

For Research Use Only

TDP-43 (N-terminal) Recombinant antibody

Catalog Number: 80002-1-RR

Featured Product

4 Publications



Basic Information

Catalog Number: 80002-1-RR	GenBank Accession Number: BC001487	Purification Method: Protein A purification
Size: 100ul, Concentration: 250 ug/ml by Nanodrop;	GeneID (NCBI): 23435	CloneNo.: 16A22
Source: Rabbit	UNIPROT ID: Q13148	Recommended Dilutions: WB 1:5000-1:50000 IHC 1:1600-1:6400 IF-P 1:800-1:3200 IF/ICC 1:200-1:800
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, ELISA	Positive Controls: WB: HeLa cells, HAP1, K-562 cells, Neuro-2a cells, C6 cells IHC: mouse brain tissue, IF-P: rat brain tissue, IF/ICC: HeLa cells, HepG2 cells, SH-SY5Y cells, HAP1 cells
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	

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 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.

Notable Publications

Author	Pubmed ID	Journal	Application
Sonia Infante-Tadeo	39764003	bioRxiv	WB
Shi-Shi Jiang	36926731	Neural Regen Res	WB,IF
Julie Dewisme	37428895	J Neuropathol Exp Neurol	IHC

Storage

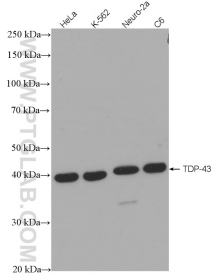
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

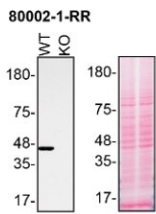
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

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

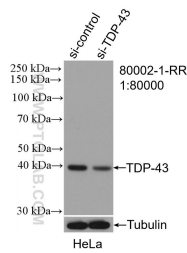
Selected Validation Data



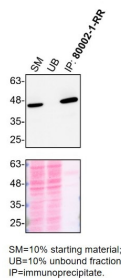
Various cell lysates were subjected to SDS PAGE followed by western blot with 80002-1-RR (TDP-43 antibody) at dilution of 1:12000 incubated at room temperature for 1.5 hours.



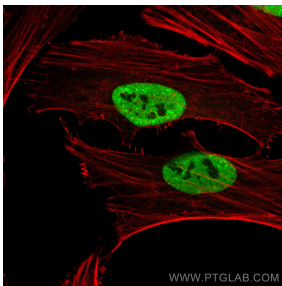
HAP1 (WT and TARDBP KO) lysates prepared with NP-40 buffer, 50 µg protein loaded. 80002-1-RR incubated at 1:1000 at 4°C overnight in 5% milk in TBST. Ponceau stained transfers shown on right. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve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



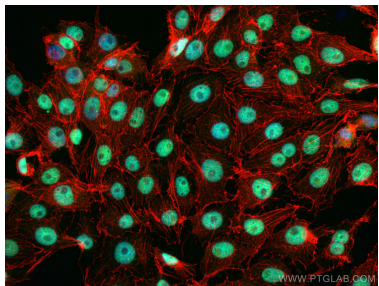
WB result of TDP-43 antibody (80002-1-RR; 1:80000; incubated at room temperature for 1.5 hours) with sh-Control and sh-TDP-43 transfected HeLa cells.



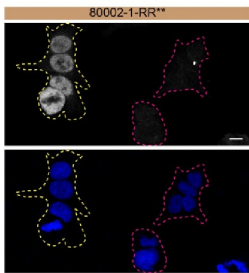
HAP1 lysates prepared and IP of TARDBP performed using 2.0 µg of 80002-1-RR coupled to protein A-Sepharose beads. The Ponceau stained transfers of each blot are shown. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency.



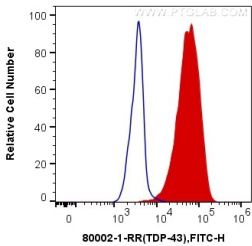
Immunofluorescent analysis of (4% PFA) fixed HeLa cells using TDP-43 antibody (80002-1-RR, Clone: 16A22) at dilution of 1:400 and CoraLite@488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red).



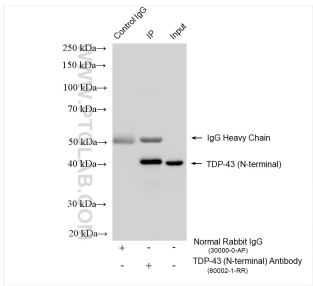
Immunofluorescent analysis of (4% PFA) fixed SH-SY5Y cells using TDP-43 antibody (80002-1-RR, Clone: 16A22) at dilution of 1:200 and CoraLite@488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L). Red: staining with CoraLite555-Phalloidin.



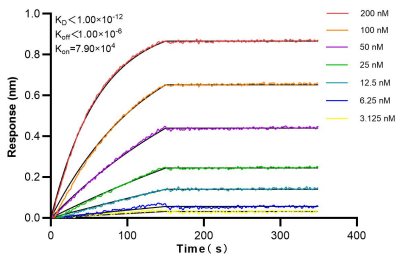
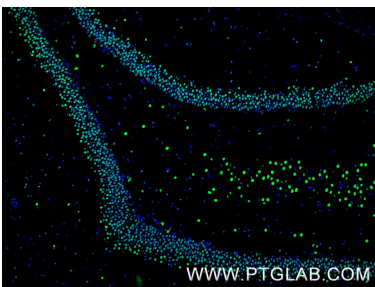
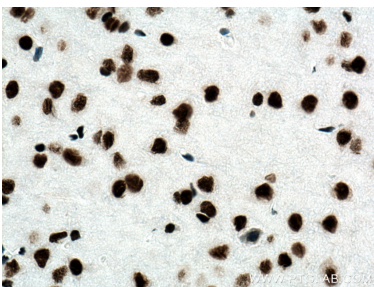
HAP1 WT cells (yellow outline) and TARDBP KO cells (red outline) labelled with a green or a far red fluorescence dye, respectively. Cells fixed with 4% PFA and stained with 80002-1-RR at 1:200 plus DAPI. Bars = 10 µm. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency.



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).



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.



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).

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).

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