

TARDBP Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AW5091

Product Information

Application	IF, IHC-P, WB
Primary Accession	Q13148
Other Accession	Q921F2 , Q5ZLN5 , NP_031401.1
Reactivity	Mouse, Human
Predicted	Chicken
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44740
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	23435
Antigen Region	1-30
Other Names	TARDBP; TDP43; TAR DNA-binding protein 43
Dilution	IF~~1:10~50 IHC-P~~1:100~500 WB~~1:1000
Target/Specificity	This TARDBP antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human TARDBP.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TARDBP Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TARDBP {ECO:0000303 PubMed:18396105, ECO:0000312 HGNC:HGNC:11571}
Function	RNA-binding protein that is involved in various steps of RNA biogenesis and

processing (PubMed:[23519609](#)). Preferentially binds, via its two RNA recognition motifs RRM1 and RRM2, to GU-repeats on RNA molecules predominantly localized within long introns and in the 3'UTR of mRNAs (PubMed:[23519609](#), PubMed:[24240615](#), PubMed:[24464995](#)). In turn, regulates the splicing of many non-coding and protein-coding RNAs including proteins involved in neuronal survival, as well as mRNAs that encode proteins relevant for neurodegenerative diseases (PubMed:[21358640](#), PubMed:[29438978](#)). Plays a role in maintaining mitochondrial homeostasis by regulating the processing of mitochondrial transcripts (PubMed:[28794432](#)). Also regulates mRNA stability by recruiting CNOT7/CAF1 deadenylase on mRNA 3'UTR leading to poly(A) tail deadenylation and thus shortening (PubMed:[30520513](#)). In response to oxidative insult, associates with stalled ribosomes localized to stress granules (SGs) and contributes to cell survival (PubMed:[19765185](#), PubMed:[23398327](#)). Also participates in the normal skeletal muscle formation and regeneration, forming cytoplasmic myo-granules and binding mRNAs that encode sarcomeric proteins (PubMed:[30464263](#)). Plays a role in the maintenance of the circadian clock periodicity via stabilization of the CRY1 and CRY2 proteins in a FBXL3-dependent manner (PubMed:[27123980](#)). Negatively regulates the expression of CDK6 (PubMed:[19760257](#)). Regulates the expression of HDAC6, ATG7 and VCP in a PPIA/CYPA-dependent manner (PubMed:[25678563](#)).

Cellular Location

Nucleus. Cytoplasm. Cytoplasm, Stress granule Mitochondrion.
Note=Continuously travels in and out of the nucleus (PubMed:18957508). Localizes to stress granules in response to oxidative stress (PubMed:19765185). A small subset localizes in mitochondria (PubMed:28794432).

Tissue Location

Ubiquitously expressed. In particular, expression is high in pancreas, placenta, lung, genital tract and spleen

Background

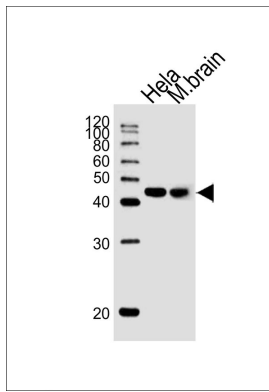
HIV-1, the causative agent of acquired immunodeficiency syndrome (AIDS), contains an RNA genome that produces a chromosomally integrated DNA during the replicative cycle. Activation of HIV-1 gene expression by the transactivator Tat is dependent on an RNA regulatory element (TAR) located downstream of the transcription initiation site. The protein encoded by this gene is a transcriptional repressor that binds to chromosomally integrated TAR DNA and represses HIV-1 transcription. In addition, this protein regulates alternate splicing of the CFTR gene. A similar pseudogene is present on chromosome 20. [provided by RefSeq].

References

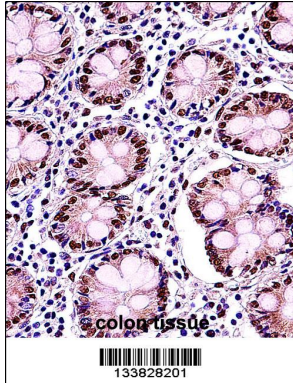
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Mackenzie, I.R., et al. Lancet Neurol 9(10):995-1007(2010)
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Images

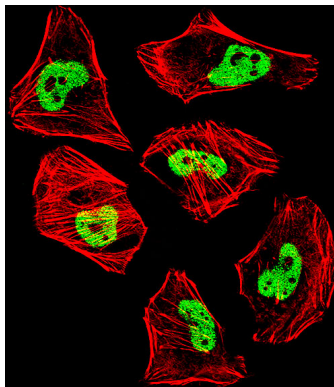
Western blot analysis of lysates from Hela cell line, mouse brain tissue lysate (from left to right), using TARDBP Antibody (N-term) (Cat. #AW5091). AW5091 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L (HRP) at 1:10000 dilution was used as the secondary



antibody. Lysates at 20ug per lane.



TARDBP Antibody (N-term) (Cat. #AW5091) immunohistochemistry analysis in formalin fixed and paraffin embedded human colon tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of TARDBP Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



Fluorescent confocal image of HeLa cell stained with TARDBP Antibody (N-term) (Cat#AW5091). HeLa cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with TARDBP primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7 units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min). TARDBP immunoreactivity is localized to nucleus significantly and Cytoplasm weakly.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.