

Tau (Tau 46): sc-32274



The Power to Question

BACKGROUND

Tau, also known as MAPT (microtubule-associated protein tau), MAPTL, MTBT1 or Tau, is a 758 amino acid protein that localizes to the cytoplasm, as well as to the cytoskeleton and the cell membrane, and contains four Tau/MAP repeats. Expressed in neuronal tissue and existing as multiple alternatively spliced isoforms, Tau functions to promote microtubule assembly and stability and is thought to be involved in the maintenance of neuronal polarity. Tau may also link microtubules with neural plasma membrane components and, addition to its role in microtubule stability, is also necessary for cytoskeletal plasticity. Tau is highly subject to a variety of post-translational modifications, including phosphorylation on serine and threonine residues, poly-ubiquitination (and subsequent proteasomal degradation) and glycation of specific Tau isoforms. Defects in the gene encoding Tau are associated with Alzheimers disease, pallido-ponto-nigral degeneration (PPND), corticobasal degeneration (CBD) and progressive supranuclear palsy (PSP).

CHROMOSOMAL LOCATION

Genetic locus: MAPT (human) mapping to 17q21.31; Mapt (mouse) mapping to 11 E1.

SOURCE

Tau (Tau 46) is a mouse monoclonal antibody raised against purified native Tau of bovine origin, with epitope mapping to the carboxy-terminus of human Tau.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tau (Tau 46) is available conjugated to agarose (sc-32274 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32274 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32274 PE), fluorescein (sc-32274 FITC), Alexa Fluor® 488 (sc-32274 AF488), Alexa Fluor® 546 (sc-32274 AF546), Alexa Fluor® 594 (sc-32274 AF594) or Alexa Fluor® 647 (sc-32274 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32274 AF680) or Alexa Fluor® 790 (sc-32274 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Tau (Tau 46) is recommended for detection of Tau and MAP-2 (280 kDa) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); predicted to react with all six Tau isoforms and bovine Tau.

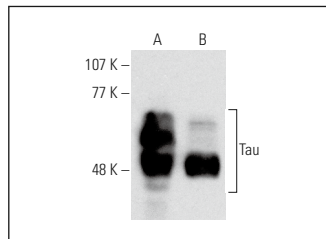
Molecular Weight of Tau: 46-80 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or TE671 cell lysate: sc-2416.

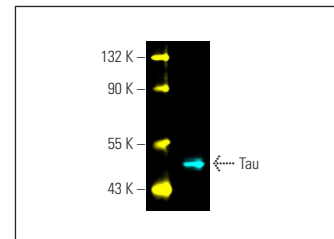
STORAGE

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

DATA



Tau (Tau 46) HRP: sc-32274 HRP. Direct western blot analysis of Tau expression in rat brain (A) and mouse brain (B) tissue extracts.



Tau (Tau 46) Alexa Fluor® 647: sc-32274 AF647. Direct fluorescent western blot analysis of Tau expression in mouse brain tissue extract. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 488: sc-516790.

SELECT PRODUCT CITATIONS

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- Piccarducci, R., et al. 2019. High levels of Amyloid- β , Tau, and phospho-Tau in red blood cells as biomarkers of neuropathology in senescence-accelerated mouse. *Oxid. Med. Cell. Longev.* 2019: 5030475.
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- Gáspár, A., et al. 2022. Performance of the intracerebroventricularly injected streptozotocin Alzheimer's disease model in a translationally relevant, aged and experienced rat population. *Sci. Rep.* 12: 20247.
- Yadav, Y., et al. 2023. PP2C α aggravates neuronal Insulin resistance leading to AD-like phenotype *in vitro*. *Biochem. Biophys. Res. Commun.* 644: 49-54.
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RESEARCH USE

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