

Product Datasheet

TDP-43/TARDBP Antibody (2E2-D3) - Azide and BSA Free H00023435-M01

Unit Size: 0.1 mg

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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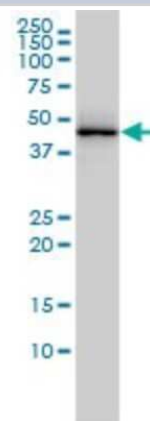
H00023435-M01

TDP-43/TARDBP Antibody (2E2-D3) - Azide and BSA Free

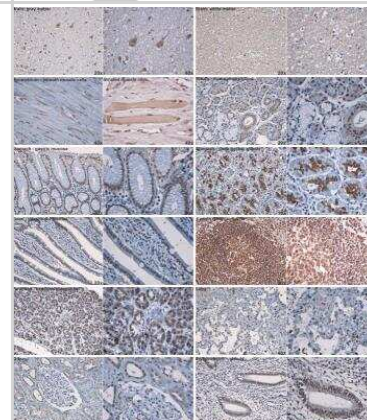
Product Information	
Unit Size	0.1 mg
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	2E2-D3
Preservative	No Preservative
Isotype	IgG1 Kappa
Purity	IgG purified
Buffer	In 1x PBS, pH 7.4
Target Molecular Weight	45 kDa
Product Description	
Host	Mouse
Gene ID	23435
Gene Symbol	TARDBP
Species	Human, Mouse, Rat, Bacteria, Insect, Monkey, Firefly
Reactivity Notes	Cross reactivity in Mouse and Rat reported by customer review. Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Mouse-On-Mouse blocking reagent may be needed for IHC and ICC experiments to reduce high background signal. You can find these reagents under catalog numbers PK-2200-NB and MP-2400-NB. Please contact Technical Support if you have any questions.
Specificity/Sensitivity	TARDBP - TAR DNA binding protein
Immunogen	TARDBP (NP_031401.1, 1 a.a. ~ 260 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa. MSEYIRVTEDENDIEIPSEDDGTVLLSTVTAQFPGACGLRYRNPVSQCMRG VRLVEGILHAPDAGWGNLVYVVNYPKDNKRKMDETDASSAVKVKRAVQKTSD LIVLGLPWKTTEQDLKEYFSTFGEVLMVQVKKDLKTGHSKGFVRFTEYETQ VKVMSQRHMIDGRWCDCCLPNSKQSQDEPLRSRKVFVGRCTEDMTEDELRE FFSQYGDVMDVFIPKPFRAFAFVTFADDQIAQSLCGEDLIKGISVHISNA
Notes	This product is produced by and distributed for Abnova, a company based in Taiwan.
Product Application Details	
Applications	Western Blot, ELISA, Functional, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation, Knockdown Validated
Recommended Dilutions	Western Blot 1:500, ELISA 1:100-1:2000, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:10-1:500, Functional, Knockdown Validated
Application Notes	Cross reactivity in Mouse and Rat reported by customer review.

Images

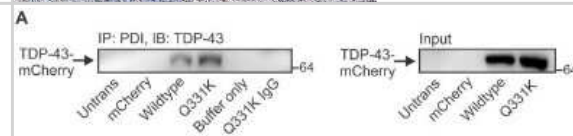
Western Blot: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - TARDBP monoclonal antibody (M01), clone 2E2-D3 Analysis of TARDBP expression in A-431.



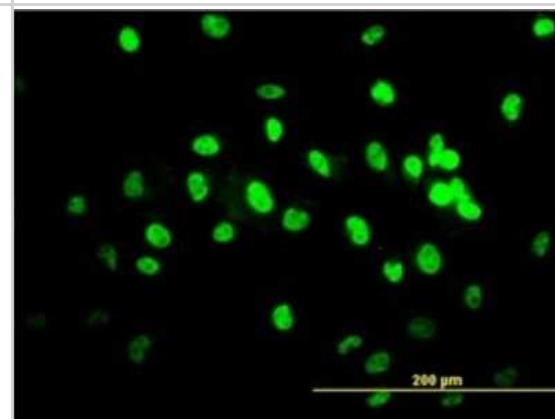
Immunohistochemistry-Paraffin: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - TARDBP in rat tissue samples. Image courtesy of product review by Daniel Pirici.



