

Lot XXXXX

## MATERIAL DATA SHEET

### **Tau (1N4R), human recombinant** **Cat. # SP-501**

Tau is a microtubule-associated protein expressed primarily in neurons. Carboxy-terminal domains of Tau associate with and stabilize microtubule structure, while other domains bind to the plasma membrane. Abnormal Tau phosphorylation can result in the self-assembly of tangles of paired helical and/or straight filaments, which are involved in the pathogenesis of Alzheimer's disease and other neurodegenerative diseases. Properly folded Tau is highly soluble, but when the protein becomes misfolded it forms insoluble aggregates that can damage cytoplasmic functions, interfere with axonal transport and ultimately lead to cell death. There are multiple isoforms of Tau— this 412 amino acid isoform is known as “1N4R,” “Isoform Tau-E,” or “Tau 412” and is referenced in UniProt as P10636-7. This recombinant protein is untagged.

#### Product Information

<b>Quantity:</b>	100 µg
<b>Stock:</b>	2.1 mg/ml (50 µM) in PBS pH 7.4
<b>MW:</b>	43 kDa
<b>Purity:</b>	> 95 % by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue Stain.

#### Use & Storage

<b>Use:</b>	Concentrations for <i>in vitro</i> assays will depend on experimental conditions and detection methods.
<b>Storage:</b>	Store at -80°C. Avoid multiple freeze/thaw cycles.

#### Literature

<b>References:</b>	Billingsley M.L. & Kincaid R.L. (1997). <u>Biochem. J.</u> <b>323</b> : 577
	Bloom G.S. (2014) <u>JAMA Neurol.</u> <b>71</b> : 505
	Cripps D. <i>et al.</i> (2006) <u>J. Biol. Chem.</u> <b>281</b> : 10825
	Harada A. <i>et al.</i> (1994) <u>Nature</u> <b>369</b> : 488
	Lei P. <i>et al.</i> (2010) <u>Int. J Biochem Cell Biol.</u> <b>42</b> : 1775

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