

TTP (H-8): sc-376162

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 (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-29 at the N-terminus of TTP of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376162 P, (100 μ g 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-8) 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 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), 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 1:30-1:3000).

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.

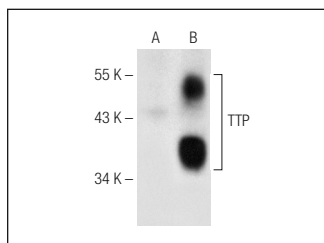
Molecular Weight of TTP: 44 kDa.

Positive Controls: TTP (h): 293T Lysate: sc-178098, RAW 309 Cr.1 cell lysate: sc-3814 or RAW 309 Cr.1 + LPS cell lysate: sc-24770.

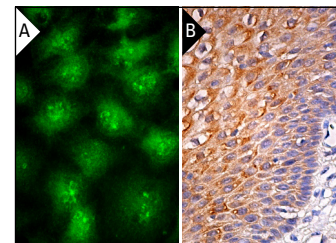
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG λ BP-FITC: sc-516185 or m-IgG λ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG λ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

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 (H-8): sc-376162. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

1. Tramutola, A., et al. 2015. Alteration of mTOR signaling occurs early in the progression of Alzheimer disease (AD): analysis of brain from subjects with pre-clinical AD, amnesic mild cognitive impairment and late-stage AD. *J. Neurochem.* 133: 739-749.
2. Zhang, Z., et al. 2020. RNA-binding protein ZFP36/TTP protects against ferroptosis by regulating autophagy signaling pathway in hepatic stellate cells. *Autophagy* 16: 1482-1505.
3. Lee, Y.C., et al. 2023. AMPK inhibition induces MCL1 mRNA destabilization via the p38 MAPK/miR-22/HuR axis in chronic myeloid leukemia cells. *Biochem. Pharmacol.* E-published.

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.

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.