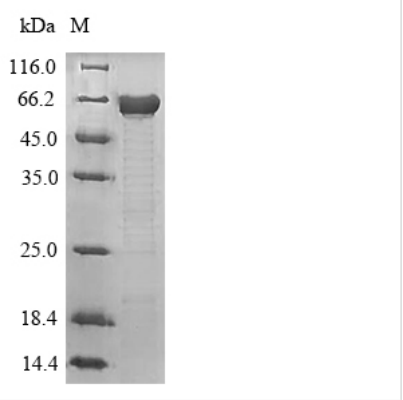
Recombinant Mouse Microtubule-associated protein tau (Mapt)

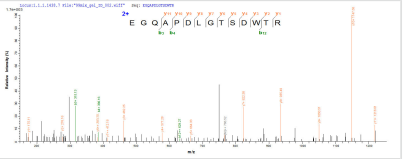
Product Code	CSB-YP013481MO
Relevance	Promotes microtubule assembly and stability, and might be involved in the establishment and maintenance of neuronal polarity. The C-terminus binds axonal microtubules while the N-terminus binds neural plasma membrane components, suggesting that tau functions as a linker protein between both. Axonal polarity is predetermined by tau localization (in the neuronal cell) in the domain of the cell body defined by the centrosome. The short isoforms allow plasticity of the cytoskeleton whereas the longer isoforms may preferentially play a role in its stabilization.
Abbreviation	Recombinant Mouse Mapt protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P10637
Alias	Neurofibrillary tangle protein Paired helical filament-tau Short name: PHF-tau
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	ADPRQEFDTMEDHAGDYTLLQDQEGDMDHGLKESPPQPPADDGAEEPGSET SDAKSTPTAEDVTAPLVDERAPDKQAAAQPHTEIPEGITAEEAGIGDTPNQED QAAGHVTQGRREGQAPDLGTSDWTRQQVSSMSGAPLLPQGLREATCQPSG TRPEDIEKSHPASELLRRGPPQKEGWGQDRLGSEEEVDEDLTVDESSQDSPP SQASLTPGRAAPQAGSGSVCGETASVPGLPTEGSVPLPADFFSKVSAETQAS QPEGPGTGPMEEGHEAAPEFTFHVEIKASTPKEQDLEGATVVGVPGEEQKAQ TQGPSVGKGTKEASLQEPPGKQPAAGLPGRPVSRVPQLKARVASKDRTGND EKKAKTSTPSCAKAPSHRPCLSPTRPTLGSSDPLIKPSSPAVSPEPATSPKHVS SVTPRNGSPGTKQMKLKGADGKTGAKIATPRGAASPAQKGTSNATRIPAKTTP SPKTPPGSGEPPKSGERSGYSSPGSPGTPGSRSRTPSLPTPPTREPKKVAVV RTPPKSPSASKSRLQTAPVPMPDLKNVRSKIGSTENLKHQPGGGKVQIINKKL DLSNVQSKCGSKDNIKHVPGGGSVQIVYKPVDLSKVTSKCGSLGNIHHKPGG GQVEVKSEKLDFKDRVQSKIGSLDNITHVPGGGNKKIETHKLTFRENAKAKTD HGAEIVYKSPVVSGDTSPRHLSNVSSTGSIDMVDSPQLATLADEVSASLAKQG L
Research Area	Neuroscience
Source	Yeast
Target Names	Mapt
Protein Names	Recommended name: Microtubule-associated protein tau Alternative name(s):

	Neurofibrillary tangle protein Paired helical filament-tau Short name= PHF-tau
Expression Region	2-733aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	78.1kDa
Protein Length	Full Length of Mature Protein

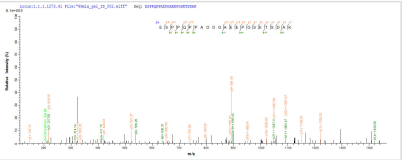
Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of Yeast host and target protein, the LC-MS/MS Analysis result of CSB-YP013481MO could indicate that this peptide derived from Yeast-expressed Mus musculus (Mouse) Mapt.



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Description

Recombinant full-length of mature Mouse Microtubule-associated protein tau (Mapt) cDNA (2-733aa) constructed with a 6xHis-tag at the N-terminus was expressed in the yeast. The protein identity was confirmed by both SDS-PAGE and LC-MS/MS analysis. It is over 90% in purity and has a calculated molecular weight of 78.1 kDa. Importantly, this recombinant Mapt protein is in stock so there is no waiting period for product preparation. The Mapt can act as an immunogen to elicit an adaptive immune reaction and thus obtain specific antibodies. Besides, this protein may also be used in the studies of the neuroscience field.

Mapt is abundant in the axons of neurons where it promotes microtubule (MT) assembly and stability. Together with stathmin and other destabilizing MAPs, Mapt also participates in MT dynamics via the modulation of assembly, dynamic behavior, and the spatial construction of MTs. Aberrant hyperphosphorylation of Mapt-causing its self-aggregation into paired helical filaments and buildup in the

	neurons frequently occurred in the tauopathies such as Alzheimer's disease (AD) and frontotemporal dementia (FTD).
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.