

# TPPP (A-6): sc-515819



The Power to Question

## BACKGROUND

Tubulin family members are globular proteins important in the assembly of microtubules. Microtubules are structural components that play important roles in mitosis, cytokinesis and vesicle transport. TPPP (Tubulin polymerization-promoting protein), also known as p24 and p25, is a widely expressed 219 amino acid protein found in the perinuclear region of the cytoplasm. TPPP may form dimers and functions in polymerizing Tubulin into double-walled tubules, polymorphic aggregates, or stabilized blocks. TPPP overexpression prevents formation of the mitotic spindle assembly and breakdown of the nuclear envelope. TPPP is phosphorylated by TPK II and is encoded by a gene that maps to human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome.

## REFERENCES

1. Libman, E., et al. 1981. Lipodystrophia diabetica. *Med. Pregl.* 34: 49-53.
2. Vincze, O., et al. 2006. Tubulin polymerization promoting proteins (TPPPs): members of a new family with distinct structures and functions. *Biochemistry* 45: 13818-13826.
3. Skjoerringe, T., et al. 2006. P25 $\alpha$ /Tubulin polymerization promoting protein expression by myelinating oligodendrocytes of the developing rat brain. *J. Neurochem.* 99: 333-342.
4. Preusser, M., et al. 2007. TPPP/p25 in brain tumours: expression in non-neoplastic oligodendrocytes but not in oligodendroglioma cells. *Acta Neuropathol.* 113: 213-215.

## CHROMOSOMAL LOCATION

Genetic locus: TPPP (human) mapping to 5p15.33; Tppp (mouse) mapping to 13 C1.

## SOURCE

TPPP (A-6) is a mouse monoclonal antibody raised against amino acids 1-77 mapping at the N-terminus of TPPP of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\kappa$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TPPP (A-6) is available conjugated to agarose (sc-515819 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515819 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515819 PE), fluorescein (sc-515819 FITC), Alexa Fluor<sup>®</sup> 488 (sc-515819 AF488), Alexa Fluor<sup>®</sup> 546 (sc-515819 AF546), Alexa Fluor<sup>®</sup> 594 (sc-515819 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-515819 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-515819 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-515819 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

TPPP (A-6) is recommended for detection of TPPP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TPPP siRNA (h): sc-76720, TPPP siRNA (m): sc-76721, TPPP shRNA Plasmid (h): sc-76720-SH, TPPP shRNA Plasmid (m): sc-76721-SH, TPPP shRNA (h) Lentiviral Particles: sc-76720-V and TPPP shRNA (m) Lentiviral Particles: sc-76721-V.

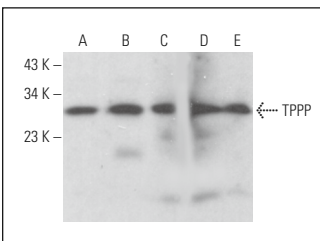
Molecular Weight of TPPP: 24 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, mouse cerebellum extract: sc-2403 or A549 cell lysate: sc-2413.

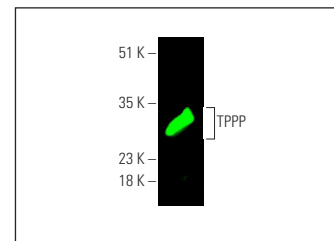
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



TPPP (A-6): sc-515819. Western blot analysis of TPPP expression in IMR-32 (A) and A549 (B) whole cell lysates and mouse brain (C), mouse cerebellum (D) and rat brain (E) tissue extracts.



TPPP (A-6): sc-515819. Near-infrared western blot analysis of TPPP expression in human cerebellum tissue extract. Detection reagent used: m-IgG $\kappa$  BP-CFL 680: sc-516180.

## SELECT PRODUCT CITATIONS

1. Hondius, D.C., et al. 2021. The proteome of granulovacuolar degeneration and neurofibrillary tangles in Alzheimer's disease. *Acta Neuropathol.* 141: 341-358.
2. Jiang, J., et al. 2022. Intraneuronal sortilin aggregation relative to granulovacuolar degeneration, Tau pathogenesis and sorfra plaque formation in human hippocampal formation. *Front. Aging Neurosci.* 14: 926904.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.