

**Product number: K9-3152**  
**Product name: SeTau-488-NHS**

## General Data

**Molecular Mass:** 1642.73  
1384.24 (protonated form)  
**Solubility:** Water, Alcohol, DMF, DMSO  
**Insoluble:** Hexane  
**Storage:** Store in absence of light, desiccate and refrigerate

## Description

- Bright, water-soluble, amine-reactive label containing one NHS-ester group. The ideal label for proteins and other amino-modified biomolecules including oligonucleotides. Brighter, more photostable replacement for fluorescein-type labels including Alexa-488!

## Advantages

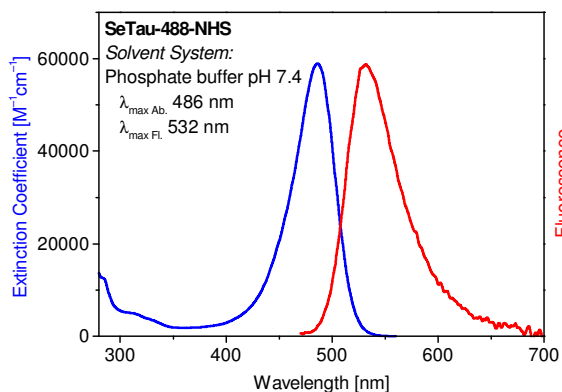
- Perfectly suited for excitation with 440 and 480-nm diode lasers or the 488-nm Ar-ion laser
- Stokes' shift of ~47 nm (larger than for FITC and Alexa Fluor 488).
- Considerably higher photostability compared to fluorescein
- High chemical stability against oxidation with peroxides or other oxygen species

## Spectral Data

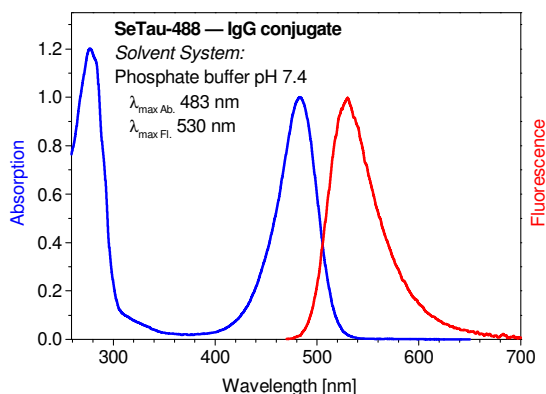
**Solvent System:** phosphate buffer pH 7.4

Sample	Dye-to-protein Ratio	Absorption max. [nm]	Extinction Coefficient [ $M^{-1}cm^{-1}$ ]	Fluorescence max. [nm]	Quantum Yield <sup>1</sup> [%]
Free dye	—	486	59,000	532	27
IgG conjugate 1	1.0	484		529	66
IgG conjugate 2	2.0	484		530	61
IgG conjugate 3	5.0	483		530	52
IgG conjugate 4	10.0	483		530	46
BSA conjugate 1	1.0	480		526	45
BSA conjugate 2	2.0	481		527	43

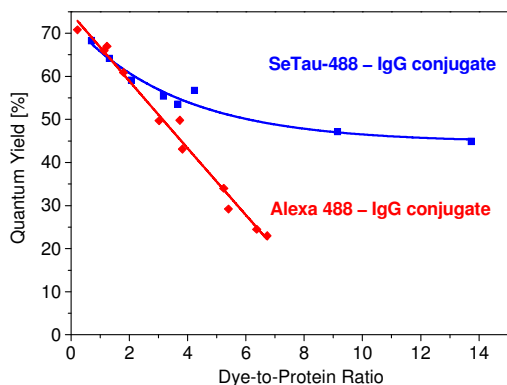
<sup>1</sup> Fluorescein in 0.1N NaOH (QY = 92%) was used as the reference.  $\lambda_{Ex.} = 450$  nm.



