

### KD-Validated Anti-TAR DNA binding protein Rabbit Monoclonal Antibody Rabbit monoclonal antibody

Catalog # AGI1472

#### Specification

# KD-Validated Anti-TAR DNA binding protein Rabbit Monoclonal Antibody - Product Information

Application Primary Accession Reactivity Clonality Isotype Calculated MW Gene Name Aliases

WB, FC, ICC <u>O13148</u> Rat, Human, Mouse Monoclonal Rabbit IgG Predicted, 45 kDa, observed, 40 kDa KDa TARDBP TARDBP; TAR DNA Binding Protein; TDP-43; ALS10; TAR DNA-Binding Protein 43; TAR DNA-Binding Protein-43; TDP43 A synthesized peptide derived from human TDP43

Immunogen

### KD-Validated Anti-TAR DNA binding protein Rabbit Monoclonal Antibody - Additional Information

Gene ID 23435 Other Names TAR DNA-binding protein 43, TDP-43, TARDBP {ECO:0000303|PubMed:18396105, ECO:0000312|HGNC:HGNC:11571}

## KD-Validated Anti-TAR DNA binding protein Rabbit Monoclonal 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/23519609" target="\_blank">23519609</a>, PubMed:<a href="http://www.uniprot.org/citations/24240615" 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/21358640" target="\_blank">21358640</a>, PubMed:<a href="http://www.uniprot.org/citations/21358640" target="\_blank">21358640</a>, PubMed:<a href="http://www.uniprot.org/citations/29438978" target="\_blank">21358640</a>, PubMed:<a href="http://www.uniprot.org/citations/21358640" target="\_blank">21358640</a>, PubMed:<a href="http://www.uniprot.org/citations/29438978" target="\_blank">21358640</a>, PubMed:<a href="http://www.uniprot.org/citations/28794432" target="\_blank">22438978</a>, PubMed:<a href="http://www.uniprot.org/citations/28794432" target="\_blank">22438978</a>, PubMed:<a href="http://www.uniprot.org/citations/28794432" target



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

#### KD-Validated Anti-TAR DNA binding protein Rabbit Monoclonal Antibody - Protocols

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

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

#### KD-Validated Anti-TAR DNA binding protein Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-TAR DNA binding protein antibody (Cat#61846). Total cell lysates (30  $\mu$ g) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-TAR DNA binding protein antibody (Cat#61846, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:20,000) respectively. Image was developed



using FeQ<sup>™</sup> ECL Substrate Kit (Cat#226).



Western blotting analysis using anti-TAR DNA binding protein antibody (Cat#61846). TAR DNA binding protein expression in wild type (WT) and TAR DNA binding protein shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90  $\alpha$  serves as a loading control. The blot was incubated with anti-TAR DNA binding protein antibody (Cat#61846, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:20,000) respectively. Image was developed using FeQ<sup>TM</sup> ECL Substrate Kit (Cat#226).



Flow cytometric analysis of TAR DNA binding protein expression in C2C12 cells using TAR DNA binding protein antibody (Cat#61846, 1:2,000). Green, isotype control; red, TAR DNA binding protein.



Immunocytochemical staining of C2C12 cells with TAR DNA binding protein antibody (Cat#61846, 1:1,000). Nuclei were stained blue with DAPI; TAR DNA binding protein was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20  $\mu$ m.