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Goat Anti-TDP-43 Antibody

Peptide-affinity purified goat antibody
Catalog # AF2067a

Specification

Goat Anti-TDP-43 Antibody - Product Information

Application	**WB**
Primary Accession	Q13148
Other Accession	NP_031401, 23435, 230908 (mouse)
Reactivity	**Human, Mouse**
Predicted	**Rat, Pig, Dog, Cow**
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

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: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:<a

href="http://www.uniprot.org/citations/24464995" target="_blank">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). Regulates also 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:23398327, PubMed:19765185). Participates also 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

Goat Anti-TDP-43 Antibody - Protocols

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

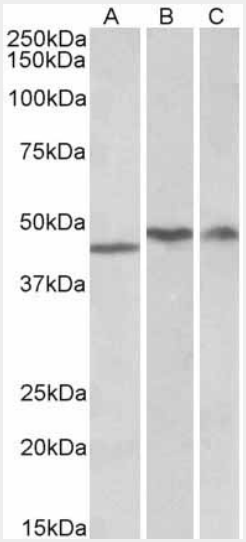
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-TDP-43 Antibody - Images

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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 Cotex (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.