

TDP43 Antibody

Rabbit mAb Catalog # AP92679

Product Information

Application WB, IHC, IF, FC, ICC, IHF

Primary Accession <u>Q13148</u>

Reactivity Rat, Human, Mouse

Clonality Monoclonal

Other Names ALS10; TAR DNA binding protein 43; TARDBP; TDP43;

IsotypeRabbit IgGHostRabbitCalculated MW44740

Additional Information

Dilution WB 1:1000~1:5000 IHC 1:50~1:200 ICC/IF 1:50~1:200 FC 1:50

Purification Affinity-chromatography

Immunogen A synthesized peptide derived from TDP43

Description DNA and RNA-binding protein which regulates transcription and splicing.

Involved in the regulation of CFTR splicing. It promotes CFTR exon 9 skipping by binding to the UG repeated motifs in the polymorphic region near the 3'-splice site of this exon. The resulting aberrant splicing is associated with

pathological features typical of cystic fibrosis.

Storage Condition and Buffer Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium

azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term.

Avoid freeze / thaw cycle.

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: <u>23519609</u>). 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: <u>23519609</u>, PubMed: <u>24240615</u>, PubMed: <u>244464995</u>). 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:<u>29438978</u>). Plays a role in maintaining mitochondrial homeostasis by regulating the processing of mitochondrial transcripts (PubMed:<u>28794432</u>). Also regulates mRNA stability by recruiting CNOT7/CAF1 deadenylase on mRNA 3'UTR leading to poly(A) tail deadenylation and thus shortening (PubMed:<u>30520513</u>). 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).

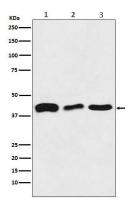
Cellular Location

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

Images



Western blot analysis of TDP43 expression in (1) HeLa cell lysate; (2) Mouse brain lysate; (3) Rat brain lysate.

Image not found: 202311/AP92679-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human glioma, using TDP43 Antibody.

Image not found: 202311/AP92679-IF.jpg

Immunofluorescent analysis of Hela cells, using TDP43 Antibody .

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