lineage and modulates remyelination. *J. Neurosci. Res.* 95: 2391-2408.
- Ramos Pittol, J.M., et al. 2018. ZBTB7A is a transducer for the control of promoter accessibility by NFκB and multiple other transcription factors. *PLoS Biol.* 16: e2004526.
- Zhang, L., et al. 2019. ZBTB7A, a miR-663a target gene, protects osteosarcoma from endoplasmic reticulum stress-induced apoptosis by suppressing lncRNA GAS5 expression. *Cancer Lett.* 448: 105-116.
- Choi, S.H., et al. 2019. Hypoxia-induced RelA/p65 derepresses SLC16A3 (MCT4) by downregulating ZBTB7A. *Biochim. Biophys. Acta Gene Regul. Mech.* 1862: 771-785.
- Zhou, J.P., et al. 2020. Obesity-induced upregulation of ZBTB7A promotes lipid accumulation through SREBP1. *Biomed Res. Int.* 2020: 4087928.
- Yu, S., et al. 2020. BMP4 resets mouse epiblast stem cells to naive pluripotency through ZBTB7A/B-mediated chromatin remodelling. *Nat. Cell Biol.* 22: 651-662.

RESEARCH USE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA