

## **TARDBP Antibody**

Purified Mouse Monoclonal Antibody Catalog # AO2088a

# Specification

# TARDBP Antibody - Product Information

Application Primary Accession Reactivity Host Clonality Isotype Calculated MW **Description**  E, WB, FC <u>Q13148</u> Human Mouse Monoclonal IgG1 44.7kDa KDa

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.

Immunogen Purified recombinant fragment of human TARDBP (AA: 126-260) expressed in E. Coli.

**Formulation** Purified antibody in PBS with 0.05% sodium azide

# **TARDBP Antibody - Additional Information**

Gene ID 23435

Other Names TAR DNA-binding protein 43, TDP-43, TARDBP, TDP43

**Dilution** E~~1/10000 WB~~1/500 - 1/2000 FC~~1/200 - 1/400

**Storage** Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

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

## **TARDBP 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>). Regulates also 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>). Participates also 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

## **TARDBP Antibody - Protocols**

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

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

