COSMO BIO CO., LTD.
Inspiration for Life Science

MONOCLONAL ANTIBODY

For research use only, Not for diagnostic use

Catalog No. TIP-PTD-M01

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.

Product type	Primary antibody
Immunogen	CMDSKS(p)S(p)GWGM, S(p):phosphoserine 409/410.
Raised in	Mouse
Myeloma	-
Clone number	11-9
Isotype	IgG1
Source	Culture supernatant
Purification	ammonium sulfate precipitation
Form	Liquid containing 50% glycerol and 0.05% NaN3
Concentration	-
Volume	100 uL
Label	Unlabeled
Specificity	Phospho TDP-43
Cross reactivity	Human
Storage	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

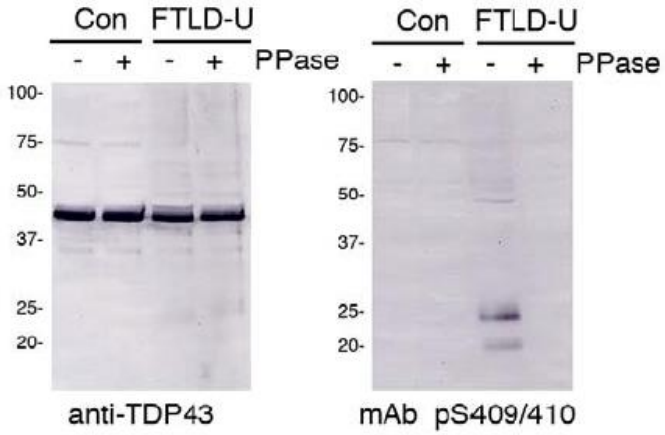

Figure 1 Immunoblot analyses with mAb pS409/410 (11-9),
Perdicted molecular weight: Phosphorylated full-length TDP-43 at 45 kDa, -25 kDa fragments and smearing substances in FTLD-U, ALS and other related disorders.

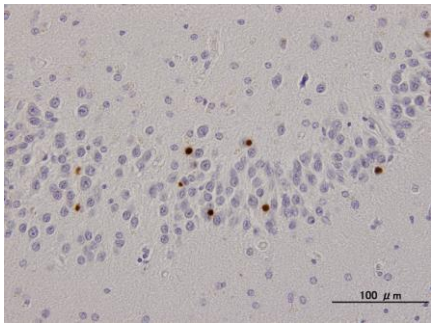

Figure 2 Immunohistochemistry of TDP-43 lesions.
NCIs in dentate gyrus of FTLD-U are specifically stained. Bars 100 lm.
MAb pS409/410 stains ubiquitin-positive inclusions in FTLD-U and ALS without nuclear staining. This does not stain ghost tangles and granulovacuolar degeneration in AD or other related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