

For Research Use Only

# TDP-43 Recombinant antibody, PBS Only (Detector)



Catalog Number: 80001-1-PBS

Featured Product

## Basic Information

<b>Catalog Number:</b> 80001-1-PBS	<b>GenBank Accession Number:</b> BC001487	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ug, Concentration: 1mg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 23435	<b>CloneNo.:</b> 11N20
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> Q13148	
<b>Isotype:</b> IgG	<b>Full Name:</b> TAR DNA binding protein	
	<b>Calculated MW:</b> 43 kDa	
	<b>Observed MW:</b> 43 kDa	

## Applications

**Tested Applications:**  
WB, IF, FC, IHC, Sandwich ELISA, Indirect ELISA

**Species Specificity:**  
Human, mouse, rat

## Product Information

80001-1-PBS targets TDP-43 as part of a matched antibody pair.

MP80000-1: 60019-2-PBS capture and 80001-1-PBS detection (validated in Sandwich ELISA)

Unconjugated rabbit recombinant monoclonal antibody in PBS only (BSA and azide free) storage buffer at a concentration of 1 mg/mL, ready for conjugation. Created using Proteintech's proprietary in-house recombinant technology. Recombinant production enables unrivalled batch-to-batch consistency, easy scale-up, and future security of supply.

This conjugation ready format makes antibodies ideal for use in many applications including: ELISAs, multiplex assays requiring matched pairs, mass cytometry, and multiplex imaging applications. Antibody use should be optimized by the end user for each application and assay.

## 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 80001-1-RR is a rabbit recombinant TDP-43 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. (PMID: 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. (PMID: 29581274).

80001-1-RR can be used in WB, IHC, IHF. For the ICC (IF with cells) experiment, the results will be better with ethanol fixed cell and dilution 1:50 or 1:100. Another antibody with CatNo. 80002-1-RR is recommended for IF or ICC experiment.

## Storage

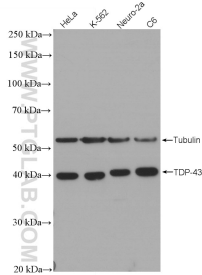
**Storage:**  
Store at -80°C.

**Storage Buffer:**  
PBS Only

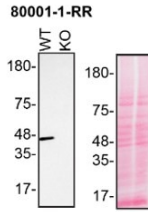
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA) E: proteintech@ptglab.com W: ptglab.com

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

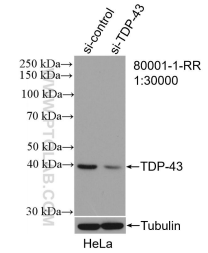
## Selected Validation Data



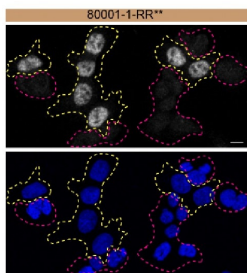
Various cell lysates were subjected to SDS PAGE followed by western blot with 80001-1-RR (TDP43 antibody) at dilution of 1:35000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.



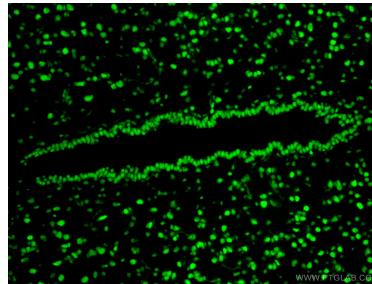
HAP1 (WT and TARDBP KO) lysates prepared with NP-40 buffer, 50 µg protein loaded. 80001-1-RR incubated at 1:1000 at 4°C overnight in 5% milk in TBST. Ponceau stained transfers shown on right. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency. This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer



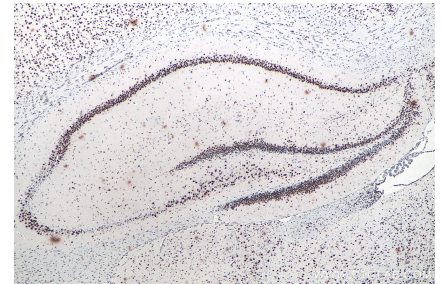
WB result of TDP-43 antibody (80001-1-RR; 1:30000; incubated at room temperature for 1.5 hours) with sh-Control and sh-TDP-43 transfected HeLa cells. This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.



