

TTP (N-18): sc-8458



The Power to Question

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 .

CHROMOSOMAL LOCATION

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

SOURCE

TTP (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TTP 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-8458 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TTP (N-18) is recommended for detection of TTP 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).

TTP (N-18) is also recommended for detection of TTP in additional species, including porcine.

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, RAW 309 Cr.1 cell lysate: sc-3814 or RAW 309 Cr.1 + LPS cell lysate: sc-24770.

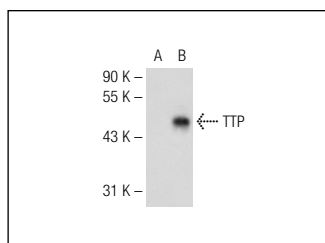
STORAGE

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

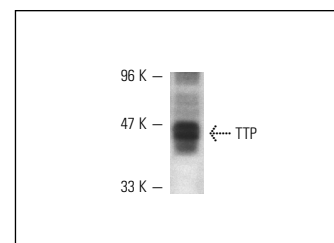
RESEARCH USE

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

DATA



TTP (N-18): sc-8458. Western blot analysis of TTP expression in non-transfected: sc-117752 (A) and human TTP transfected: sc-178098 (B) 293T whole cell lysates.



TTP (N-18): sc-8458. Western blot analysis of TTP expression in LPS-induced RAW 309 Cr.1 whole cell lysate.

SELECT PRODUCT CITATIONS

- Sawaoka, H., et al. 2003. Tristetraprolin binds to the 3'-untranslated region of cyclooxygenase-2 mRNA. A polyadenylation variant in a cancer cell line lacks the binding site. *J. Biol. Chem.* 278: 13928-13935.
- Jamison, J.T., et al. 2008. Persistent redistribution of poly-adenylated mRNAs correlates with translation arrest and cell death following global brain ischemia and reperfusion. *Neuroscience* 154: 504-520.
- Sze, K.L., et al. 2008. Post-transcriptional regulation of CLMP mRNA is controlled by tristetraprolin in response to TNF- α via c-Jun N-terminal kinase signalling. *Biochem. J.* 410: 575-583.
- Young, L.E., et al. 2009. The mRNA binding proteins HuR and tristetraprolin regulate cyclooxygenase 2 expression during colon carcinogenesis. *Gastroenterology* 136:1669-1679.
- Gray, L.C., et al. 2010. Binding of human antigen R (HuR) to an AU-rich element (ARE) in the 3'untranslated region (3'UTR) reduces the expression of decay accelerating factor (DAF). *Mol. Immunol.* 47: 2545-2551.
- Subramaniam, K., et al. 2010. Transcriptional down-regulation of IGFBP-3 in human hepatocellular carcinoma cells is mediated by the binding of TIA-1 to its AT-rich element in the 3'-untranslated region. *Cancer Lett.* 297: 259-268.
- Joe, Y., et al. 2011. Tristetraprolin mediates anti-inflammatory effects of nicotine in lipopolysaccharide-stimulated macrophages. *J. Biol. Chem.* 286: 24735-24742.
- Kang, J.G., et al. 2011. Zinc finger protein tristetraprolin interacts with CCL3 mRNA and regulates tissue inflammation. *J. Immunol.* 187: 2696-2701.

MONOS
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Try **TTP (A-8): sc-374305** or **TTP (H-12): sc-398904**, our highly recommended monoclonal alternatives to TTP (N-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **TTP (A-8): sc-374305**.