For Research Use Only

TDP-43 (human specific) Monoclonal antibody

Catalog Number:60019-2-Ig Featured Product 111 Publications

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Basic Information

Catalog Number:
60019-2-Ig

Size:
150ul , Concentration: 2000 ug/ml by Nanodrop and 912 ug/ml by Bradford method using BSA as the standard;

Source:
Mouse

Isotype:
IgG1

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 G purification

CloneNo.:
6H6E12

Recommended Dilutions:
WB: 1:5000-1:50000
IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC: 1:5000-1:20000

Applications

Tested Applications:
WB, IHC, IP, ELISA

Cited Applications:
WB, IHC, IP, CoIP

Species Specificity:
human

Cited Species:
human, yeast

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 : LNCaP cells, HeLa cells, HEK-293 cells, HepG2 cells, Jurkat cells, K-562 cells

IP : K-562 cells,

IHC : human gliomas tissue, human pancreas cancer tissue, human brain(FTLD-U) tissue

Background Information

Transactivation response (TAR) DNA-binding protein of 43 kDa (also known as TARDBP or TDP-43) was first isolated as a transcriptional inactivator binding to the TAR DNA element of the HIV-1 virus. Neumann et al. (2006) found that a hyperphosphorylated, ubiquitinated, and cleaved form of TARDBP, known as pathologic TDP-43, is the major component of the tau-negative and ubiquitin-positive inclusions that characterize amyotrophic lateral sclerosis (ALS) and the most common pathological subtype of frontotemporal lobar degeneration (FTLD-U). 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). 60019-2-Ig is a mouse monoclonal antibody recognizing the cleavage product of 20-30 kDa in addition to the native and phosphorylated forms of TDP-43. Immunohistochemical analyses of TDP-43 using this antibody detect both normal diffuse nuclear staining and insoluble inclusions in pathologic tissues. Notably this antibody only recognizes human TDP-43 but not reacts with mouse or rat TDP-43.

Notable Publications

Author	Pubmed ID	Journal	Application
Nikita Fernandes	32992901	Biomolecules	
Deng Han-Xiang HX	21857683	Nature	IHC
Lynda Nwabuobi	31745474	Mov Disord Clin Pract	IHC

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
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
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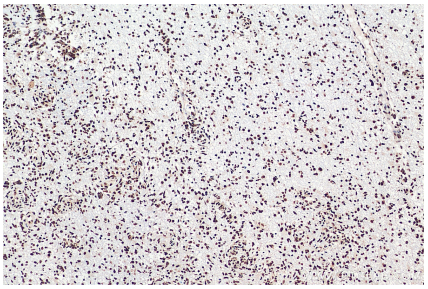
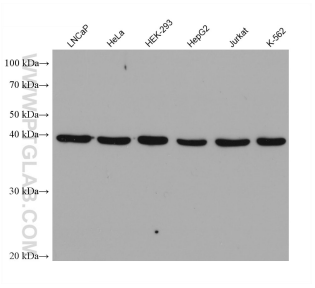
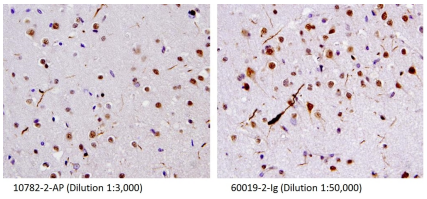
Selected Validation Data



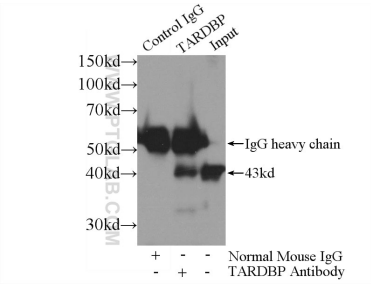
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 60019-2-Ig (TDP-43 (human specific) antibody) at dilution of 1:8500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



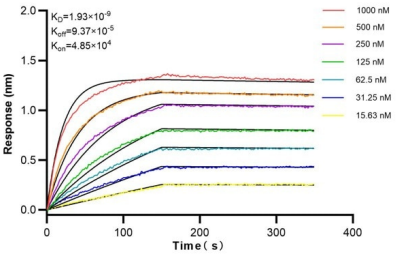
Various lysates were subjected to SDS PAGE followed by western blot with 60019-2-Ig (TDP-43 (human specific) antibody) at dilution of 1:100000 incubated at room temperature for 1.5 hours.



40X of FTLD-U case stained by 10782-2-AP and 60019-2-Ig, showing dystrophic neurites. (Figs were provided by Linda K. Kwong).



IP result of anti-TDP-43 (human specific) (IP:60019-2-Ig, 5ug; Detection:60019-2-Ig 1:1000) with K-562 cells lysate 1720ug.



Biolayer interferometry (BLI) kinetic assays of 60019-2-Ig against Human TDP-43 were performed. The affinity constant is 1.93 nM.