



## MONOCLONAL ANTIBODY

For research use only, Not for diagnostic use

Catalog No. TIP-PTD-M01A

**Anti phospho TDP-43 (pS409/410)****BACKGROUND**

TDP-43, a heterogeneous nuclear ribonucleoprotein, was identified as a component of ubiquitin-positive and tau-negative inclusions observed in cases of frontotemporal lobar degeneration (FTLD-U) and amyotrophic lateral sclerosis (ALS). Immunochemical analyses using antibodies generated against phospho- and non-phosphopeptides of human TDP-43 revealed that abnormally phosphorylated full-length TDP-43 (45 kDa), C-terminal fragments (~25 kDa) and smearing substances are deposited as intracellular inclusions in affected regions of FTLD-U and ALS cases.

These antibodies are powerful tools for biochemical and immunohistochemical analyses of neurodegenerative diseases and for evaluation of cellular or animal models of TDP-43 proteinopathy.

<b>Product type</b>	Primary antibody
<b>Immunogen</b>	CMDSKS(p)S(p)GWGM, S(p):phosphoserine 409/410.
<b>Raised in</b>	Mouse
<b>Myeloma</b>	-
<b>Clone number</b>	11-9
<b>Isotype</b>	IgG1
<b>Source</b>	Culture supernatant
<b>Purification</b>	Affinity purify
<b>Form</b>	Phosphate buffered saline containing 0.05% NaN <sub>3</sub> as a preservative
<b>Concentration</b>	1.0~1.5mg/ml
<b>Volume</b>	100 uL
<b>Label</b>	Unlabeled
<b>Specificity</b>	Phospho TDP-43
<b>Cross reactivity</b>	Human
<b>Storage</b>	Store below -20°C. (below -70°C for prolonged storage). Aliquot to avoid cycles of freeze/thaw.

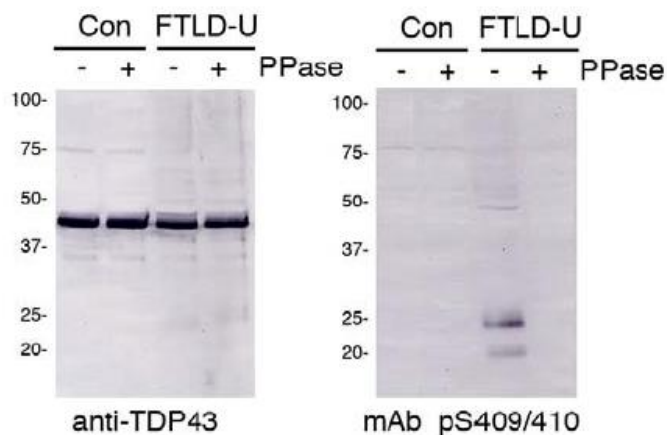
- Application notes**
- Recommended dilutions**
- **Western blotting:** 1/1000 - 1/3000
  - **Immunohistochemistry:** 1/3000 - 1/10000  
1/1,000 or a higher dilution is recommended for immunohistochemistry.
  - **ELISA:** 1/1000 - 1/5000

Other applications have not been tested.

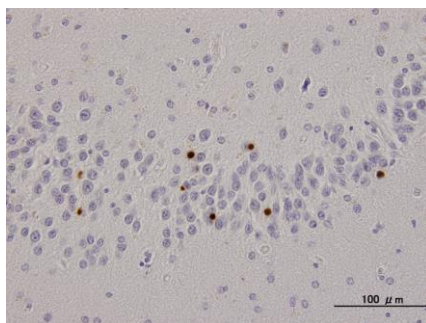
Optimal dilutions/concentrations should be determined by the end user.

- References**
- 1) Inukai Y, Nonaka T, Arai T, et al. Abnormal phosphorylation of Ser409/410 of TDP-43 in FTLD-U and ALS. FEBS Lett. 582, 2899-2904, 2008 PubMed: [18656473](#)

## ANTIBODY CHARACTERIZATION



**Figure 1 Immunoblot analyses with mAb pS409/410 (11-9),**  
 Predicted molecular weight: Phosphorylated full-length TDP-43 at 45 kDa, -25 kDa fragments and smearing substances in FTLD-U, ALS and other related disorders.



**Figure 2 Immunohistochemistry of TDP-43 lesions.**  
 NCIs in dentate gyrus of FTLD-U are specifically stained. Bars 100 μm.  
 MAb pS409/410 stains ubiquitin-positive inclusions in FTLD-U and ALS without nuclear staining. This does not stain ghost tangles and granulovacuolar degeneration in AD or other related diseases by immunohistochemistry.

## RELATED PRODUCTS:

Product Name	Quantity	Maker	Cat#
Anti TDP-43, phospho Ser409 Polyclonal Antibody	100 uL	CAC	TIP-PTD-P03
Anti TDP-43, phospho Ser410 Polyclonal Antibody	100 uL	CAC	TIP-PTD-P04
Anti TDP-43, phospho Ser409/410 Polyclonal Antibody	100 uL	CAC	TIP-PTD-P07
Anti TDP-43 N-terminus(3-12) Polyclonal Antibody	100 uL	CAC	TIP-TD-P07
Anti TDP-43 C-terminus(405-414) Polyclonal Antibody	100 uL	CAC	TIP-TD-P09

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