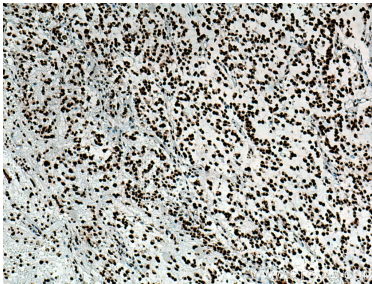
HAP1 WT cells (yellow outline) and TARDBP KO cells (red outline) labelled with a green or a far red fluorescence dye, respectively. Cells fixed with 4% PFA and stained with 80001-1-RR at 1:400 plus DAPI. Bars = 10 µm. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency. This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer



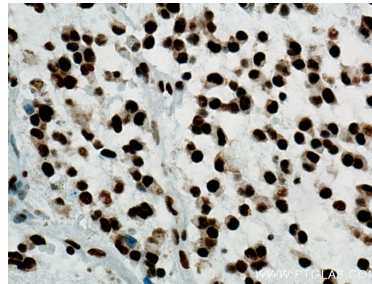
Immunofluorescent analysis of (4% PFA) fixed rat brain tissue using 80001-1-RR (TDP-43 antibody) at dilution of 1:150 and CoralLite488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L). This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.



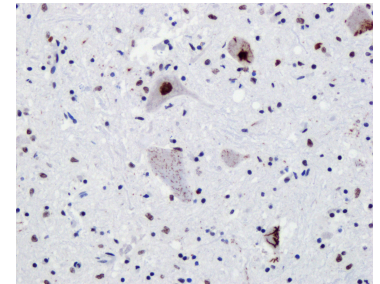
Immunohistochemical analysis of paraffin-embedded rat brain tissue slide using 80001-1-RR (TDP-43 antibody) at dilution of 1:2000 (under 4x lens). This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.



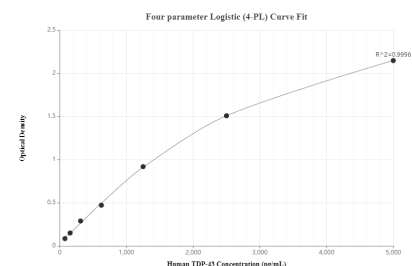
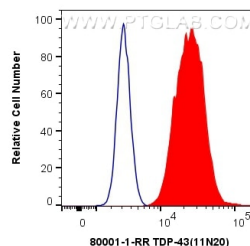
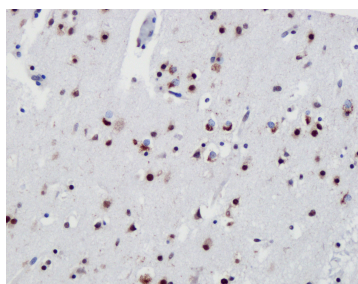
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 80001-1-RR (TDP-43 antibody) at dilution of 1:1500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.



Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 80001-1-RR (TDP-43 antibody) at dilution of 1:1500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.



IHC results of TDP43 rabbit recombinant antibody (80001-1-RR, 1:20000) with the spinal cord slides from ALS patients. IHC experiment was done with Ventana automatic staining system and Optiview DAB detection kit with heat-induced epitope retrieval (boiling for 32 min in Tris-EDTA based solution CC1 buffer, Ventana). Fig from the lab of Dr. Neumann. This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.



IHC results of TDP43 rabbit recombinant antibody (80001-1-RR, 1:20000) with the frontal cortex from FTL-D-TDP type B patients. IHC experiment was done with Ventana automatic staining system and Optiview DAB detection kit with heat-induced epitope retrieval (boiling for 32 min in Tris-EDTA based solution CC1 buffer, Ventana). Fig from the lab of Dr. Neumann. This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer



1X10<sup>6</sup> HeLa cells were intracellularly stained with 0.4 ug Anti-Human TDP-43 (80001-1-RR, Clone:11N20) and CoraLite<sup>®</sup>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). This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.

Standard curve of MP80000-1, TDP-43 Hybrid Matched Antibody Pair - BSA and Azide free, measured by sandwich ELISA. Capture antibody: 60019-2-PBS. Detection antibody: 80001-1-PBS. Standard: Ag1833. Range: 78.1-5000 pg/mL