

TDP-43 Polyclonal antibody

Catalog Number: 10782-2-AP

Featured Product

1591 Publications

Basic Information

Catalog Number:

10782-2-AP

Concentration:

600 ug/ml

Source:

Rabbit

Isotype:

IgG

GenBank Accession Number:

BC001487

GeneID (NCBI):

23435

UNIPROT ID:

Q13148

Full Name:

TAR DNA binding protein

Calculated MW:

43 kDa

Observed MW:

44 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB: 1:2000-1:10000

IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC: 1:2000-1:8000

IF-Fro: 1:1000-1:4000

IF/ICC: 1:3000-1:12000

FC (Intra): 0.40 ug per 10⁶ cells in a 100 µl suspension

ChIP: 1:10-1:100

Applications

Tested Applications:

WB, IHC, IF/ICC, IF-Fro, FC (Intra), IP, ChIP, ELISA

Cited Applications:

WB, IHC, IF, IP, CoIP, ChIP, RIP, ELISA, IEM

Species Specificity:

human, mouse, rat, zebrafish

Cited Species:

human, mouse, rat, monkey, chicken, zebrafish, hamster, yeast, horse, seal

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB: SH-SY5Y cells, HeLa cells, C2C12 cells, Neuro-2a cells

IP: HeLa cells,

IHC: human gliomas tissue, human brain (FTLD-U) tissue, mouse brain tissue

IF-Fro: rat brain tissue, mouse brain tissue

IF/ICC: HeLa cells,

FC (Intra): HeLa cells,

ChIP: HeLa cells,

Background Information

The TARDBP gene encodes the TDP-43 protein, initially found to repress HIV-1 transcription by binding TAR DNA. TDP-43 has since been shown to bind RNA as well as DNA, and have multiple functions in transcriptional repression, translational regulation and pre-mRNA splicing. For instance, it is reported to regulate alternate splicing of the CTRF gene. In 2006 Neumann et al. found that hyperphosphorylated, ubiquitinated and/or cleaved forms of TDP-43, collectively known as pathological TDP-43, play a major role in the disease mechanisms of ubiquitin-positive, tau- and alpha-synuclein-negative frontotemporal dementia (FTLD-U) and in amyotrophic lateral sclerosis (ALS). Proteintech's 10782-2-AP antibody is a rabbit polyclonal antibody recognizing N-terminal TDP-43. It recognizes the intact 43 kDa protein as well as all posttranslationally modified and truncated forms in multiple applications. Various forms of TDP-43 exist, including 18-35 kDa of cleaved C-terminal fragments, 45-50 kDa phospho-protein, 55 kDa glycosylated form, 75 kDa hyperphosphorylated form, and 90-300 kDa cross-linked form. (17023659, 19823856, 21666678, 22193176) Recently TDP-43 has been reported to be overexpressed in triple negative breast cancer (TNBC) and it may be a potential target for TNBC diagnosis and drug design. (29581274)

Notable Publications

Author	Pubmed ID	Journal	Application
Kasey L Jackson	26445725	Mol Ther Methods Clin Dev	WB
Jinwal Umesh K UK	19793966	J Neurosci	WB
Rudolf Hergesheimer	33003404	Cells	

Storage

Storage:

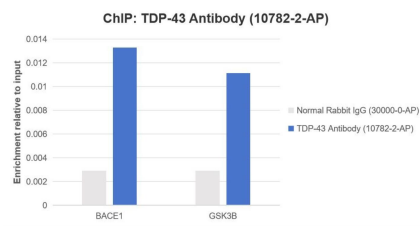
Store at -20°C. Stable for one year after shipment.

Storage Buffer:

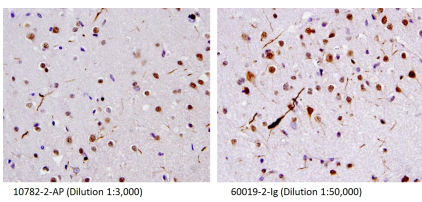
PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

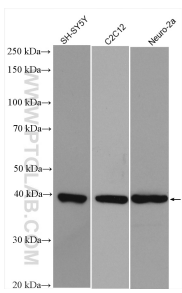
Selected Validation Data



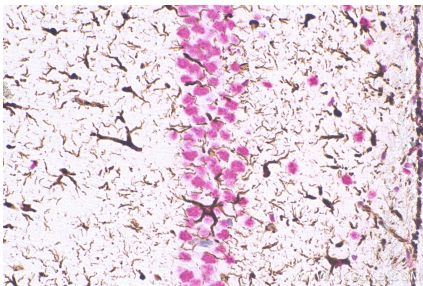
Chromatin was prepared from HeLa cells, cells were fixed with formaldehyde for 10 minutes. The ChIP was performed with 15 µg of cross-linked chromatin, 5 µg of TDP-43 Antibody(10782-2-AP) or 5 µg of Normal Rabbit IgG (30000-0-AP), and 30 µl of Protein A Magarose Beads. The immunoprecipitated DNA was quantified by real time PCR. Primers are located in the first kb of the transcribed region.



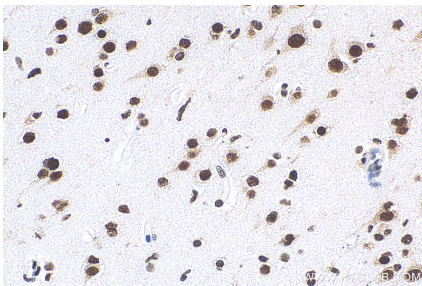
40X of FTL-DU case stained by 10782-2-AP and 60019-2-Ig, showing dystrophic neurites. (Figs were provided by Linda K. Kwong).



