



## Anti phospho TDP-43 (pS410)

### 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). Immunohistochemical 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>	CMDSKSS(p)GWGM, S(p):phosphoserine 410
<b>Raised in</b>	Rabbit
<b>Myeloma</b>	-
<b>Clone number</b>	-
<b>Isotype</b>	-
<b>Source</b>	Serum
<b>Purification</b>	-
<b>Form</b>	Liquid. Antiserum with 0.05% NaN <sub>3</sub> as a preservative.
<b>Concentration</b>	-
<b>Volume</b>	100 µl
<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:** 1/1000 - 1/5000
- **ELISA:** 1/1000 - 1/5000

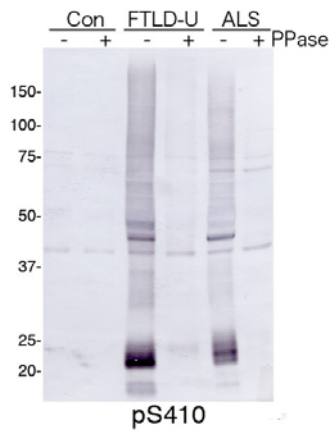
Other applications have not been tested.

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

### References

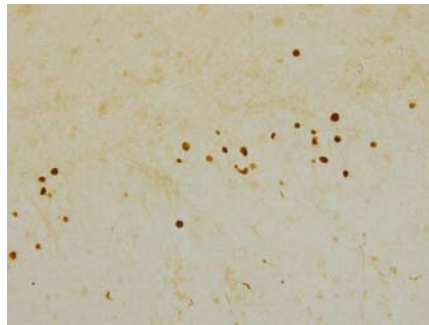
- 1) Hasegawa M, Arai T, Nonaka T, Kametani F, Yoshida M, Hashizume Y, Beach TG, Buratti E, Baralle F, Morita M, Nakano I, Oda T, Tsuchiya K, Akiyama H. Phosphorylated TDP-43 in frontotemporal lobar degeneration and amyotrophic lateral sclerosis. *Ann Neurol.* 2008 Jun 10;64(1):60-70. PubMed: [18546284](https://pubmed.ncbi.nlm.nih.gov/18546284/)

## ANTIBODY CHARACTERIZATION



**Figure 1 Immunoblot analyses with pAb pS410**

Predicted molecular weight: Phosphorylated full-length TDP-43 at 45 kDa, non-phosphorylated TDP-43 at 43 kDa, - 25 kDa fragments and smearing substances in FTLD-U, ALS.



**Figure 2 Immunohistochemistry of TDP-43 lesions.**

PAb "pS410" recognize neuronal cytoplasmic inclusions (NCIs) and dystrophic neurites (DNs) in dentate gyrus of FTLD-U.

## RELATED PRODUCTS:

Product Name	Quantity	Maker	Cat#
Anti TDP-43, phospho Ser409/410 (clone:11-9) Monoclonal Antibody	50 uL	CAC	TIP-PTD-M01
Anti TDP-43, phospho Ser409/410-1 Polyclonal Antibody	100 uL	CAC	TIP-PTD-P01
Anti TDP-43, phospho Ser409/410-2 Polyclonal Antibody	100 uL	CAC	TIP-PTD-P02
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 Ser403/404 Polyclonal Antibody	100 uL	CAC	TIP-PTD-P05
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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Inspiration for Life Science

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