

For Research Use Only

TDP-43 (N-terminal) Recombinant antibody, PBS Only (Detector)

Catalog Number: 80002-1-PBS

Featured Product



Basic Information

Catalog Number: 80002-1-PBS	GenBank Accession Number: BC001487	Purification Method: Protein A purification
Size: 100ug, Concentration: 1mg/ml by Nanodrop;	GeneID (NCBI): 23435	CloneNo.: 16A22
Source: Rabbit	UNIPROT ID: Q13148	
Isotype: IgG	Full Name: TAR DNA binding protein	
Immunogen Catalog Number: AG1231	Calculated MW: 43 kDa	
	Observed MW: 43 kDa	

Applications

Tested Applications:
WB, IHC, IF/ICC, IF-P, FC (Intra), IP, Cytometric bead array, Indirect ELISA

Species Specificity:
human, mouse, rat

Product Information

80002-1-PBS targets TDP-43 (N-terminal) as part of a matched antibody pair:

MP00589-2: 80007-1-PBS capture and 80002-1-PBS detection (validated in Cytometric bead array)

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 80002-1-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)

80002-1-RR antibody works well in IF experiment.

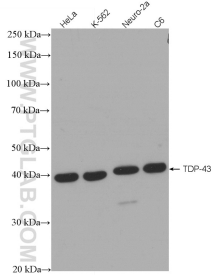
Storage

Storage:
Store at -80°C.
Storage Buffer:
PBS Only

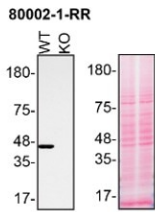
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

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

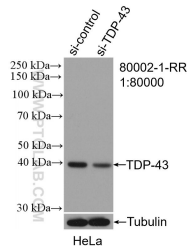
Selected Validation Data



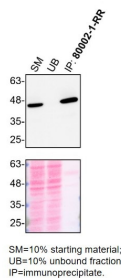
Various cell lysates were subjected to SDS PAGE followed by western blot with 80002-1-RR (TDP-43 antibody) at dilution of 1:12000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 80002-1-PBS in a different storage buffer formulation.



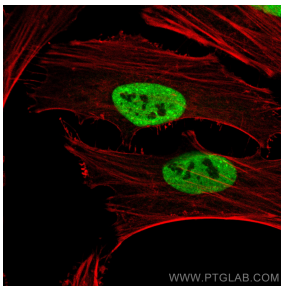
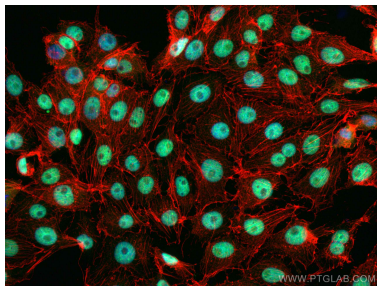
HAP1 (WT and TARDBP KO) lysates prepared with NP-40 buffer, 50 µg protein loaded. 80002-1-RR incubated at 1:1000 at 4°C overnight in 5% milk in TBST. Ponceau stained transfers shown on right. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency. This data was developed using the same antibody clone with 80002-1-PBS in a different storage buffer formulation.



WB result of TDP-43 antibody (80002-1-RR; 1:80000; 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 80002-1-PBS in a different storage buffer formulation.

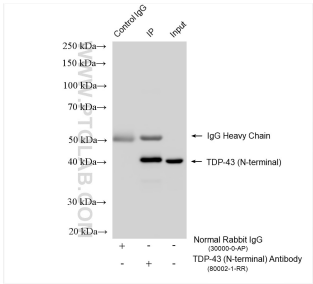
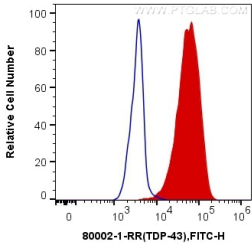
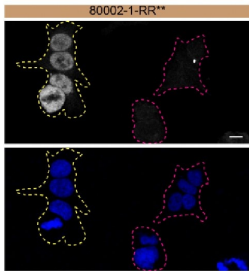


HAP1 lysates prepared and IP of TARDBP performed using 2.0 µg of 80002-1-RR coupled to protein A-Sepharose beads. The Ponceau stained transfers of each blot are shown. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency. This data was developed using the same antibody clone with 80002-1-PBS in a different storage buffer formulation.



