

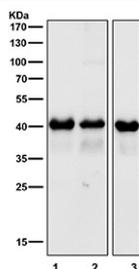
TARDBP Antibody Recombinant Rabbit mAb / TAR DNA binding protein 43 [clone ABAB-20] (RQ8883)

| Catalog No. | Formulation | Size |
|-------------|--|--------|
| RQ8883 | Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA | 100 ul |

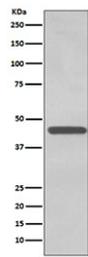
Recombinant **RABBIT MONOCLONAL**

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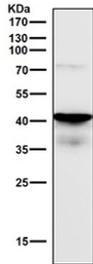
| | |
|---------------------------|--|
| Availability | 1-3 days |
| Species Reactivity | Human, Mouse, Rat |
| Format | Purified |
| Host | Rabbit |
| Clonality | Recombinant Rabbit Monoclonal |
| Isotype | Rabbit IgG |
| Clone Name | ABAB-20 |
| Purity | Affinity chromatography |
| UniProt | Q13148 |
| Localization | Nuclear, cytoplasmic |
| Applications | Western Blot : 1:500-1:2000 |
| Limitations | This TARDBP antibody is available for research use only. |



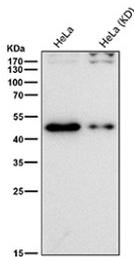
Western blot analysis of TARDBP antibody in mouse and rat tissue lysates. Lane 1: mouse brain, Lane 2: mouse skin, Lane 3: rat brain. A clear immunoreactive band is detected at approximately 43-45 kDa in all lanes, consistent with the predicted molecular weight of TAR DNA-binding protein 43 / TDP-43. Clone ABAB-20 was used as a recombinant rabbit monoclonal antibody under reducing conditions.



Western blot testing of human K562 cell lysate with TARDBP antibody. Predicted molecular weight ~45 kDa, commonly observed at 43-45 kDa.



Western blot testing of human HepG2 cell lysate with TARDBP antibody. Predicted molecular weight ~45 kDa, commonly observed at 43-45 kDa.



Western blot testing of human HeLa cell lysate (wild type and knock down) with TARDBP antibody. Predicted molecular weight ~45 kDa, commonly observed at 43-45 kDa.

Description

TARDBP antibody recognizes TAR DNA-binding protein 43, commonly known as TDP-43, a ubiquitously expressed nuclear RNA- and DNA-binding protein encoded by the TARDBP gene. TDP-43 is predominantly localized to the nucleus under physiological conditions, where it regulates transcription, RNA splicing, RNA stability, and microRNA processing. TARDBP Antibody Recombinant Rabbit MAb is developed to detect endogenous TDP-43 in research applications investigating RNA metabolism and neurodegenerative disease mechanisms.

TDP-43 is a member of the heterogeneous nuclear ribonucleoprotein family and contains two RNA recognition motifs and a C-terminal glycine-rich domain that mediates protein-protein interactions. Through binding to UG-rich RNA sequences, TAR DNA-binding protein 43 regulates alternative splicing of numerous transcripts and contributes to maintenance of RNA homeostasis. In addition to its nuclear functions, TDP-43 shuttles between the nucleus and cytoplasm and participates in stress granule dynamics under conditions of cellular stress.

The TARDBP gene is located on chromosome 1p36.22 and encodes multiple isoforms generated by alternative splicing. Under pathological conditions, TDP-43 undergoes abnormal cytoplasmic redistribution, hyperphosphorylation, ubiquitination, and proteolytic cleavage. Aggregated forms of TDP-43 are a defining pathological hallmark of amyotrophic lateral sclerosis and frontotemporal lobar degeneration, as well as subsets of other neurodegenerative disorders. Loss of normal nuclear TDP-43 function combined with toxic cytoplasmic aggregation is thought to contribute to neuronal dysfunction and cell death.

Beyond neurodegeneration, TDP-43 has been implicated in cancer biology, inflammation, and viral replication due to its broad role in gene expression control. Altered TARDBP expression or localization may influence cell survival pathways, RNA processing networks, and stress responses across multiple tissue types.

Clone ABAB-20 is a recombinant rabbit monoclonal antibody that recognizes TAR DNA-binding protein 43 and supports studies of nuclear RNA regulation, cytoplasmic aggregation, and TDP-43-associated disease pathology.

Application Notes

Optimal dilution of the TARDBP antibody should be determined by the researcher.

Immunogen

A peptide sequence specific to TAR DNA binding protein 43 was used as the immunogen for the TARDBP antibody.

Storage

After reconstitution, the TARDBP Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.