SANTA CRUZ BIOTECHNOLOGY, INC.

TTP (H-12): sc-398904

BACKGROUND

Tristetraprolin (TTP), also known as Nup475 and TIS11, is a zinc-binding protein encoded by the immediate-early response gene, Zfp-36. Stimulation of quiescent fibroblasts by mitogens, including platelet derived growth factor and fibroblast growth factor, results in the serine phosphorylation of TTP and the rapid redistribution of the protein from the nucleus to the cytoplasm. *In vitro* studies have demonstrated that TTP is phosphorylated by p42 MAP kinase, indicating that the activity of TTP may be regulated by the MAP kinase pathway *in vivo*. Knockout mice deficient in TTP develop autoimmunity, inflammatory arthritis and dermatitis. These conditions can be reversed by blocking the activity of the inflammatory mediator, tumor necrosis factor-α (TNF-α), suggesting that TTP may function to negatively regulate the expression of TNF-α.

REFERENCES

1. Taylor, G.A., et al. 1991. The human TTP protein: sequence, alignment with related proteins, and chromosomal localization of the mouse and human genes. Nucleic Acids Res. 19: 3454.
2. Kaneda, N., et al. 1992. Sequence of a rat TIS11 cDNA, an immediate early gene induced by growth factors and phorbol esters. Gene 118: 289-291.
3. Taylor, G.A., et al. 1995. Phosphorylation of tristetraprolin, a potential zinc finger transcription factor, by mitogen stimulation in intact cells and by mitogen-activated protein kinase *in vitro*. J. Biol. Chem. 270: 13341-13347.
4. Taylor, G.A., et al. 1996. Mitogens stimulate the rapid nuclear to cytosolic translocation of tristetraprolin, a potential zinc-finger transcription factor. Mol. Endocrinol. 10: 140-146.
5. Taylor, G.A., et al. 1996. A pathogenetic role for TNF α in the syndrome of cachexia, arthritis, and autoimmunity resulting from tristetraprolin (TTP) deficiency. Immunity 4: 445-454.

CHROMOSOMAL LOCATION

Genetic locus: ZFP36 (human) mapping to 19q13.2; Zfp36 (mouse) mapping to 7 A3.

SOURCE

TTP (H-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 287-302 near the C-terminus of TTP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398904 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

TTP (H-12) is recommended for detection of TTP 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TTP siRNA (h): sc-36760, TTP siRNA (m): sc-36761, TTP shRNA Plasmid (h): sc-36760-SH, TTP shRNA Plasmid (m): sc-36761-SH, TTP shRNA (h) Lentiviral Particles: sc-36760-V and TTP shRNA (m) Lentiviral Particles: sc-36761-V.

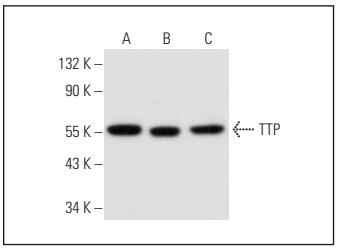
Molecular Weight of TTP: 44 kDa.

Positive Controls: TTP (h): 293T Lysate: sc-178098, 3T3-L1 cell lysate: sc-2243 or PC-12 cell lysate: sc-2250.

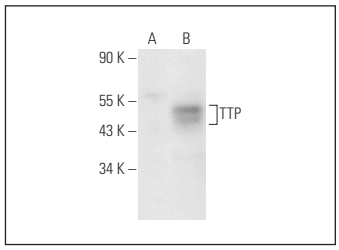
RECOMMENDED SUPPORT REAGENTS

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.

DATA



TTP (H-12): sc-398904. Western blot analysis of TTP expression in RAW 309 Crat 1 (**A**), 3T3-L1 (**B**) and PC-12 (**C**) whole cell lysates.



TTP (H-12): sc-398904. Western blot analysis of TTP expression in non-transfected: sc-117752 (**A**) and human TTP transfected: sc-178098 (**B**) 293T whole cell lysates.

RESEARCH USE

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

CONJUGATES

See **TTP (A-8): sc-374305** for TTP antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.