

TARDBP Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2088a

Product Information

Application	WB, FC, E
Primary Accession	Q13148
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	7F9A6
Isotype	IgG1
Calculated MW	44740
Description	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

Additional Information

Gene ID	23435
Other Names	TAR DNA-binding protein 43, TDP-43, TARDBP, TDP43
Dilution	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 E~~1/10000
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.

Protein Information

Name	TARDBP {ECO:0000303 PubMed:18396105,
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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

References

1. Exp Cell Res. 2013 Aug 1;319(13):1998-2005. 2. PLoS One. 2013 May 30;8(5):e64002.

Images