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TDP-43 / TARDBP Antibody (clone 2E2-D3)

Mouse Monoclonal Antibody
Catalog # ALS13483

Specification

TDP-43 / TARDBP Antibody (clone 2E2-D3) - Product Information

Application	**WB, IF, IHC**
Primary Accession	Q13148
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**45kDa KDa**

TDP-43 / TARDBP Antibody (clone 2E2-D3) - Additional Information

Gene ID 23435

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

Reconstitution & Storage
Store at -20°C. Aliquot to avoid freeze/thaw cycles.

Precautions
TDP-43 / TARDBP Antibody (clone 2E2-D3) is for research use only and not for use in diagnostic or therapeutic procedures.

TDP-43 / TARDBP Antibody (clone 2E2-D3) - 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: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).

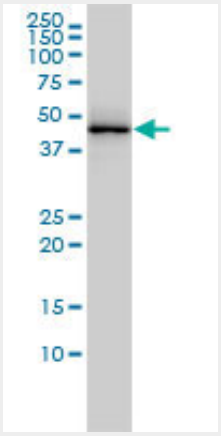
Tissue Location
Ubiquitously expressed. In particular, expression is high in pancreas, placenta, lung, genital tract and spleen

TDP-43 / TARDBP Antibody (clone 2E2-D3) - 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

TDP-43 / TARDBP Antibody (clone 2E2-D3) - Images



TARDBP monoclonal antibody clone 2E2-D3 Western blot of TARDBP expression in A-431.

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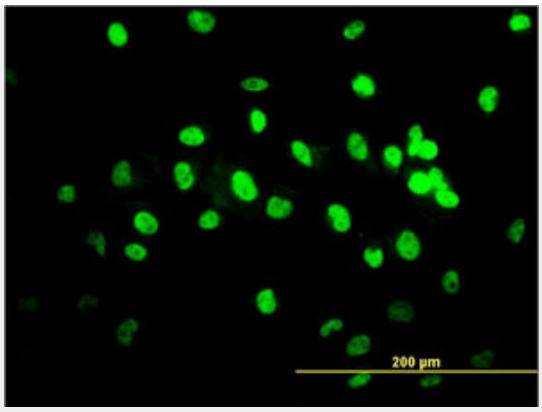
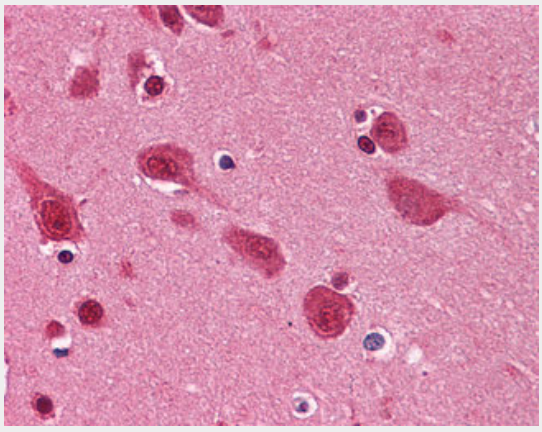
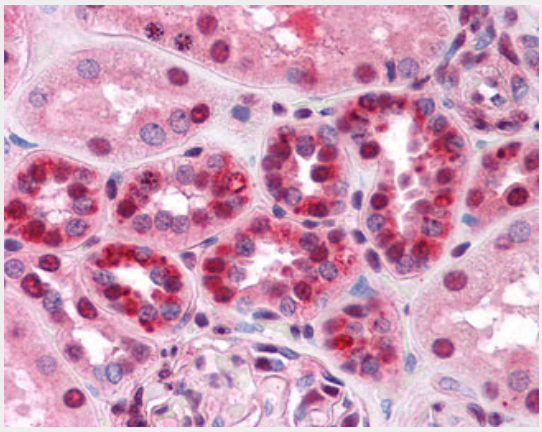


Immunofluorescence of monoclonal antibody to TARDBP on HeLa cell (antibody concentration 10 ug/ml).



Anti-TARDBP antibody IHC of human brain, cortex.



Anti-TARDBP antibody IHC of human kidney.

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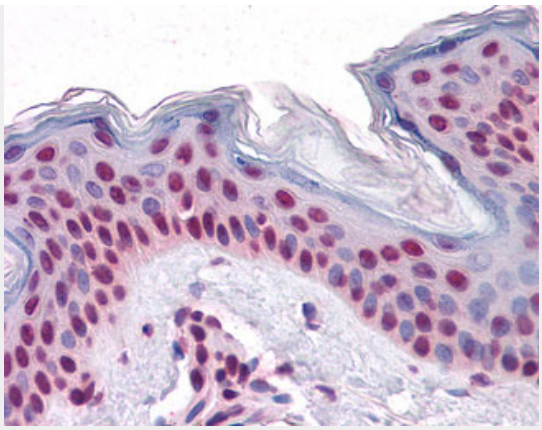

Anti-TARDBP antibody IHC of human skin.

TDP-43 / TARDBP Antibody (clone 2E2-D3) - Background

DNA and RNA-binding protein which regulates transcription and splicing. Involved in the regulation of CFTR splicing. It promotes CFTR exon 9 skipping by binding to the UG repeated motifs in the polymorphic region near the 3'-splice site of this exon. The resulting aberrant splicing is associated with pathological features typical of cystic fibrosis. May also be involved in microRNA biogenesis, apoptosis and cell division. Can repress HIV-1 transcription by binding to the HIV-1 long terminal repeat. Stabilizes the low molecular weight neurofilament (NFL) mRNA through a direct interaction with the 3' UTR.

TDP-43 / TARDBP Antibody (clone 2E2-D3) - References

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Strong M.J.,et al.Mol. Cell. Neurosci. 35:320-327(2007).
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Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
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