SANTA CRUZ BIOTECHNOLOGY, INC.

TIF1α (C-4): sc-271266

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TIF1α mediates transcriptional events by interactions with the AF2 region of several nuclear receptors, such as the estrogen, retinoic acid and vitamin D_3 receptors. TIF1α localizes to nuclear bodies and is thought to associate with chromatin and heterochromatin-associated factors. TIF1α is a member of the tripartite motif (TRIM) family. The TRIM motif includes three zinc-binding domains (RING, B-box type 1 and B-box type 2) and a coiled-coil region. The TIF1α gene, which maps to human chromosome 7q33, encodes two alternatively spliced transcripts. However, the full length nature of one variant has not been determined. A TIF1α homolog (designated bonus) has been identified in *Drosophila* and is associated with several genes that are implicated in the ecdysone pathway, a nuclear hormone receptor pathway required throughout *Drosophila* development, suggesting a conserved functional role for the protein throughout the course of evolution.

REFERENCES

1. Fraser, R.A., et al. 1998. The putative cofactor TIF1α is a protein kinase that is hyperphosphorylated upon interaction with liganded nuclear receptors. J. Biol. Chem. 273: 16199-16204.
2. Nielsen, A.L., et al. 1999. Interaction with members of the heterochromatin protein 1 (HP1) family and histone deacetylation are differentially involved in transcriptional silencing by members of the TIF1 family. EMBO J. 18: 6385-6395.

CHROMOSOMAL LOCATION

Genetic locus: TRIM24 (human) mapping to 7q33; Trim24 (mouse) mapping to 6 B1.

SOURCE

TIF1α (C-4) is a mouse monoclonal antibody raised against amino acids 631-820 mapping within an internal region of TIF1α 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-271266 X, 200 µg/0.1 ml.

TIF1α (C-4) is available conjugated to agarose (sc-271266 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271266 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271266 PE), fluorescein (sc-271266 FITC), Alexa Fluor® 488 (sc-271266 AF488), Alexa Fluor® 546 (sc-271266 AF546), Alexa Fluor® 594 (sc-271266 AF594) or Alexa Fluor® 647 (sc-271266 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271266 AF680) or Alexa Fluor® 790 (sc-271266 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

TIF1α (C-4) is recommended for detection of TIF1α long and short isoforms 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).

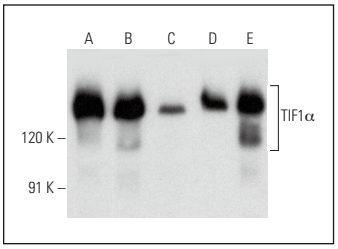
Suitable for use as control antibody for TIF1α siRNA (h): sc-38548, TIF1α siRNA (m): sc-38549, TIF1α shRNA Plasmid (h): sc-38548-SH, TIF1α shRNA Plasmid (m): sc-38549-SH, TIF1α shRNA (h) Lentiviral Particles: sc-38548-V and TIF1α shRNA (m) Lentiviral Particles: sc-38549-V.

TIF1α (C-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

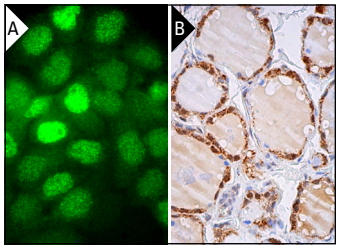
Molecular Weight of TIF1α: 117 kDa.

Positive Controls: F9 cell lysate: sc-2245, IMR-32 cell lysate: sc-2409 or Hep G2 cell lysate: sc-2227.

DATA



TIF1α (C-4): sc-271266. Western blot analysis of TIF1α expression in IMR-32 (**A**), Hep G2 (**B**), COLO 205 (**C**), Sol8 (**D**) and F9 (**E**) whole cell lysates.



TIF1α (C-4): sc-271266. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing nuclear and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Theurillat, J.P., et al. 2014. Prostate cancer. Ubiquitylome analysis identifies dysregulation of effector substrates in SPOP-mutant prostate cancer. Science 346: 85-89.
2. Zhu, Q., et al. 2020. TRIM24 facilitates antiviral immunity through mediating K63-linked TRAF3 ubiquitination. J. Exp. Med. 217: e20192083.
3. Wu, H.L., et al. 2021. Transcriptional regulation and ubiquitination-dependent regulation of HnRNPK oncogenic function in prostate tumorigenesis. Cancer Cell Int. 21: 641.
4. De La Cruz-Herrera, C.F., et al. 2023. Changes in SUMO-modified proteins in Epstein-Barr virus infection identifies reciprocal regulation of TRIM24/28/33 complexes and the lytic switch BZLF1. PLoS Pathog. 19: e1011477.

RESEARCH USE

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