COSMO BIO CO., LTD.
Inspiration for Life Science

POLYCLONAL ANTIBODY

For research use only, Not for diagnostic use

Catalog No. TIP-PTD-P02

Anti phospho TDP-43 (pS409/410-2)

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
Rased in	Rabbit
Myeloma	-
Clone number	-
Isotype	-
Source	Serum
Purification	-
Form	Liquid. Antiserum with 0.05% NaN_3 as a preservative.
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:** 1/1000 - 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

ANTIBODY CHARACTERIZATION

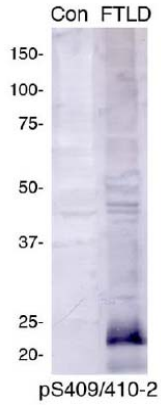

Figure 1 Immunoblot analyses with pAb pS409/410-2,
Perdicted molecular weight: Phosphorylated full-length TDP-43 at 45 kDa, unphosphorlated TDP-43 at 43 kDa, -25 kDa fragments and smearing substances in FTLD-U and ALS.

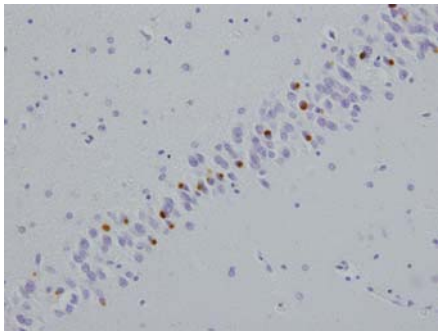

Figure 2 Immunohistochemistry of TDP-43 lesions.
PAb “pS409/410-2” recognize neuronal cytoplasmic inclusions (NCIs) in dentate gyrus of FLTD-U and stains ubiquitin-positive inclusions in FTLD-U and ALS without nuclear staining. This does not stain ghost tangles and granulovacuolar degeneration in AD or other related diseases.

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-terminus405-414) Polyclonal Antibody	100 uL	CAC	TIP-TD-P09

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