

For Research Use Only

# TDP-43 Polyclonal antibody

Catalog Number: 10782-2-AP

Featured Product

1556 Publications



## Basic Information

### Catalog Number:

10782-2-AP

### Size:

150ul, Concentration: 800 ug/ml by Nanodrop;

### 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 1:200-1:800

IF/ICC 1:3000-1:12000

## 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, pig, canine, monkey, chicken, hamster, horse, drosophila, caenorhabditis elegans

**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: mouse brain tissue,

IF/ICC: 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

\*\*\* 20ul sizes contain 0.1% BSA

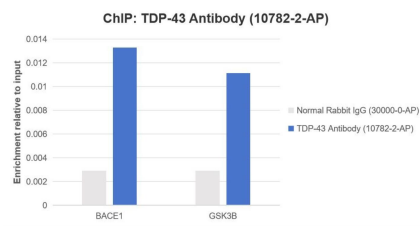
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

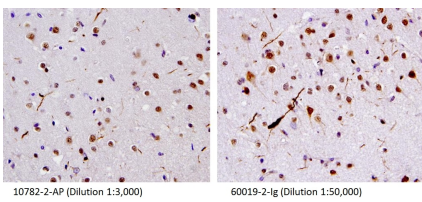
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

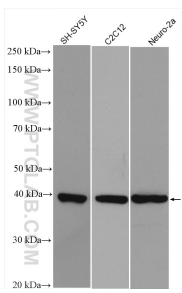
Selected Validation Data



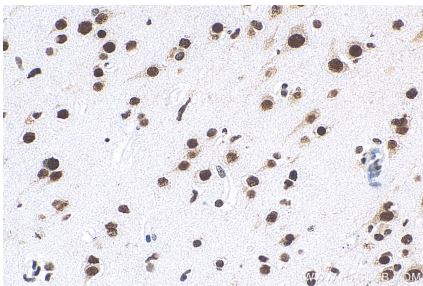
Chromatin was prepared from HeLa cells, cells were fixed with formaldehyde for 10 minutes. The ChIP was performed with 15 µg of cross-linked chromatin, 5 µg of TDP-43 Antibody(10782-2-AP) or 5 µg of Normal Rabbit IgG (30000-0-AP), and 30 µl of Protein A Magarose Beads. The immunoprecipitated DNA was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



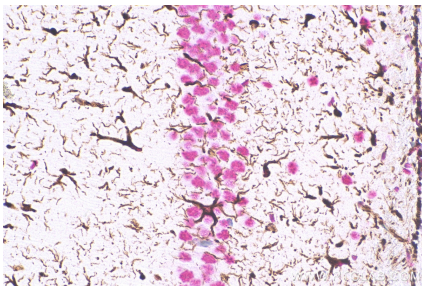
40X of FTLD-U case stained by 10782-2-AP and 60019-2-Ig, showing dystrophic neurites. (Figs were provided by Linda K. Kwong).



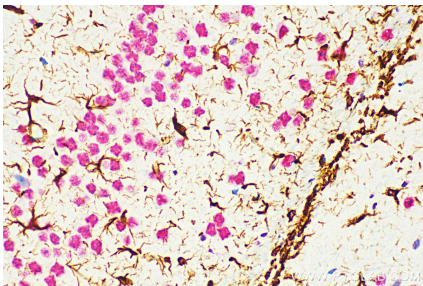
Various lysates were subjected to SDS PAGE followed by western blot with 10782-2-AP (TDP-43 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



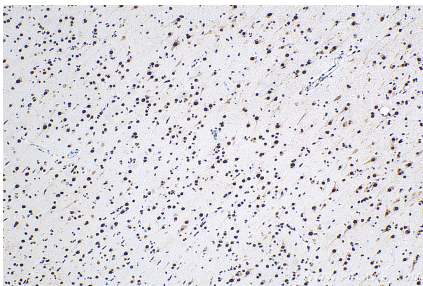
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:4000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



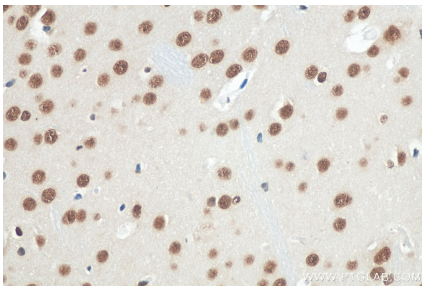
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 10782-2-AP (TDP-43 (N-terminal) antibody) at dilution of 1:5000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



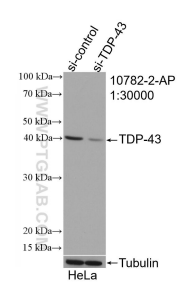
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 10782-2-AP (TDP-43 (N-terminal) antibody) at dilution of 1:5000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



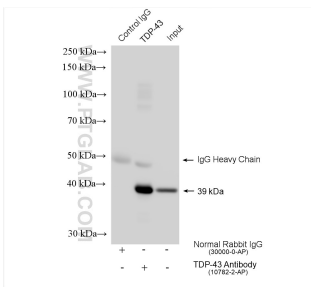
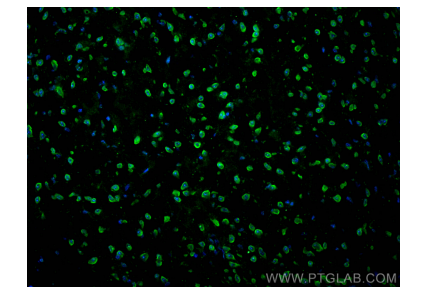
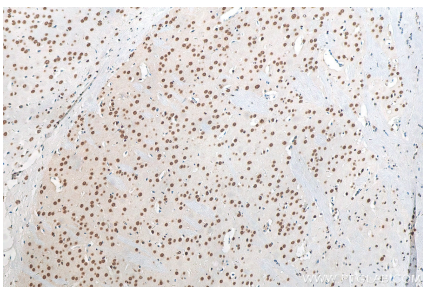
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



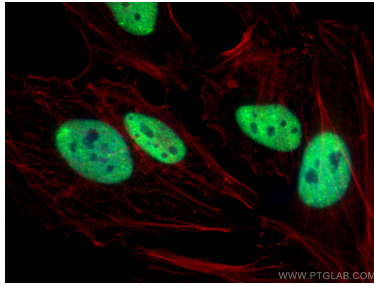
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



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.

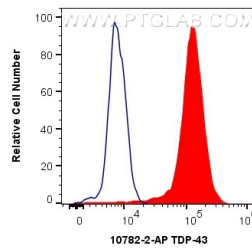


Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:2000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



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 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2).



1X10<sup>6</sup> 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.