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TTP Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10405

Specification

TTP Antibody - Product Information

Application	**WB**
Primary Accession	P26651
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**34003**

TTP Antibody - Additional Information

Gene ID 7538

Positive Control	**Western blot: Jurkat cell lysate**
Application & Usage	**Western blot: 1:200**

Other Names
G0/G1 switch regulatory protein 24, Growth factor-inducible, nuclear protein NUP475, Protein TIS11A, Zinc finger protein 36 homolog

Target/Specificity
TTP

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) of antibody in PBS, 0.01 % BSA, 0.01 % thimerosal, and 50 % glycerol, pH 7.2

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
TTP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TTP Antibody - Protein Information

Name ZFP36 (HGNC:12862)

Function
Zinc-finger RNA-binding protein that destabilizes several cytoplasmic AU-rich element (ARE)-containing mRNA transcripts by promoting their poly(A) tail removal or deadenylation, and hence provide a mechanism for attenuating protein synthesis (PubMed:10330172, PubMed:10751406, PubMed:11279239, PubMed:12115244, PubMed:12748283, PubMed:15187101, PubMed:15634918, PubMed:16702957, PubMed:17030620, PubMed:20221403, PubMed:20702587, PubMed:21775632, PubMed:23644599, PubMed:25815583, PubMed:27193233, PubMed:31439631, PubMed:9703499). Acts as an 3'-untranslated region (UTR) ARE mRNA-binding adapter protein to communicate signaling events to the mRNA decay machinery (PubMed:15687258, PubMed:23644599). Recruits deadenylase CNOT7 (and probably the CCR4-NOT complex) via association with CNOT1, and hence promotes ARE-mediated mRNA deadenylation (PubMed:23644599). Functions also by recruiting components of the cytoplasmic RNA decay machinery to the bound ARE-containing mRNAs (PubMed:11719186, PubMed:12748283, PubMed:15687258, PubMed:16364915). Self regulates by destabilizing its own mRNA (PubMed:15187101). Binds to 3'-UTR ARE of numerous mRNAs and of its own mRNA (PubMed:10330172, PubMed:10751406, PubMed:12115244, PubMed:15187101, PubMed:15634918, PubMed:16702957, PubMed:17030620, PubMed:19188452, PubMed:20221403, PubMed:20702587, PubMed:21775632, PubMed:25815583). Plays a role in anti-inflammatory responses; suppresses tumor necrosis factor (TNF)-alpha production by stimulating ARE-mediated TNF-alpha mRNA decay and several other inflammatory ARE- containing mRNAs in interferon (IFN)- and/or lipopolysaccharide (LPS)- induced macrophages (By similarity). Also plays a role in the regulation of dendritic cell maturation at the post-transcriptional level, and hence operates as part of a negative feedback loop to limit the inflammatory response (PubMed:18367721). Promotes ARE-mediated mRNA decay of hypoxia-inducible factor HIF1A mRNA during the response

of endothelial cells to hypoxia (PubMed:21775632). Positively regulates early adipogenesis of preadipocytes by promoting ARE-mediated mRNA decay of immediate early genes (IEGs) (By similarity). Negatively regulates hematopoietic/erythroid cell differentiation by promoting ARE-mediated mRNA decay of the transcription factor STAT5B mRNA (PubMed:20702587). Plays a role in maintaining skeletal muscle satellite cell quiescence by promoting ARE-mediated mRNA decay of the myogenic determination factor MYOD1 mRNA (By similarity). Associates also with and regulates the expression of non-ARE-containing target mRNAs at the post-transcriptional level, such as MHC class I mRNAs (PubMed:18367721). Participates in association with argonaute RISC catalytic components in the ARE-mediated mRNA decay mechanism; assists microRNA (miRNA) targeting ARE-containing mRNAs (PubMed:15766526). May also play a role in the regulation of cytoplasmic mRNA decapping; enhances decapping of ARE-containing RNAs, in vitro (PubMed:16364915). Involved in the delivery of target ARE-mRNAs to processing bodies (PBs) (PubMed:17369404). In addition to its cytosolic mRNA-decay function, affects nuclear pre-mRNA processing (By similarity). Negatively regulates nuclear poly(A)-binding protein PABPN1-stimulated polyadenylation activity on ARE-containing pre-mRNA during LPS- stimulated macrophages (By similarity). Also involved in the regulation of stress granule (SG) and P-body (PB) formation and fusion (By similarity). Plays a role in the regulation of keratinocyte proliferation, differentiation and apoptosis (PubMed:27182009). Plays a role as a tumor suppressor by inhibiting cell proliferation in breast cancer cells (PubMed:26926077).

Cellular Location
Nucleus. Cytoplasm. Cytoplasmic granule. Cytoplasm, P-body. Note=Shuttles between nucleus and cytoplasm in a CRM1-dependent manner (By similarity). Localized predominantly in the cytoplasm in a p38 MAPK- and YWHAB-dependent manner (By similarity). Colocalizes with SH3KBP1 and MAP3K4 in the cytoplasm (PubMed:20221403). Component of cytoplasmic stress granules (SGs) (By similarity). Localizes to cytoplasmic stress granules upon energy starvation (PubMed:15014438). Localizes in processing bodies (PBs) (PubMed:17369404). Excluded from stress granules in a phosphorylation MAPKAPK2-dependent manner (By similarity). Shuttles in and out of both cytoplasmic P-body and SGs (By similarity) {ECO:0000250|UniProtKB:P22893, ECO:0000269|PubMed:15014438, ECO:0000269|PubMed:17369404, ECO:0000269|PubMed:20221403}

Tissue Location
Expressed in both basal and suprabasal epidermal layers (PubMed:27182009). Expressed in epidermal keratinocytes (PubMed:27182009). Expressed strongly in mature dendritic cells (PubMed:18367721). Expressed in immature dendritic cells (at protein level) (PubMed:18367721).

TTP Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety

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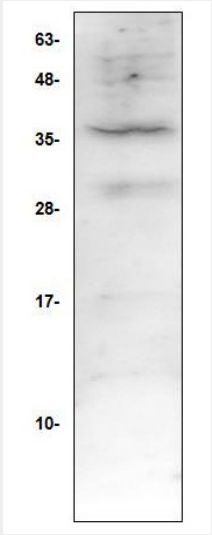
- Cell Culture

TTP Antibody - Images



Western blot of Jurkat cell lysate with TTP antibody.

TTP Antibody - 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-alpha (TNF-α), suggesting that TTP may function to negatively regulate the expression of TNF-α.