SANTA CRUZ BIOTECHNOLOGY, INC.

TIF1γ (XX-19): sc-101179

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Transcriptional intermediary factor 1α (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 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. TIF1β is also a member of the TRIM family that contains both a Cys/His PHD 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 via its zinc finger. TIF1γ has a similar structure to the previous two TRIM members, though it presents several functional differences. TIF1γ interacts with the Smad2/3 transcription factor in hematopoietic, mesenchymal and epithelial cell types to mediate different transcriptional effects in response to TGFβ.

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 TIF1β that interacts with the KRAB repressor domain of KOX1. Nucleic Acids Res. 24: 4859-4867.

CHROMOSOMAL LOCATION

Genetic locus: TRIM33 (human) mapping to 1p13.2; Trim33 (mouse) mapping to 3 F2.2.

SOURCE

TIF1γ (XX-19) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1006-1106 of TIF1γ of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TIF1γ (XX-19) is recommended for detection of TIF1γ 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)], 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 TIF1γ siRNA (h): sc-63127, TIF1γ siRNA (m): sc-63128, TIF1γ shRNA Plasmid (h): sc-63127-SH, TIF1γ shRNA Plasmid (m): sc-63128-SH, TIF1γ shRNA (h) Lentiviral Particles: sc-63127-V and TIF1γ shRNA (m) Lentiviral Particles: sc-63128-V.

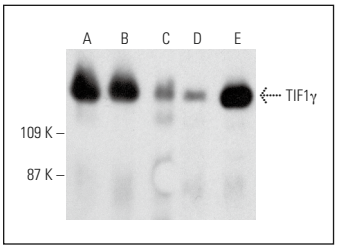
Molecular Weight of TIF1γ: 100 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, PC-12 cell lysate: sc-2250 or K-562 whole cell lysate: sc-2203.

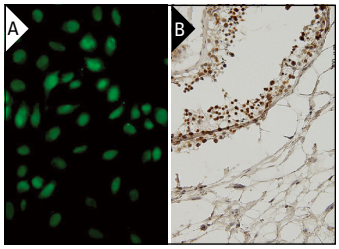
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TIF1γ (XX-19): sc-101179. Western blot analysis of TIF1γ expression in HeLa nuclear extract (**A**) and K-562 (**B**), SW480 (**C**), PC-12 (**D**) and NBT-11 (**E**) whole cell lysates.



TIF1γ (XX-19): sc-101179. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human testis tissue showing nuclear localization (**B**).

SELECT PRODUCT CITATIONS

1. Jain, S., et al. 2011. Association of overexpression of TIF1γ with colorectal carcinogenesis and advanced colorectal adenocarcinoma. World J. Gastroenterol. 17: 3994-4000.
2. Mao, S., et al. 2017. Valproic acid inhibits epithelial-mesenchymal transition in renal cell carcinoma by decreasing Smad4 expression. Mol. Med. Rep. 16: 6190-6199.
3. Nakanishi, Y., et al. 2020. Coexisting TIF1γ-positive primary pulmonary lymphoepithelioma-like carcinoma and anti-TIF1γ antibody-positive dermatomyositis: a case report. Intern. Med. 59: 2553-2558.
4. Su, Z., et al. 2022. TIF1γ inhibits lung adenocarcinoma EMT and metastasis by interacting with the TAF15/TBP complex. Cell Rep. 41: 111513.
5. Wu, Y., et al. 2023. Deubiquitinase YOD1 suppresses tumor progression by stabilizing E3 ligase TRIM33 in head and neck squamous cell carcinoma. Cell Death Dis. 14: 517.

STORAGE

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

RESEARCH USE

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