

### **TDP43 Antibody**

Rabbit mAb Catalog # AP92679

## **Specification**

### **TDP43 Antibody - Product Information**

Application WB, IHC, FC, ICC

Primary Accession
Reactivity
Q13148
Rat

Clonality Monoclonal

**Other Names** 

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

Isotype Rabbit IgG
Host Rabbit
Calculated MW 44740 Da

# **TDP43 Antibody - Additional Information**

Dilution WB~~1:1000

IHC~~1:100~500 FC~~1:10~50 ICC~~N/A

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.

## **TDP43 Antibody - 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:<a href="http://www.uniprot.org/citations/23519609" target="\_blank">23519609</a>). 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:<a



href="http://www.uniprot.org/citations/23519609" target=" blank">23519609</a>, PubMed:<a href="http://www.uniprot.org/citations/24240615" target="\_blank">24240615</a>, PubMed:<a href="http://www.uniprot.org/citations/24464995" target="blank">24464995</a>). 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:<a href="http://www.uniprot.org/citations/21358640" target=" blank">21358640</a>, PubMed:<a href="http://www.uniprot.org/citations/29438978" target=" blank">29438978</a>). Plays a role in maintaining mitochondrial homeostasis by regulating the processing of mitochondrial transcripts (PubMed: <a href="http://www.uniprot.org/citations/28794432" target=" blank">28794432</a>). Also regulates mRNA stability by recruiting CNOT7/CAF1 deadenylase on mRNA 3'UTR leading to poly(A) tail deadenylation and thus shortening (PubMed:<a href="http://www.uniprot.org/citations/30520513" target=" blank">30520513</a>). In response to oxidative insult, associates with stalled ribosomes localized to stress granules (SGs) and contributes to cell survival (PubMed: <a href="http://www.uniprot.org/citations/19765185" target=" blank">19765185</a>, PubMed:<a href="http://www.uniprot.org/citations/23398327" target="blank">23398327</a>). Also participates in the normal skeletal muscle formation and regeneration, forming cytoplasmic myo-granules and binding mRNAs that encode sarcomeric proteins (PubMed: <a href="http://www.uniprot.org/citations/30464263" target=" blank">30464263</a>). 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:<a href="http://www.uniprot.org/citations/27123980" target=" blank">27123980</a>). Negatively regulates the expression of CDK6 (PubMed:<a href="http://www.uniprot.org/citations/19760257" target=" blank">19760257</a>). Regulates the expression of HDAC6, ATG7 and VCP in a PPIA/CYPA-dependent manner (PubMed: <a href="http://www.uniprot.org/citations/25678563" target=" blank">25678563</a>).

#### **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

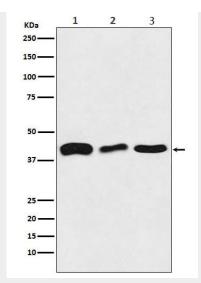
## **TDP43 Antibody - Protocols**

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

# **TDP43 Antibody - Images**





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