SANTA CRUZ BIOTECHNOLOGY, INC.

TIF1γ (XX-19): sc-101179

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.

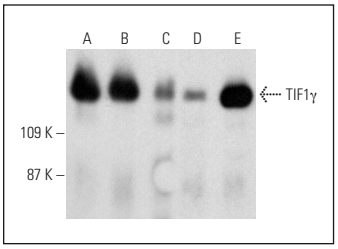
Molecular Weight of TIF1γ: 100 kDa.

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

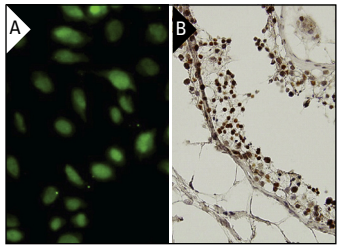
RECOMMENDED SUPPORT REAGENTS

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. E-published.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.