

TTP (h): 293T Lysate: sc-178098

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. A pathogenetic role for TNF α in the syndrome of cachexia, arthritis, and autoimmunity resulting from tristetraprolin (TTP) deficiency. *Immunity* 4: 445-454.
5. 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.
6. Carballo, E., et al. 1998. Feedback inhibition of macrophage tumor necrosis factor- α production by tristetraprolin. *Science* 281: 1001-1005.

CHROMOSOMAL LOCATION

Genetic locus: ZFP36 (human) mapping to 19q13.2.

PRODUCT

TTP (h): 293T Lysate represents a lysate of human TTP transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

TTP (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive TTP antibodies. Recommended use: 10-20 μ l per lane.

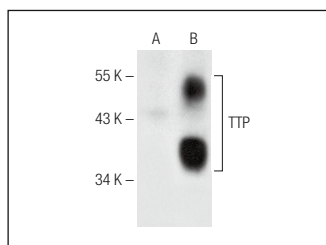
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TTP (H-8): sc-376162 is recommended as a positive control antibody for Western Blot analysis of enhanced human TTP expression in TTP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

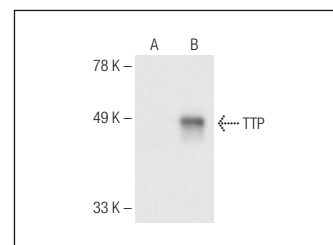
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-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.

DATA



TTP (H-8): sc-376162. Western blot analysis of TTP expression in non-transfected: sc-117752 (A) and human TTP transfected: sc-178098 (B) 293T whole cell lysates.



TTP (A-8): sc-374305. Western blot analysis of TTP expression in non-transfected: sc-117752 (A) and human TTP transfected: sc-178098 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.