

For Research Use Only

TDP-43 (N-terminal) Recombinant antibody

Catalog Number: 80001-1-RR

Featured Product

2 Publications



Basic Information

Catalog Number: 80001-1-RR	GenBank Accession Number: BC001487	Purification Method: Protein A purification
Size: 250 µg/ml	GeneID (NCBI): 23435	CloneNo.: 11N20
Source: Rabbit	UNIPROT ID: Q13148	Recommended Dilutions: WB 1:5000-1:50000 IHC 1:500-1:4000 IF-P 1:300-1:1200
Isotype: IgG	Full Name: TAR DNA binding protein	
	Calculated MW: 43 kDa	
	Observed MW: 43 kDa	

Applications

Tested Applications:
WB, IHC, IF-P, FC (Intra), ELISA

Cited Applications:
WB, IHC, IF, IP

Species Specificity:
Human, mouse, rat

Cited Species:
human, mouse

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: HeLa cells, HAP1 cells, K-562 cells, Neuro-2a cells, C6 cells

IHC: human gliomas tissue, spinal cord slides from ALS patients, frontal cortex from FTLD-TDP type B, mouse brain tissue, rat brain tissue

IF-P: rat brain tissue, HAP1 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 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.

Notable Publications

Author	Pubmed ID	Journal	Application
Dana M Niedowicz	39438022	Brain Pathol	IHC
Donovan Worrall	37359785	F1000Res	WB,IP,IF

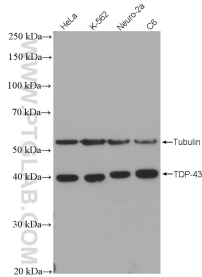
Storage

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

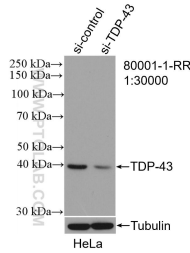
For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

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

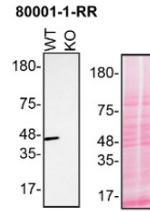
Selected Validation Data



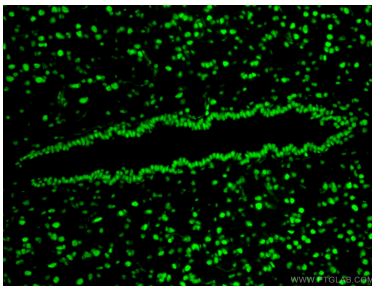
Various cell lysates were subjected to SDS PAGE followed by western blot with 80001-1-RR (TDP43 antibody) at dilution of 1:35000 incubated at room temperature for 1.5 hours.



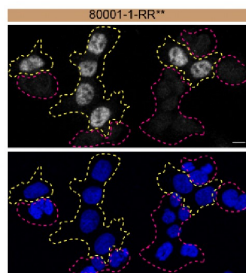
WB result of TDP-43 antibody (80001-1-RR; 1:30000; incubated at room temperature for 1.5 hours) with sh-Control and sh-TDP-43 transfected HeLa cells.



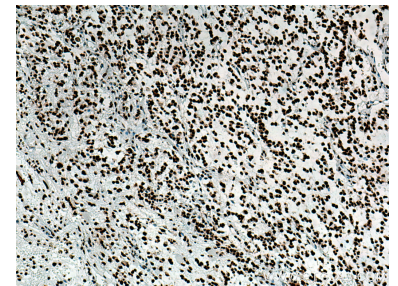
HAP1 (WT and TARDBP KO) lysates prepared with NP-40 buffer, 50 μ g protein loaded. 80001-1-RR incubated at 1:1000 at 4°C overnight in 5% milk in TBST. Ponceau stained transfers shown on right. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency.



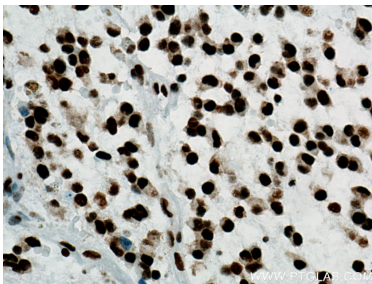
Immunofluorescent analysis of (4% PFA) fixed rat brain tissue using 80001-1-RR (TDP-43 antibody) at dilution of 1:150 and CoralLite488-Conjugated Goat Anti-Rabbit IgG(H+L).



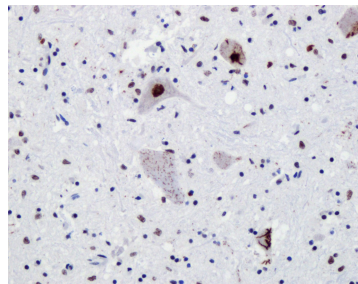
HAP1 WT cells (yellow outline) and TARDBP KO cells (red outline) labelled with a green or a far red fluorescence dye, respectively. Cells fixed with 4% PFA and stained with 80001-1-RR at 1:400 plus DAPI. Bars = 10 μ m. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency.



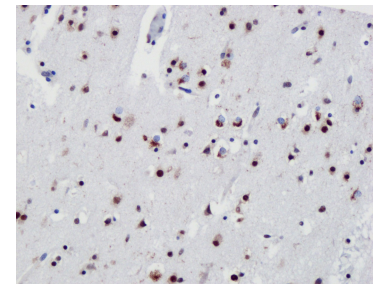
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 80001-1-RR (TDP-43 antibody) at dilution of 1:1500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



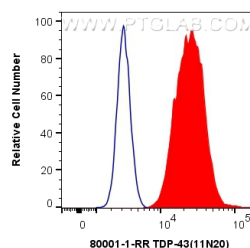
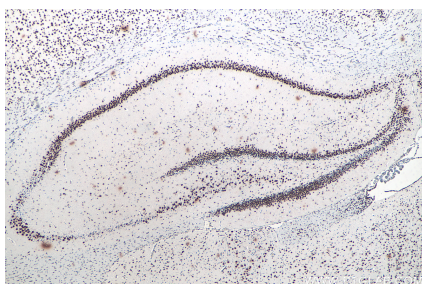
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 80001-1-RR (TDP-43 antibody) at dilution of 1:1500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



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.



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



Immunohistochemical analysis of paraffin-embedded rat brain tissue slide using 80001-1-RR (TDP-43 antibody) at dilution of 1:2000 (under 4x lens).

1X10⁶ HeLa cells were intracellularly stained with 0.4 ug Anti-Human TDP-43 (80001-1-RR, Clone:11N20) and CoraLite®488-Conjugated 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).