

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human TDP-43/TARDBP in direct ELISAs. Detects human, mouse, and rat TDP-43/TARDBP in Western blots.
Source	Monoclonal Mouse IgG _{2A} Clone # 671834
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human TDP-43/TARDBP Met1-Thr103 Accession # Q13148
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

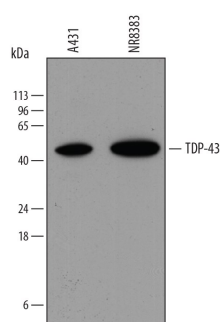
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.4-1 µg/mL	See Below
Immunocytochemistry	1-25 µg/mL	See Below
Immunohistochemistry	1-10 µg/mL	See Below
Immunoprecipitation	2 µg/1 mg cell lysate	Cell lysate of HAP1 human near-haploid cell line
Simple Western	5 µg/mL	See Below

DATA

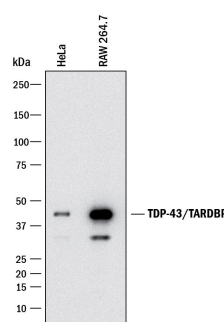
Western Blot



Detection of Human TDP-43/TARDBP by Western Blot.

Western blot shows lysates of A431 human epithelial carcinoma cell line and NR8383 rat alveolar macrophage cell line. PVDF membrane was probed with 0.4 µg/mL of Mouse Anti-Human/Mouse/Rat TDP-43/TARDBP Monoclonal Antibody (Catalog # MAB7778) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for TDP-43/TARDBP at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

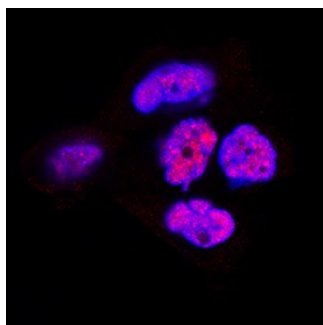
Western Blot



Detection of Human and Mouse TDP-43/TARDBP by Western Blot.

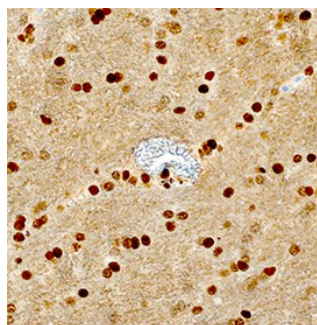
Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line and RAW 264.7 mouse monocyte/macrophage cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human TDP-43/TARDBP Monoclonal Antibody (Catalog # MAB7778) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for TDP-43/TARDBP at approximately 43 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 3.

Immunocytochemistry



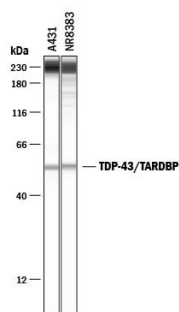
TDP-43/TARDBP in A431 Human Cell Line. TDP-43/TARDBP was detected in immersion fixed A431 human epithelial carcinoma cell line using Mouse Anti-Human/Mouse/Rat TDP-43/TARDBP Monoclonal Antibody (Catalog # MAB7778) at 1 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunohistochemistry



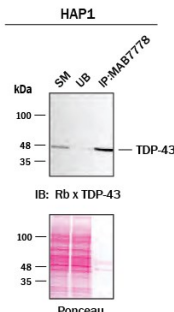
TDP-43/TARDBP in Human Brain. TDP-43/TARDBP was detected in immersion fixed paraffin-embedded sections of human brain (hippocampus) using Mouse Anti-Human/Mouse/Rat TDP-43/TARDBP Monoclonal Antibody (Catalog # MAB7778) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to nuclei. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Simple Western



Detection of Human and Rat TDP-43/TARDBP by Simple Western™. Simple Western lane view shows lysates of A431 human epithelial carcinoma cell line and NR8383 rat alveolar macrophage cell line, loaded at 0.2 mg/mL. A specific band was detected for TDP-43/TARDBP at approximately 54 kDa (as indicated) using 5 µg/mL of Mouse Anti-Human TDP-43/TARDBP Monoclonal Antibody (Catalog # MAB7778). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system. Non-specific interaction with the 230 kDa Simple Western standard may be seen with this antibody.

Immunoprecipitation



Detection of TDP-43/TARDBP by Immunoprecipitation. Immunoprecipitation was performed on cell lysate of HAP1 human near-haploid cell line using 2.0 µg of Mouse Anti-Human TDP-43 Monoclonal Antibody (Catalog # MAB7778) pre-coupled to protein G or protein A beads. Immunoprecipitated Stat5b was detected with a Rabbit Anti-TDP-43 antibody. The Ponceau stained transfers of each blot are shown. SM=10% starting material; UB=10% unbound fraction; IP=immunoprecipitated. Image, protocol, and testing courtesy of YCharOS Inc. (ycharos.com).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

TDP-43 (TAR DNA binding protein of 43 kDa; gene name TARDBP) is a 414 amino acid (aa) nuclear RNA/DNA binding phosphoprotein that regulates transcription and splicing. TDP-43 is aberrantly expressed in most forms of amyotrophic lateral sclerosis and frontotemporal lobar degeneration. In these cases it is absent from the nucleus and accumulates, along with a truncated 20-28 kDa form, in ubiquitin-containing inclusion bodies. TDP-43 can also influence CFTR exon 9 skipping in cystic fibrosis. Within aa 1-103, human and mouse TDP-43 share 100% aa sequence identity, and 99% aa identity with rat TDP-43.