

For Research Use Only

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

Catalog Number: 80001-1-PBS

Featured Product



Basic Information

Catalog Number:

80001-1-PBS

Size:

100ug, Concentration: 1mg/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:

43 kDa

Purification Method:

Protein A purification

CloneNo.:

11N20

Applications

Tested Applications:

WB, IHC, IF-P, FC (Intra), Sandwich ELISA, Indirect ELISA, Sample test

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 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 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, IFH. 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, pH7.3

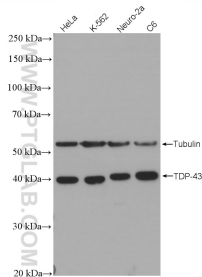
For technical support and original validation data for this product please contact:

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

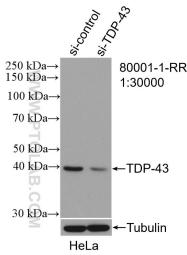
E: proteintech@ptglab.com
W: ptglab.com

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

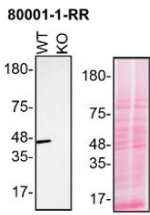
Selected Validation Data



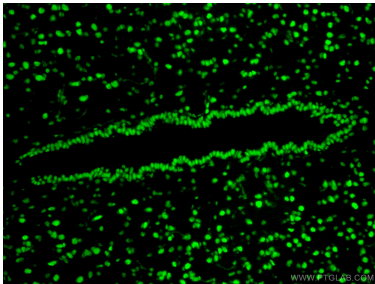
Various cell lysates were subjected to SDS PAGE followed by western blot with 80001-1-RR (TDP43 antibody) at dilution of 1:35000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.



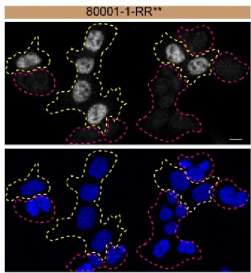
WB result of TDP-43 antibody (80001-1-RR; 1:30000; incubated at room temperature for 1.5 hours) with sh-Control and sh-TDP-43 transfected HeLa cells. This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.



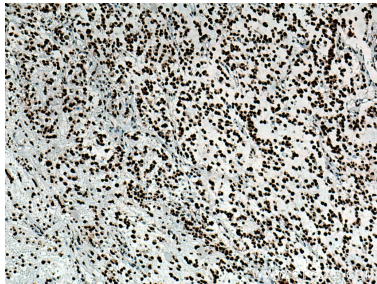
HAP1 (WT and TARDBP KO) lysates prepared with NP-40 buffer, 50 µg protein loaded. 80001-1-RR incubated at 1:1000 at 4°C overnight in 5% milk in TBST. Ponceau stained transfers shown on right. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve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



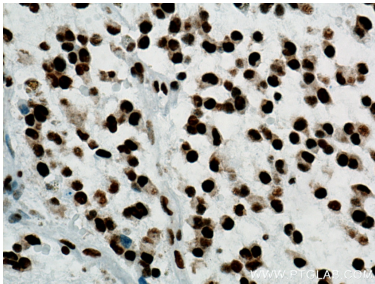
Immunofluorescent analysis of (4% PFA) fixed rat brain tissue using 80001-1-RR (TDP-43 antibody) at dilution of 1:150 and CoralLite488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L). This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.



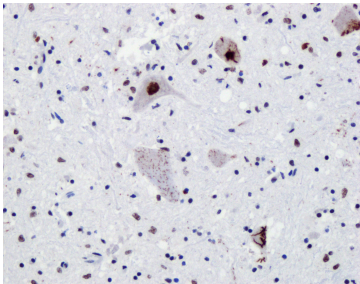
HAP1 WT cells (yellow outline) and TARDBP KO cells (red outline) labelled with a green or a far red fluorescence dye, respectively. Cells fixed with 4% PFA and stained with 80001-1-RR at 1:400 plus DAPI. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies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



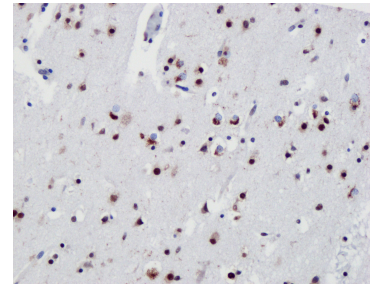
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 80001-1-RR (TDP-43 antibody) at dilution of 1:1500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 80001-1-PBS in a different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



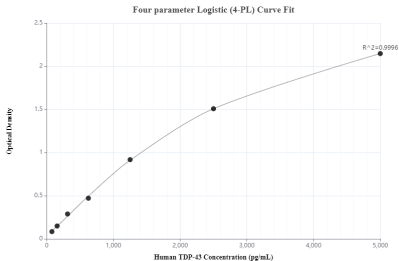
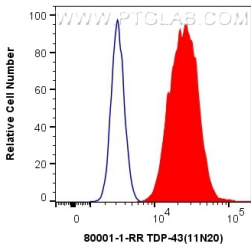
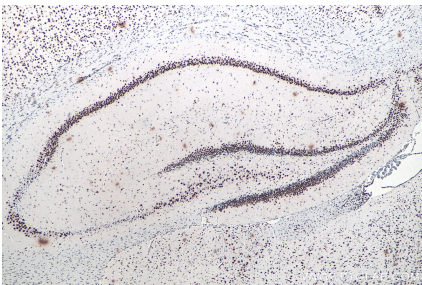
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 80001-1-RR (TDP-43 antibody) at dilution of 1:1500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 80001-1-PBS in a different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



IHC results of TDP43 rabbit recombinant antibody (80001-1-RR, 1:20000) with the frontal cortex from FTLD-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



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.

1X10⁶ HeLa cells were intracellularly stained with 0.4 ug Anti-Human TDP-43 (80001-1-RR, Clone:11N20) 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). This data was developed using the same antibody clone with 80001-1-PBS in a different storage buffer formulation.

Sandwich ELISA standard curve of MP80000-1, TDP-43 Hybrid Matched Antibody Pair, PBS Only. Capture antibody: 60019-2-PBS. Detection antibody: 80001-1-PBS. Standard: Ag1833. Range: 78.1-5000 pg/mL.