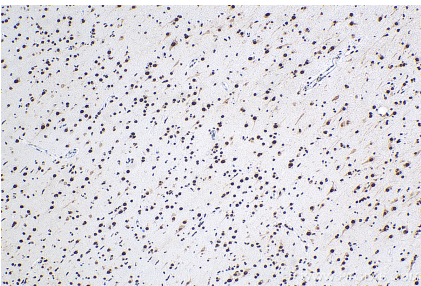
Various lysates were subjected to SDS PAGE followed by western blot with 10782-2-AP (TDP-43 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



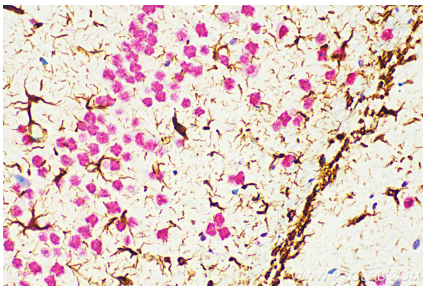
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 10782-2-AP (TDP-43 (N-terminal) antibody) at dilution of 1:5000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



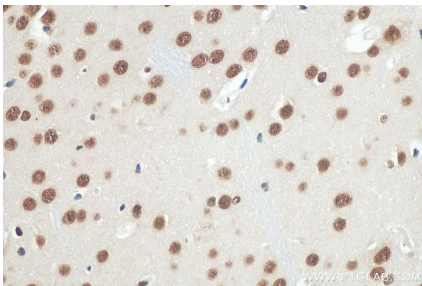
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:4000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



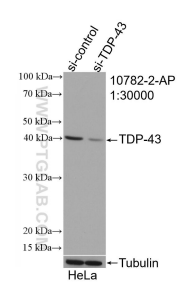
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



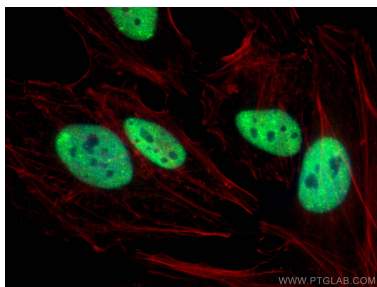
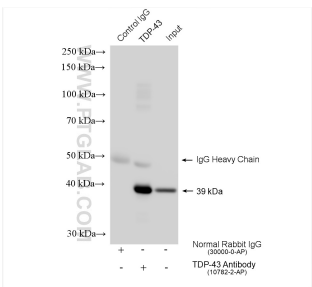
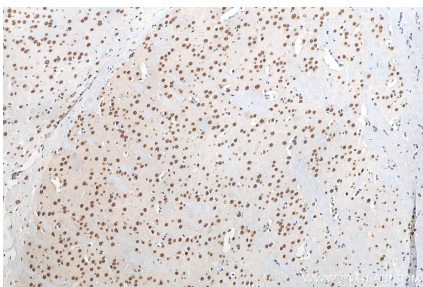
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 10782-2-AP (TDP-43 (N-terminal) antibody) at dilution of 1:5000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



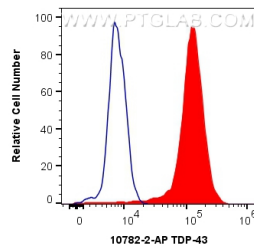
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



WB result of TDP-43 antibody (10782-2-AP; 1:30000; incubated at room temperature for 1.5 hours) with sh-Control and sh-TDP-43 transfected HeLa cells.

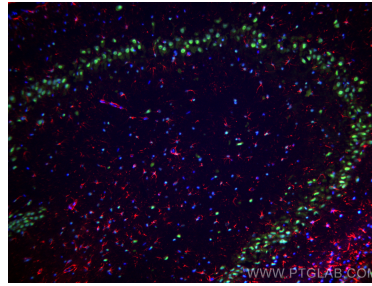


Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:2000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



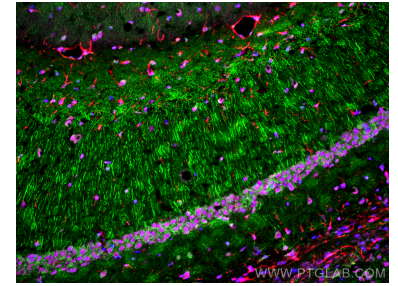
1X10⁶ HeLa cells were intracellularly stained with 0.4 ug Anti-Human TDP-43 (10782-2-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Isotype Control. Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011).

IP result of anti-TDP-43 (IP:10782-2-AP, 4ug; Detection:10782-2-AP 1:50000) with HeLa cells lysate 1520 ug.



Immunofluorescent analysis of (4% PFA) fixed frozen OCT-embedded rat brain tissue using TDP-43 antibody (10782-2-AP) at dilution of 1:2000 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CoraLite®594 GFAP antibody (CL594-16825, red).

Immunofluorescent analysis of (4% PFA) fixed HeLa cells using TDP-43 antibody (10782-2-AP) at dilution of 1:6000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-phalloidin (red).



Immunofluorescent analysis of (4% PFA) fixed frozen OCT-embedded mouse brain tissue using TDP-43 antibody (10782-2-AP) at dilution of 1:2000 and CoraLite®647-conjugated F(ab, MAP2 antibody (67015-1-Ig, Clone: 1C3E6, green), CoraLite®594 GFAP antibody (CL594-16825, red).