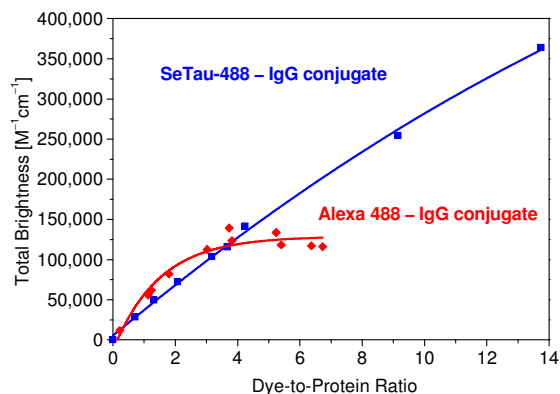
Absorption and emission spectrum of **SeTau-488-NHS** in phosphate buffer (pH 7.4)



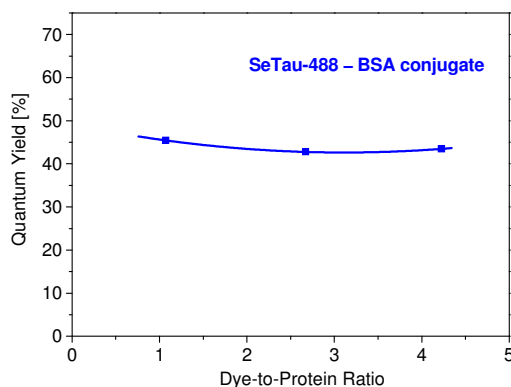
Absorption and emission spectrum of a **SeTau-488 - IgG conjugate** in phosphate buffer (pH 7.4) (Dye-to-protein ratio 3.7)



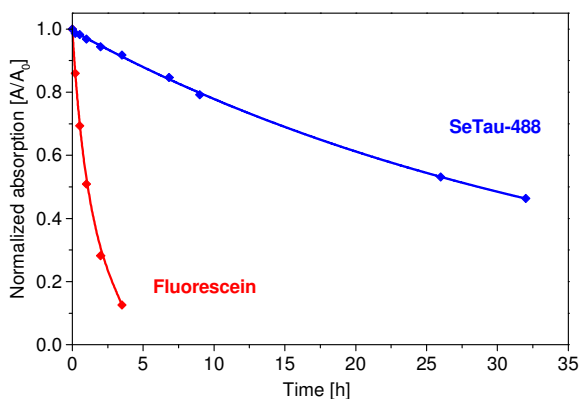
Quantum yield vs. dye-to-protein ratio of **SeTau-488 — IgG conjugates** in phosphate buffer (pH 7.4) as compared to **Alexa 488 — IgG conjugates**



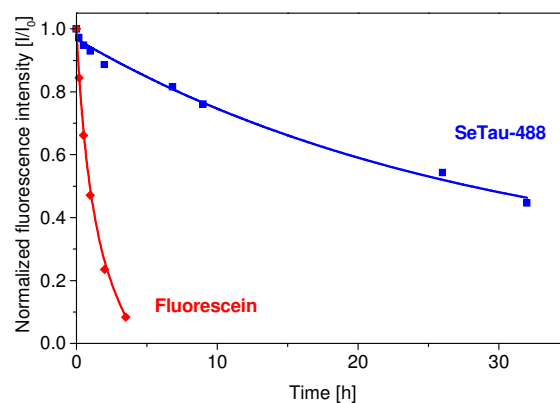
Total brightness ( $QY \times \epsilon \times D/P$ ) vs. dye-to-protein ratio (D/P) of **SeTau-488 — IgG conjugates** in phosphate buffer (pH 7.4) as compared to **Alexa 488 — IgG conjugates**



Quantum yield vs. dye-to-protein ratio of **SeTau-488 — BSA conjugates** in phosphate buffer (pH 7.4)



Decrease of the long-wavelength absorption of **SeTau-488-COOH** compared to **Fluorescein** upon irradiation with a warm light LED (illuminance ~ 4000 Lux)



Decrease of fluorescence intensity of **SeTau-488-COOH** compared to **Fluorescein** upon irradiation with a warm light LED (illuminance ~ 4000 Lux)