

Phospho-TDP43 (Ser409/410) Recombinant monoclonal antibody

 Catalog Number: 80007-1-RR **21 Publications**

Basic Information

Catalog Number: 80007-1-RR	GenBank Accession Number: NM_007375	Purification Method: Protein A purification
Concentration: 1000 ug/ml	GeneID (NCBI): 23435	CloneNo.: 6M10
Source: Rabbit	UNIPROT ID: Q13148	Recommended Dilutions: WB: 1:5000-1:50000 IHC: 1:500-1:2000
Isotype: IgG	Full Name: TAR DNA binding protein	
	Calculated MW: 43 kDa	
	Observed MW: 45-50 kDa	

Applications

Tested Applications: WB, IHC, ELISA	Positive Controls:
Cited Applications: WB, IHC, IF	WB : HeLa cells, Calyculin A treated cells
Species Specificity: human, mouse	IHC : frontal cortex of FTLD-TDP type B case, human brain tissue
Cited Species: human, mouse, zebrafish	
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

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). 80007-1-RR is a recombinant rabbit monoclonal antibody recognizing TDP-43 only when phosphorylated at 409/410. Immunohistochemical analyses using this antibody only stain the insoluble inclusions in pathologic tissues without normal diffuse nuclear staining.

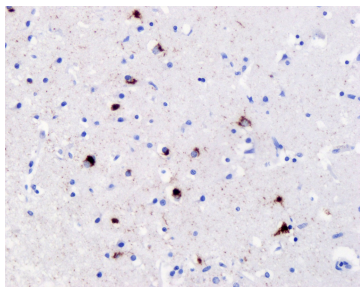
Notable Publications

Author	Pubmed ID	Journal	Application
Josephine C Esposto	34339840	Biochim Biophys Acta Mol Basis Dis	WB
Bo Zhang	40294499	Ecotoxicol Environ Saf	WB, IF
Joy Mitra	40057796	Acta Neuropathol Commun	IHC

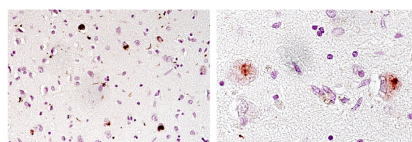
Storage

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

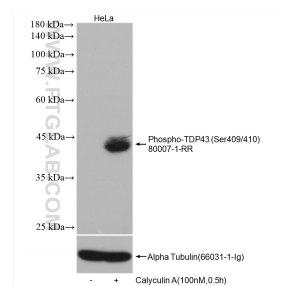
Selected Validation Data



IHC results of Phospho-TDP43 (Ser409/410) rabbit recombinant antibody (80007-1-RR, 1000) with the frontal cortex from FTDL-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.



It's human subiculum (high-mag) and temporal cortex (medium-mag) from subject with limbic-predominant age-related TDP-43 encephalopathy neuropathologic change (LATE-NC). Staining provided by Pete Nelson and Ela Patel, U. Kentucky AD Research Center Neuropathology Core.



Non-treated and Calyculin A treated cells were subjected to SDS PAGE followed by western blot with 80007-1-RR (Phospho-TDP43 (Ser409/410) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Alpha Tubulin (66031-1-Ig) antibody as a loading control.