

**Goat Anti-TDP-43 Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF2067a****Specification**

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**Goat Anti-TDP-43 Antibody - Product Information**

|                   |  |
|-------------------|--|
| Application       | WB, E  |
| Primary Accession | <a href="#">O13148</a>   |
| Other Accession   | <a href="#">NP_031401</a> , <a href="#">23435</a> , <a href="#">230908 (mouse)</a> |
| Reactivity        | Human, Mouse   |
| Predicted         | Rat, Pig, Dog  |
| Host              | Goat   |
| Clonality         | Polyclonal   |
| Concentration     | 100ug/200ul  |
| Isotype           | IgG  |
| Calculated MW     | 44740  |

**Goat Anti-TDP-43 Antibody - Additional Information****Gene ID** 23435**Other Names**

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

**Dilution**

WB~~1:1000

E~~N/A

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**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**

Goat Anti-TDP-43 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-TDP-43 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:&lt;a href="http://www.uniprot.org/citations/23519609" target="\_blank"&gt;23519609&lt;/a&gt;).

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

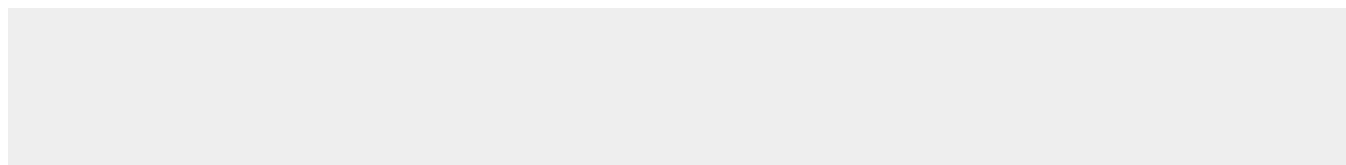
Ubiquitously expressed. In particular, expression is high in pancreas, placenta, lung, genital tract and spleen

### Goat Anti-TDP-43 Antibody - Protocols

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

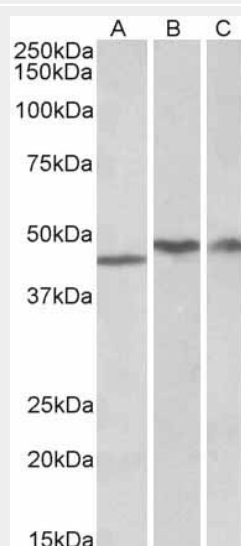
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Goat Anti-TDP-43 Antibody - Images





AF2067a (0.3 µg/ml) staining of Jurkat lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF2067a (1 µg/ml) staining of Human Cer (A), Frontal Cortex (B) and Hippocampus (C) lysates (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

### Goat Anti-TDP-43 Antibody - Background

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.

### Goat Anti-TDP-43 Antibody - References

TARDBP gene mutations among Chinese patients with sporadic amyotrophic lateral sclerosis. Huang R, et al. *Neurobiol Aging*, 2010 Aug 12. PMID 20708823.  
 Wild-type human TDP-43 expression causes TDP-43 phosphorylation, mitochondrial aggregation, motor deficits, and early mortality in transgenic mice. Xu YF, et al. *J Neurosci*, 2010 Aug 11. PMID 20702714.  
 Amyotrophic lateral sclerosis-frontotemporal lobar dementia in 3 families with p.Ala382Thr TARDBP mutations. Chi A, et al. *Arch Neurol*, 2010 Aug. PMID 20697052.  
 Large-scale screening of TARDBP mutation in amyotrophic lateral sclerosis in Japanese. Iida A, et al. *Neurobiol Aging*, 2010 Jul 30. PMID 20675015.

TARDBP Mutations in Frontotemporal Lobar Degeneration: Frequency, Clinical Features, and Disease Course. Borroni B, et al. Rejuvenation Res, 2010 Jul 20. PMID 20645878.