SANTA CRUZ BIOTECHNOLOGY, INC.

TIF1β (D-7): sc-515790

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TIF1β, for transcriptional intermediary factor 1-β, also designated KAP1 (for KRAB-associated protein 1), TF1β and TRIM28 (for tripartif motif-containing 28), is a member of the tripartif motif family characterized by three zinc-binding domains, a RING finger, B-boxes and a coiled-coil domain. Like TIF1α, TIF1β contains both a Cys/His PHD (plant homeodomain) finger and bromodomain that form a cooperative unit required for transcriptional repression. TIF1β mediates transcriptional control by interaction with the Krüppel-associated box (KRAB) repression domain found in many transcription factors and by binding DNA through its zinc finger. The human TIF1β gene maps to human chromosome 19q13.43 and encodes an 835 amino acid nuclear protein.

REFERENCES

1. Friedman, J., et al. 1996. KAP-1, a novel corepressor for the highly conserved KRAB repression domain. Genes Dev. 10: 2067-2078.
2. Moosmann, P., et al. 1996. Transcriptional repression by RING finger protein TIF1-β that interacts with the KRAB repressor domain of KOX1. Nucleic Acids Res. 24: 4859-4867.
3. Schultz, D., et al. 2001. Targeting histone deacetylase complexes via KRAB-zinc finger proteins: the PHD and bromodomains of KAP-1 form a cooperative unit that recruits a novel isoform of the Mi-2α subunit of NuRD. Genes Dev. 15: 428-443.

CHROMOSOMAL LOCATION

Genetic locus: TRIM28 (human) mapping to 19q13.43; Trim28 (mouse) mapping to 7 A1.

SOURCE

TIF1β (D-7) is a mouse monoclonal antibody raised against amino acids 536-835 mapping at the C-terminus of TIF1β of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-515790 X, 200 µg/0.1 ml.

TIF1β (D-7) is available conjugated to agarose (sc-515790 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515790 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515790 PE), fluorescein (sc-515790 FITC), Alexa Fluor® 488 (sc-515790 AF488), Alexa Fluor® 546 (sc-515790 AF546), Alexa Fluor® 594 (sc-515790 AF594) or Alexa Fluor® 647 (sc-515790 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515790 AF680) or Alexa Fluor® 790 (sc-515790 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

TIF1β (D-7) is recommended for detection of TIF1β 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), 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).

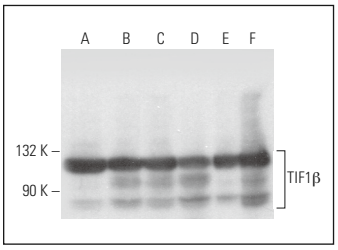
Suitable for use as control antibody for TIF1β siRNA (h): sc-38550, TIF1β siRNA (m): sc-38551, TIF1β shRNA Plasmid (h): sc-38550-SH, TIF1β shRNA Plasmid (m): sc-38551-SH, TIF1β shRNA (h) Lentiviral Particles: sc-38550-V and TIF1β shRNA (m) Lentiviral Particles: sc-38551-V.

TIF1β (D-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

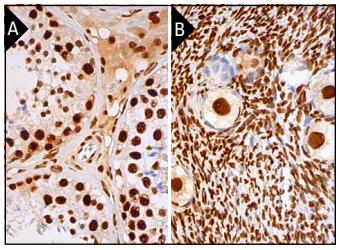
Molecular Weight of TIF1β: 100 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, NAMALWA cell lysate: sc-2234 or NCI-H929 whole cell lysate: sc-364786.

DATA



TIF1β (D-7): sc-515790. Western blot analysis of TIF1β expression in Raji (**A**), NAMALWA (**B**), GA-10 (**C**), NCI-H929 (**D**), A549 (**E**) and HEL 92.1.7 (**F**) whole cell lysates.



TIF1β (D-7): sc-515790. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts and nuclear and cytoplasmic staining of Leydig cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing nuclear staining of follicle cells, ovarian stroma cells and oocytes (**B**).

SELECT PRODUCT CITATIONS

1. Santarelli, R., et al. 2019. Stat3 phosphorylation affects p53/p21 axis and KSHV lytic cycle activation. Virology 528: 137-143.
2. Ma, X., et al. 2022. DNA polymerase η promotes nonhomologous end joining upon etoposide exposure dependent on the scaffolding protein Kap1. J. Biol. Chem. 298: 101861.
3. Lu, G., et al. 2023. Cancer associated fibroblast derived SLIT2 drives gastric cancer cell metastasis by activating NEK9. Cell Death Dis. 14: 421.
4. Sakai, M., et al. 2024. Genome-scale CRISPR-Cas9 screen identifies host factors as potential therapeutic targets for SARS-CoV-2 infection. iScience 27: 110475.

RESEARCH USE

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