

TdTIF1 (K-18): sc-85957

BACKGROUND

Terminal deoxynucleotidyltransferase (TdT) is a DNA polymerase which catalyzes the addition of deoxyribonucleotides onto the 3'-hydroxyl end of DNA primers without a DNA template. TdT activity can be positively or negatively regulated by association with certain TdT-interacting factors. TdTIF1 (terminal deoxynucleotidyltransferase-interacting factor 1), also called DNTTIP1 or TdIF1, localizes to the nucleus and functions to repress TdT activity. *In vitro*, TdTIF1 binds to the Pol β -like region of TdT, thus masking its DNA-binding region and blocking its access to the DNA. Expressed throughout the body with highest expression in the thymus, TdTIF1 contains N-terminal AT-hook motifs through which it binds to TdT. In addition to inhibiting TdT-DNA interaction, TdTIF1 can bind to TReP-132, a transcriptional co-activator of steroidogenic factor 1 (SF-1). When bound to SF-1, TdTIF1 enhances gene expression in steroid-producing cells.

REFERENCES

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2. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611388. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Fujita, K., Shimazaki, N., Ohta, Y., Kubota, T., Ibe, S., Toji, S., Tamai, K., Fujisaki, S., Hayano, T. and Koiwai, O. 2003. Terminal deoxynucleotidyltransferase forms a ternary complex with a novel chromatin remodeling protein with 82 kDa and core histone. *Genes Cells* 8: 559-571.
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5. Kubota, T., Maezawa, S., Koiwai, K., Hayano, T. and Koiwai, O. 2007. Identification of functional domains in TdIF1 and its inhibitory mechanism for TdT activity. *Genes Cells* 12: 941-959.

CHROMOSOMAL LOCATION

Genetic locus: DNTTIP1 (human) mapping to 20q13.12; Dnttip1 (mouse) mapping to 2 H3.

SOURCE

TdTIF1 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TdTIF1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85957 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TdTIF1 (K-18) is recommended for detection of TdTIF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TdTIF1 (K-18) is also recommended for detection of TdTIF1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TdTIF1 siRNA (h): sc-76640, TdTIF1 siRNA (m): sc-154171, TdTIF1 shRNA Plasmid (h): sc-76640-SH, TdTIF1 shRNA Plasmid (m): sc-154171-SH, TdTIF1 shRNA (h) Lentiviral Particles: sc-76640-V and TdTIF1 shRNA (m) Lentiviral Particles: sc-154171-V.

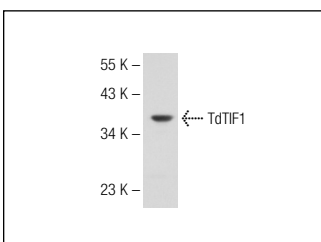
Molecular Weight of TdTIF1: 37 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, PC-3 nuclear extract: sc-2152 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



TdTIF1 (K-18): sc-85957. Western blot analysis of TdTIF1 expression in PC-3 whole cell lysate.

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.