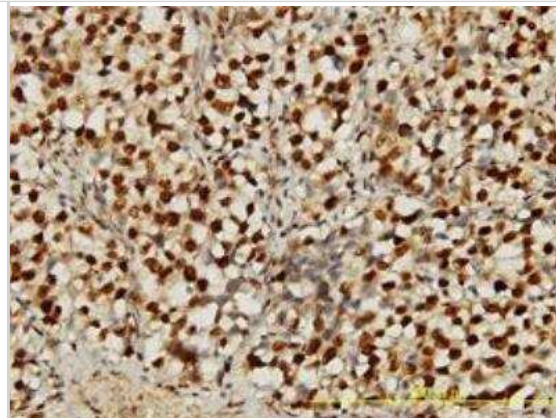
Western Blot: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - PDI co-precipitates with TDP-43/TARDBP and is increased in mutant TDP-43 transgenic mouse spinal cords. Co-immunoprecipitation of wildtype and mutant Q331K TDP-43-mCherry from Neuro2a cell lysates using an anti-PDI antibody followed by TDP-43 immunoblot. Control immunoprecipitations were performed using untransfected (Untrans) or mCherry expressing cell lysates, buffer only with coprecipitating antibodies or TDP-43 Q331K cell lysates using an irrelevant, isotype-matched control antibody (IgG). Input control (2%) shows expression of mCherry-TDP43 in wildtype and Q331K cell lysates. Image collected and cropped by CiteAb from the following publication (<https://dx.plos.org/10.1371/journal.pone.0081170>) licensed under a CC-BY license.



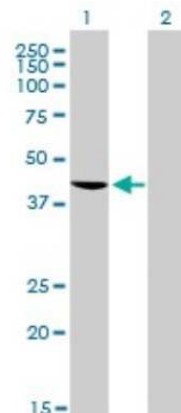
Immunocytochemistry/Immunofluorescence: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - Analysis of monoclonal antibody to TARDBP on HeLa cell. Antibody concentration 10 ug/ml.



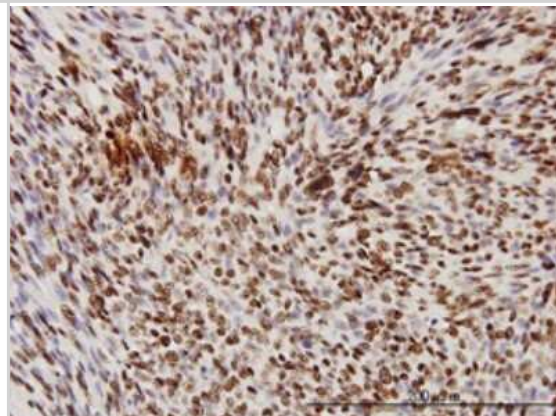
Immunohistochemistry-Paraffin: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - TARDBP on formalin-fixed paraffin-embedded human leiomyosarcoma. [antibody concentration 3 ug/ml]



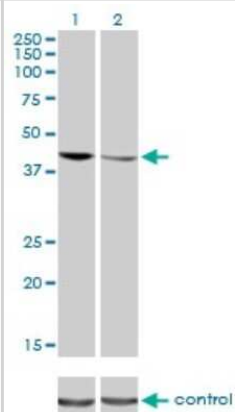
Western Blot: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - Analysis of TARDBP expression in transfected 293T cell line by TARDBP monoclonal antibody (M01), clone 2E2-D3. Lane 1: TARDBP transfected lysate (44.7 KDa). Lane 2: Non-transfected lysate.



