**Product number:** K9-4119  
**Product name:** SeTau-665-mono-NHS

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**General Data**

- **Molecular Mass:** 1936.40
- **Solubility:** Water, Alcohol, DMF, DMSO
- **Insoluble:** Acetone, Chloroform, Toluene
- **Storage:** Store in absence of light, desiccate and refrigerate

**Description**

Amine-reactive fluorescent label containing one reactive NHS-ester groups

**Applications**

Covalent labeling of proteins, amino-modified DNA and amino-modified oligonucleotides

Best fluorescent dye currently on the market for 2-photon applications - 2PCS of 8500 GM

**Advantages**

- Perfectly suited for excitation with the 665-nm, 650-nm, or 647-nm lasers
- **Extremely sensitive:** high extinction coefficients and high quantum yields of 50% in aqueous environments
- **Good aqueous solubility:** this label does not alter the solubility of the dye-conjugate
- **Ozone stability:** Higher ozone stability than Alexa Fluor™ or Cy dyes enables array experiments to be performed with SeTau 665 under any environmental condition
- Dye with highest 2-photon action cross section (~ 8500 GM!!) currently on the market
- **Photostability:** Much higher photostability than Alexa Fluor or Cy dyes
- **Long fluorescence lifetime:** ~ 3 ns in water
- Ideal for labelling of proteins, amino-modified DNA probes and amino-modified oligonucleotides

**Spectral Data**

**Solvent System:** water

<table>
<thead>
<tr>
<th>Sample</th>
<th>Dye-to-protein Ratio</th>
<th>Absorption max. [nm]</th>
<th>Extinction Coefficient [M⁻¹·cm⁻¹]</th>
<th>Fluorescence max. [nm]</th>
<th>Quantum Yield [%]</th>
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</thead>
<tbody>
<tr>
<td>Free dye</td>
<td>—</td>
<td>664</td>
<td>161,000</td>
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<tr>
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<td>50</td>
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<tr>
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<td></td>
<td>716</td>
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<tr>
<td>IgG conjugate 3</td>
<td>4.0</td>
<td>662</td>
<td></td>
<td>716</td>
<td>24</td>
</tr>
</tbody>
</table>

* Excitation at 620 nm
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Absorption and emission spectrum of a SeTau-665-mono-NHS in phosphate buffer (pH 7.4)

Quantum yield vs. dye-to-protein ratio of SeTau-665 – IγG conjugates in phosphate buffer (pH 7.4)

Decrease in fluorescence intensity of SeTau-665 as compared to Alexa Fluor 647 in 35% H₂O₂

Change in fluorescence intensity of SeTau-665 as compared to Alexa Fluor 647 in bicarbonate buffer pH 9.4 in presence of 3.5% H₂O₂

2-photon action cross sections for several squaraines and squaraine rotaxanes