**DATA SHEET**

**Product Name:** Tau-352 (0N3R), Human, Recombinant, E. coli

**Catalog #:** T-1006

**Source:** Recombinant. DNA sequence encoding the human Tau-352 isoform (0N3R) sequence was expressed in E. coli. **No** his-tag.

**Molecular Mass:** 36,800

**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°C

**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$^2$.

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>Product</th>
<th>Variant</th>
<th>Exon 2</th>
<th>Exon 3</th>
<th>Exon 10</th>
<th>AA</th>
<th>Mass (kDa)</th>
<th>Expresed</th>
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<tbody>
<tr>
<td>T-1001-1</td>
<td>Tau-441</td>
<td>2N4R</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>441</td>
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<tr>
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<td>Tau-410</td>
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<td>-</td>
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<tr>
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<tr>
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<td>352</td>
<td>36.8</td>
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</tr>
</tbody>
</table>

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.
References:
3. Avila J. et. al., 2004, Physiol Rev. 84, 361.

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