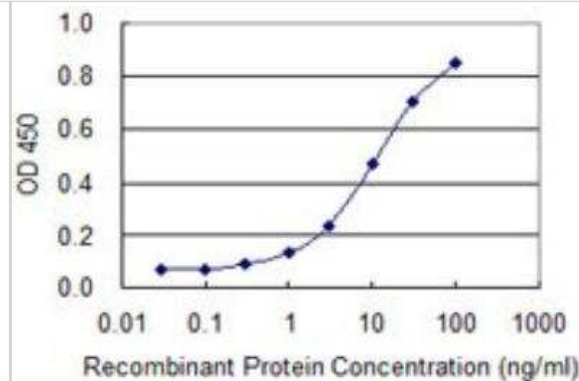
Immunohistochemistry-Paraffin: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - Analysis of monoclonal antibody to TARDBP on formalin-fixed paraffin-embedded human leiomyosarcoma tissue. Antibody concentration 3 ug/ml.



Western Blot: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - Analysis of TARDBP over-expressed 293 cell line, cotransfected with TARDBP Validated Chimera RNAi (Cat # H00023435-R01V) (Lane 2) or non-transfected control (Lane 1). Blot probed with TARDBP monoclonal antibody (M01), clone 2E2-D3 (Cat # H00023435-M01). GAPDH (36.1 kDa) used as specificity and loading control.



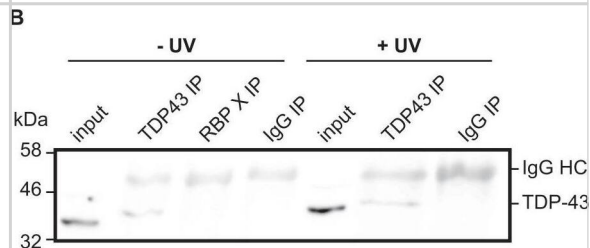
ELISA: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - Detection limit for recombinant GST tagged TARDBP is 0.3 ng/ml as a capture antibody.



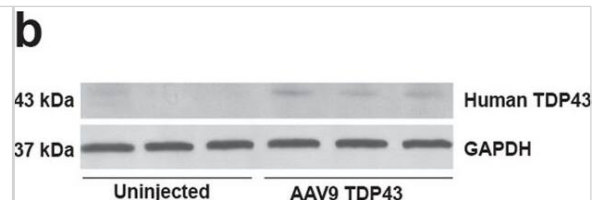
Western Blot: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - PDI co-precipitates with TDP-43 & is increased in mutant TDP-43 transgenic mouse spinal cords. (A) Co-immunoprecipitation of wildtype & mutant Q331K TDP-43-mCherry from Neuro2a cell lysates using an anti-PDI antibody followed by TDP-43 immunoblot. Control immunoprecipitations performed using untransfected (Untrans) or mCherry expressing cell lysates, buffer only with coprecipitating antibodies or TDP-43 Q331K cell lysates using an irrelevant, isotype-matched control antibody (IgG). Input control (2%) shows expression of mCherry-TDP43 in wildtype & Q331K cell lysates. Image collected & cropped by CiteAb from the following publication (<https://dx.plos.org/10.1371/journal.pone.0081170>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - CLIP shows that TDP-43 directly interacts with translational target mRNAs. (A) Schematic diagram of the CLIP experiment. (B) Immunoblot showing specific IP of TDP-43 from MN1 cells under CLIP conditions. A TDP-43 band is specifically observed in the input & TDP-43 IP lanes from both untreated & UV-treated cells, but not in the IgG or anti-RBP X control lanes. RBP X is an IP of a different RNA-binding protein, which serves as an additional specificity control here. (C and D) Plots showing percentage of input mRNA in the TDP-43 IP for the mRNAs indicated in three separate CLIP assays from MN1 cells. Performing CLIP from UV-treated cells leads to significant recovery & enrichment relative to Gapdh for all mRNAs examined (C). In the absence of UV treatment, much less mRNA is recovered & no significant enrichment relative to Gapdh mRNA is observed. Note that the Y-axis scale in D is 1000× smaller than in C, indicating strong crosslinking dependence of mRNA co-immunoprecipitation (n = 3, s.e.m. error bars, P-values indicated in the plot, unpaired two-tailed t-test). Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30357366>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: TDP-43/TARDBP Antibody (2E2-D3) [H00023435-M01] - SINE compounds partially rescue motor deficits in an animal model of ALS/FTD. (a) Schematic timeline for in vivo experiments. (b) Western blot demonstrating the expression of human TDP43 within the brains of AAV9-injected animals, which we have previously shown is largely restricted to neuronal cell types (Jackson et al.59). Full-length blots appear in Fig. S1. (c) The hang test measures the time it takes for animals to fall from grid-like scaffold when it is lifted & tilted. A single representative animal administered AAV9-TDP43 is shown; note the inability of the hind limbs to clasp the wire mesh. (d) TDP43 expression impaired motor performance on the hang test at 3 weeks, an effect that could be mitigated by 7.5 mg kg⁻¹ KPT-350. (e) Rotarod testing at 4 weeks of age showed prominent deficits associated with TDP43 expression that were resistant to treatment with SINE compounds. n, number of animals per condition. ns, not significant, mean \pm s.e.m. *p < 0.05, **p < 0.01, ***p < 0.001, one-way ANOVA with Bonferroni correction. Image collected & cropped by CiteAb from the following publication (<https://www.nature.com/articles/s41598-018-22858-w>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Pourhaghighi R, Ash PEA, Phanse S et al. BrainMap Elucidates the Macromolecular Connectivity Landscape of Mammalian Brain Cell Syst 2020-04-22 [PMID: 32325033]

