

For Research Use Only

# TDP-43 Polyclonal antibody

Catalog Number: 10782-2-AP

Featured Product

1434 Publications



## Basic Information

|   |  |  |
|---|--|--|
| <b>Catalog Number:</b><br>10782-2-AP                          | <b>GenBank Accession Number:</b><br>BC001487 | <b>Purification Method:</b><br>Antigen affinity purification   |
| <b>Size:</b><br>150ul , Concentration: 600 µg/ml by Nanodrop; | <b>GeneID (NCBI):</b><br>23435               | <b>Recommended Dilutions:</b><br>WB 1:2000-1:10000<br>IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate<br>IHC 1:2000-1:8000<br>IF 1:3000-1:12000 |
| <b>Source:</b><br>Rabbit                                      | <b>Full Name:</b><br>TAR DNA binding protein |  |
| <b>Isotype:</b><br>IgG  | <b>Calculated MW:</b><br>43 kDa              |  |
|   | <b>Observed MW:</b><br>44 kDa                |  |

## Applications

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| <b>Tested Applications:</b><br>FC, IF, IHC, IP, WB, ELISA  | <b>Positive Controls:</b>  |
| <b>Cited Applications:</b><br>ChIP, CoIP, ELISA, IEM, IF, IHC, IP, RIP, WB   | <b>WB :</b> SH-SY5Y cells, HeLa cells, C2C12 cells, Neuro-2a cells                 |
| <b>Species Specificity:</b><br>human, mouse, rat, zebrafish  | <b>IP :</b> HeLa cells,  |
| <b>Cited Species:</b><br>human, chicken, horse, Yeast, rat, seal, mouse, monkey, zebrafish, hamster  | <b>IHC :</b> human gliomas tissue, human brain (FTLD-U) tissue, mouse brain tissue |
|  | <b>IF :</b> HeLa cells,  |
| <b>Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0</b> |  |

## 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 CTFR 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

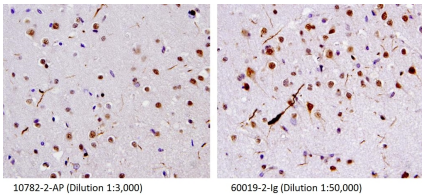
**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.  
**Aliquoting is unnecessary for -20°C storage**

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

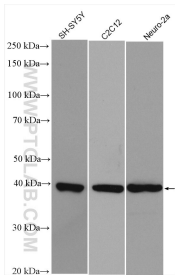
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free)  
in USA), or 1(312) 455-8498 (outside USA)  
E: proteintech@ptglab.com  
W: ptglab.com

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

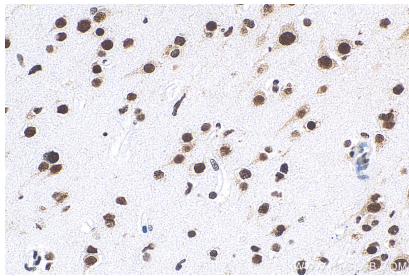
Selected Validation Data



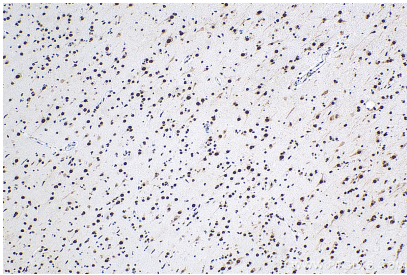
40X of FTLD-U case stained by 10782-2-AP and 60019-2-Ig, showing dystrophic neurites. (Figs were provided by Linda K. Kwong).



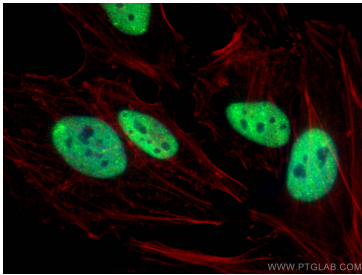
Various lysates were subjected to SDS PAGE followed by western blot with 10782-2-AP (TDP-43 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



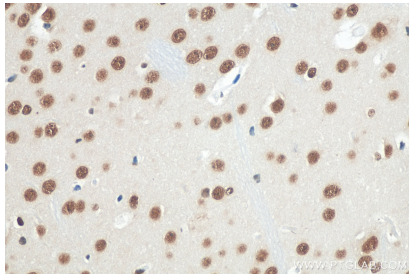
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:4000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



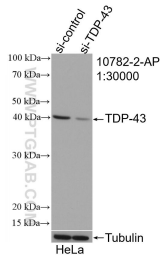
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



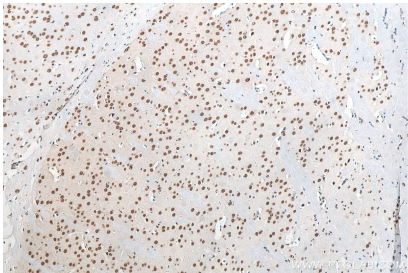
Immunofluorescent analysis of (4% PFA) fixed HeLa cells using TDP-43 antibody (10782-2-AP) at dilution of 1:6000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-phalloidin (red).



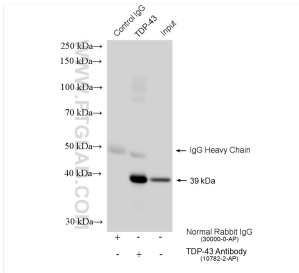
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 10782-2-AP (TDP-43 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



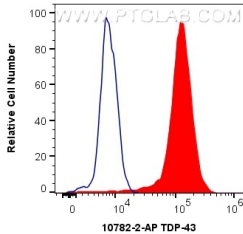
WB result of TDP-43 antibody (10782-2-AP; 1:30000; incubated at room temperature for 1.5 hours) with sh-Control and sh-TDP-43 transfected HeLa cells.



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).



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



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).