

# Tau (H-150): sc-5587

## 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 4 Tau/MAPT 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, in 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, polyubiquitination (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 (H-150) is a rabbit polyclonal antibody raised against amino acids 1-150 of Tau of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Tau (H-150) is recommended for detection of multiple Tau isoforms of human and, to a lesser extent, mouse and rat 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with isoform 2.

Suitable for use as control antibody for Tau siRNA (h): sc-36614, Tau siRNA (m): sc-36615, Tau shRNA Plasmid (h): sc-36614-SH, Tau shRNA Plasmid (m): sc-36615-SH, Tau shRNA (h) Lentiviral Particles: sc-36614-V and Tau shRNA (m) Lentiviral Particles: sc-36615-V.

Molecular Weight of Tau: 46-80 kDa.

Positive Controls: TE671 cell lysate: sc-2416, COLO 320DM cell lysate: sc-2226 or SK-N-SH cell lysate: sc-2410.

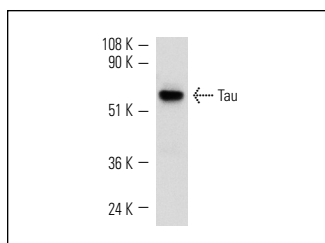
## STORAGE

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

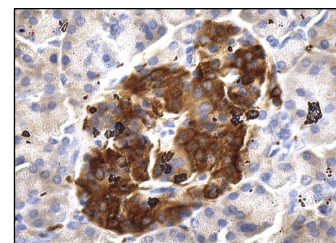
## RESEARCH USE

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

## DATA



Tau (H-150): sc-5587. Western blot analysis of Tau expression in SK-N-SH whole cell lysate.



Tau (H-150): sc-5587. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans.

## SELECT PRODUCT CITATIONS

1. Tatebayashi, Y., et al. 2002. Tau filament formation and associative memory deficit in aged mice expressing mutant (R406W) human Tau. *Proc. Natl. Acad. Sci. USA* 99: 13896-13901
2. Savage, M.J., et al. 2002. Activation of c-Jun N-terminal kinase and p38 in an Alzheimer's disease model is associated with amyloid deposition. *J. Neurosci.* 22: 3376-3385.
3. Vaudry, D., et al. 2002. Pituitary adenylate cyclase-activating polypeptide protects rat cerebellar granule neurons against ethanol-induced apoptotic cell death. *Proc. Natl. Acad. Sci. USA* 99: 6398-6403.
4. Jinwal, U.K., et al. 2010. Hsc70 rapidly engages Tau after microtubule destabilization. *J. Biol. Chem.* 285: 16798-16805.
5. Castañó, Z., et al. 2010. The neuron-specific isoform of glycogen synthase kinase-3β is required for axon growth. *J. Neurochem.* 113: 117-130.
6. Yamatani, H., et al. 2010. Proteomics analysis of the temporal changes in axonal proteins during maturation. *Dev. Neurobiol.* 70: 523-537.
7. Um, H.S., et al. 2010. Treadmill exercise represses neuronal cell death in an aged transgenic mouse model of Alzheimer's disease. *Neurosci. Res.* 69: 161-173.
8. Lee, D.C., et al. 2010. LPS- induced inflammation exacerbates phospho-Tau pathology in rTg4510 mice. *J. Neuroinflammation* 7: 56.
9. Brot, S., et al. 2010. CRMP5 interacts with tubulin to inhibit neurite outgrowth, thereby modulating the function of CRMP2. *J. Neurosci.* 30: 10639-10654.



Try **Tau (Tau 46): sc-32274** or **Tau (A-10): sc-390476**, our highly recommended monoclonal alternatives to Tau (H-150). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Tau (Tau 46): sc-32274**.