Mamontova, EM;Clément, MJ;Sukhanova, MV;Joshi, V;Bouhss, A;Rengifo-Gonzalez, JC;Desforges, B;Hamon, L;Lavrik, OI;Pastré, D; FUS RRM regulates poly(ADP-ribose) levels after transcriptional arrest and PARP-1 activation on DNA damage Cell reports 2023-10-05 [PMID: 37804508]

Becker LA, Huang B, Bieri G et al. Therapeutic reduction of ataxin-2 extends lifespan and reduces pathology in TDP-43 mice Nature 2017-04-20 [PMID: 28405022] (Immunohistochemistry, Western Blot)

Carmen-Orozco RP, Tsao W, Ye Y et al. Elevated nuclear TDP-43 induces constitutive exon skipping bioRxiv : the preprint server for biology 2023-05-12 [PMID: 37215013] (IHC, Mouse)

Angelo J, Seong A A Microplate-Based Approach to Map Interactions between TDP-43 and γ -Synuclein. J Clin Med. 2022-01-24 [PMID: 35160025]

Shayna S, Zainuddin Q, Abraian M et al. Hypusination of Eif5a regulates cytoplasmic TDP-43 aggregation and accumulation in a stress-induced cellular model. Biochim Biophys Acta Mol Basis Dis. 2020-08-31 [PMID: 32882370]

Mishra P, Boutej H, Soucy G et al. Transmission of ALS pathogenesis by the cerebrospinal fluid. Acta Neuropathol Commun. 2020-05-07 [PMID: 32381112]

Jorge M, Friederike H, Felix Z et al. Sirtuin-1 sensitive lysine-136 acetylation drives phase separation and pathological aggregation of TDP-43. Nat Commun. 2022-03-09 [PMID: 35264561]

Johnathan C, Thomas J, Emily F et al. Atypical TDP-43 protein expression in an ALS pedigree carrying a p.Y374X truncation mutation in TARDBP. Brain Pathol. 2022-07-24 [PMID: 35871544]

Silvia P, Philippe C, Genevieve S et al. Monoclonal full-length antibody against TAR DNA-binding protein 43 reduces related proteinopathy in neurons. JCI Insight. 2020-11-05 [PMID: 33021970]

Taylor P, Lauren F, Yu Z et al. Detection and characterization of TDP-43 in human cells and tissues by multiple reaction monitoring mass spectrometry. Clin Mass Spectrom. 2019-07-19 [PMID: 34917762]

Ahmed S, Fairen M, Sabir M et al. MAPT p.V363I mutation: A rare cause of corticobasal degeneration. Neurol Genet. 2019-06-25 [PMID: 31404212]

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NB110-55376PEP	TDP-43/TARDBP Antibody Blocking Peptide

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