Immunofluorescent analysis of (4% PFA) fixed SH-SY5Y cells using TDP-43 antibody (80002-1-RR, Clone: 16A22) at dilution of 1:200 and CoraLite@488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L). Red: staining with CoraLite555-Phalloidin. This data was developed using the same antibody clone with 80002-1-PBS in a different storage buffer formulation.

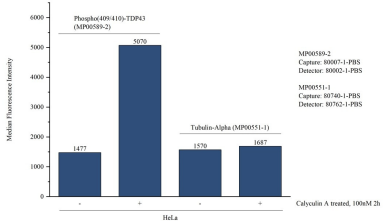
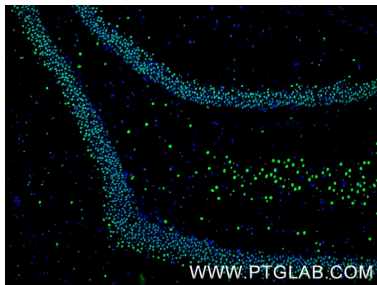
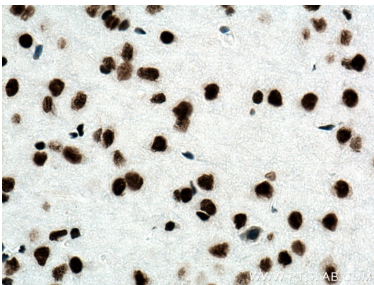
Immunofluorescent analysis of (4% PFA) fixed HeLa cells using TDP-43 antibody (80002-1-RR, Clone: 16A22) at dilution of 1:400 and CoraLite@488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red). This data was developed using the same antibody clone with 80002-1-PBS in a different storage buffer formulation.



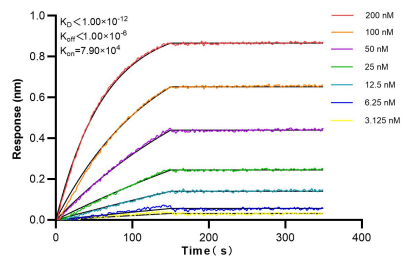
HAP1 WT cells (yellow outline) and TARDBP KO cells (red outline) labelled with a green or a far red fluorescence dye, respectively. Cells fixed with 4% PFA and stained with 80002-1-RR at 1:200 plus DAPI. Bars = 10 µm. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency. This data was developed using the same antibody clone with 80002-1-PBS in a different storage buffer formulation.

1X10⁶ HeLa cells were intracellularly stained with 0.4 µg Anti-Human TDP-43 (for IF/FC) (80002-1-RR, Clone:16A22) and CoraLite@488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 µg Control Antibody. Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011). This data was developed using the same antibody clone with 80002-1-PBS in a different storage buffer formulation.

IP result of anti-TDP-43 (N-terminal) (IP:80002-1-RR, 4µg; Detection:80002-1-RR 1:20000) with HeLa cells lysate 1200 µg. This data was developed using the same antibody clone with 80002-1-PBS in a different storage buffer formulation.



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using RREC80002 (TDP-43 antibody) at dilution of 1:1600 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 80002-1-PBS in a different storage buffer



Biolayer interferometry (BLI) kinetic assays of 80002-1-RR against Human TDP-43 (N-terminal) were performed. The affinity constant is below 1 pM.

Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded rat brain tissue using TDP-43 (N-terminal) antibody (80002-1-RR, Clone: 16A22) at dilution of 1:1600 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 80002-1-PBS in a different storage buffer formulation.

Cytometric bead array in cell lysate using MP00589-2, phospho(409/410)-TDP43 Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 80007-1-PBS. Detection antibody: 80002-1-PBS. Cell lysate(30µg/well): Non-treated HeLa and Calyculin A treated HeLa cells were lysed in 8M urea buffer and diluted in assay buffer. Non-related target Tubulin-Alpha Recombinant Matched Antibody Pair (MP00551-1) was served as control.