**BACKGROUND**

Terminal deoxynucleotidyltransfease (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 TdF1, 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 TRP-132, a transcriptional co-activator of steroidogenic factor 1 (SF-1). When bound to SF-1, TdTIF1 enhances gene expression in steroid-producing cells.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

TdTIF1 (G-2) is a mouse monoclonal antibody raised against amino acids 228-297 mapping near the C-terminus of TdTIF1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgGκ, kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

TdTIF1 (G-2) is available conjugated to agarose (sc-166296 AC), 500 µg/sodium azide and 0.1% gelatin.

**APPLICATIONS**

TdTIF1 (G-2) is recommended for detection of TdTIF1 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 1:30-1:300).

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: PC-3 cell lysate: sc-2220, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:


**DATA**

![Western Blot analysis of TdTIF1 expression in Jurkat](image1). TdTIF1 (G-2): sc-166296. Western blot analysis of TdTIF1 expression in Jurkat (A), PC-3 (B) and HeLa (C) whole cell lysates.

![Immunoperoxidase staining of formalin fixed, paraffin-embedded human thymus gland tissue showing nuclear staining of glandular cells](image2). TdTIF1 (G-2): sc-166296. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thymus gland tissue showing nuclear staining of glandular cells.

**SELECT PRODUCT CITATIONS**


**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.

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