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DATA SHEET

Product Name: Tau-381 (1N3R), Human, Recombinant, E. coli

Catalog #: T-1004

Source: Recombinant. DNA sequence encoding the human Tau-381 isoform (1N3R) sequence was expressed in E. coli. No his-tag.

Molecular Mass: 39,700

Protein Purity: >90% by SDS-PAGE.

Counter Ion: Final buffer: 50mM MES, pH 6.8, 100 mM NaCl, 0.5 mM EGTA.

Supplied As: White lyophilized powder

Resuspension: Resuspend in water at conc. of 1 mg/ml. This will give you a final of 50mM MES, pH 6.8, 100 mM NaCl, 0.5 mM EGTA.

Storage: -20^0C

Description: Tau is a family of six isoforms, derived from a single gene by alternative mRNA splicing[1]. They vary in size from 352 to 441 amino acids (36.8 to 45.9 kDa), and differ from one another in having three or four microtubule binding repeats (R) of 31-32 amino acids each, and two, one or none amino terminal inserts (N) of 29 amino acids each[2].

Catalog #	Product	Variant	Exon 2	Exon 3	Exon 10	AA	Mass (kDa)	Expressed
T-1001-1	**Tau-441**	2N4R	+	+	+	441	45.9	adult
T-1002-1	**Tau-410**	2N3R	+	+	-	410	42.6	adult
T-1003-1	**Tau-412**	1N4R	+	-	+	412	42.9	adult
T-1004-1	**Tau-381**	1N3R	+	-	-	381	39.7	adult
T-1005-1	**Tau-383**	0N4R	-	-	+	383	40	adult
T-1006-1	**Tau-352**	0N3R	-	-	-	352	36.8	fetal

Tau promotes the assembly and maintains the structure of microtubules in neuronal cells[3,4,5]. . While the fetal brain contains a single isoform of tau (Tau-352) the adult brain has several isoforms. Tau is both phosphorylated and O-GlcNAcylated[6]. The normal brain tau contains 2-3 moles of phosphate/mole of the protein. In Alzheimer disease tau is hyperphosphorylated, containing 3-4-fold more phosphate/mole of the protein than the normal tau[7,8] and is the major protein subunit of paired helical filaments (PHF) that form the neurofibrillary tangles (NFT). NFT accumulation correlates with the clinical progression of Alzheimer's disease.

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References:

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