SETA BioMedicals
Fluorescent Tools for BioMedical Applications
http://www.setabiomedicals.com
e-mail: info@setabiomedicals.com

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

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

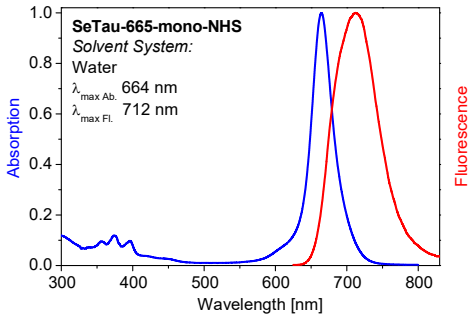
Solvent System: water

Sample	Dye-to-protein Ratio	Absorption max. [nm]	Extinction Coefficient [$M^{-1} \cdot cm^{-1}$]	Fluorescence* max. [nm]	Quantum Yield [%]
Free dye	—	664	161,000	712	53
IgG conjugate 1	1.2	662		716	50
IgG conjugate 2	2.0	662		716	40
IgG conjugate 3	4.0	662		716	24

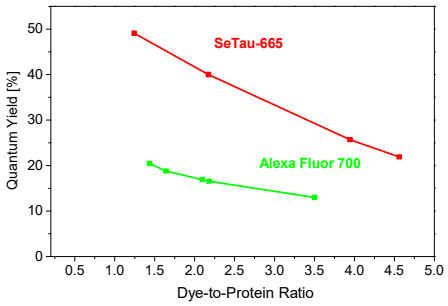
* Excitation at 620 nm

SETA BioMedicals
Fluorescent Tools for BioMedical Applications
http://www.setabiomedicals.com
e-mail: info@setabiomedicals.com

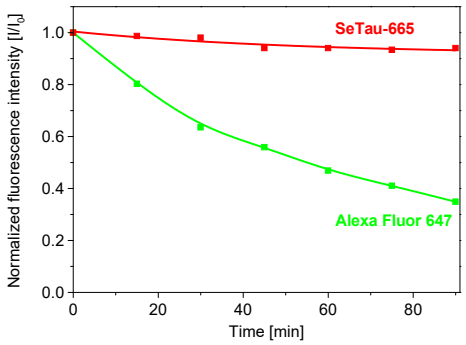
Product number: K9-4119
Product name: SeTau-665-mono-NHS



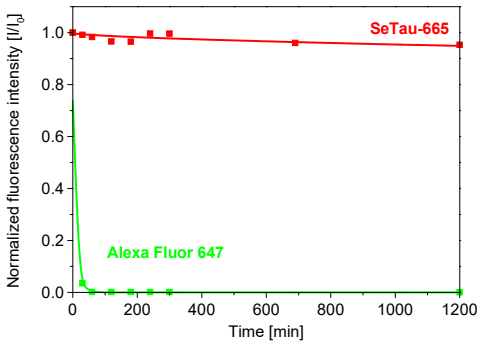
Absorption and emission spectrum of a **SeTau-665-mono-NHS** in phosphate buffer (pH 7.4)



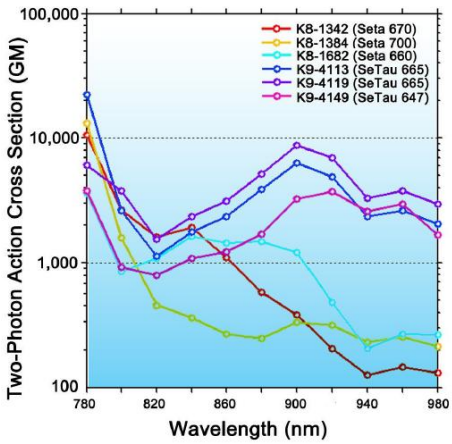
Quantum yield *vs.* dye-to-protein ratio of **SeTau-665 – IgG conjugates** in phosphate buffer (pH 7.4)



Decrease in fluorescence intensity of SeTau-665 as compared to Alexa Fluor 647 in 35% H_2O_2



Change in fluorescence intensity of SeTau-665 as compared to Alexa Fluor 647 in bicarbonate buffer pH 9.4 in presence of 3.5% H_2O_2



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