

Lot XXXXX

## MATERIAL DATA SHEET

### Tau 441 (2N4R), *human recombinant* Cat. # SP-495

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 441 amino acid isoform is known as “2N4R,” “Isoform Tau-F,” “Tau 441” or “Tau-4” and is referenced in UniProt as P10636-8. This recombinant protein is untagged.

#### Product Information

<b>Quantity:</b>	100 µg
<b>Stock:</b>	2.3 mg/ml (50 µM) in PBS pH 7.4
<b>MW:</b>	46 kDa
<b>Purity:</b>	> 95 % by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue Stain. Endotoxin: < 150 EU/ml

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