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).

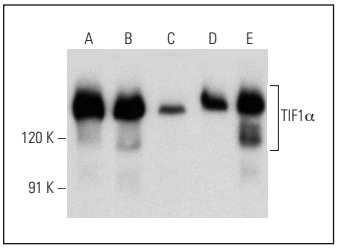
Suitable for use as control antibody for TIF1α siRNA (h): sc-38548, TIF1α siRNA (m): sc-38549, TIF1α shRNA Plasmid (h): sc-38548-SH, TIF1α shRNA Plasmid (m): sc-38549-SH, TIF1α shRNA (h) Lentiviral Particles: sc-38548-V and TIF1α shRNA (m) Lentiviral Particles: sc-38549-V.

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

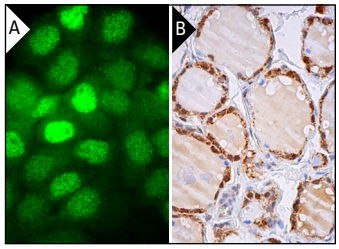
Molecular Weight of TIF1α: 117 kDa.

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. Zhang, J., et al. 2018. Cyclin D-Cdk4 kinase destabilizes PD-L1 via cullin 3-SPOP to control cancer immune surveillance. Nature 553: 91-95.
3. Yu, T., et al. 2019. Modulation of M2 macrophage polarization by the crosstalk between Stat6 and Trim24. Nat. Commun. 10: 4353.
4. Zhu, Q., et al. 2020. TRIM24 facilitates antiviral immunity through mediating K63-linked TRAF3 ubiquitination. J. Exp. Med. 217: e20192083.
5. Wu, H.L., et al. 2021. Transcriptional regulation and ubiquitination-dependent regulation of HnRNPK oncogenic function in prostate tumorigenesis. Cancer Cell Int. 21: 641.


## RESEARCH USE

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