

**Product number: K9-4112**  
**Product name: SeTau-655-di-NHS**

## General Data

**Molecular Mass:** 1667.94  
 1409.45 (protonated form)  
**Solubility:** Water, Alcohol, DMF, DMSO  
**Insoluble:** Acetone, Chloroform, Toluene  
**Storage:** Store in absence of light, desiccate and refrigerate

## Description

Hydrophilic, amine-reactive label containing two NHS-ester groups.

## Applications

- Covalent labeling of proteins, amino-modified DNA and amino-modified oligonucleotides
- Fluorescence intensity and fluorescence polarization-based applications
- Resonance Energy Transfer (RET)
- Flow Cytometry
- Immunofluorescence
- Gene Expression
- Homogeneous Assays
- Microarrays

## Advantages

- Perfectly suited for excitation with the 635 nm diode laser
- Sensitive; high extinction coefficients and high quantum yields after covalent attachment to biomolecules
- Quantum yield is highly increased after covalent and non-covalent association with proteins
- pH-insensitive between pH 3 and pH 10
- Good aqueous solubility; this label does not alter the solubility of the bioconjugate
- High photostability; e.g. compared to fluorescein or Cy5<sup>TM</sup>
- Low molecular weight — **SeTau** dyes do not add substantial mass to the conjugates
- Ideal for non-radioactive labeling of proteins, amino-modified oligonucleotides and amino-modified lipids

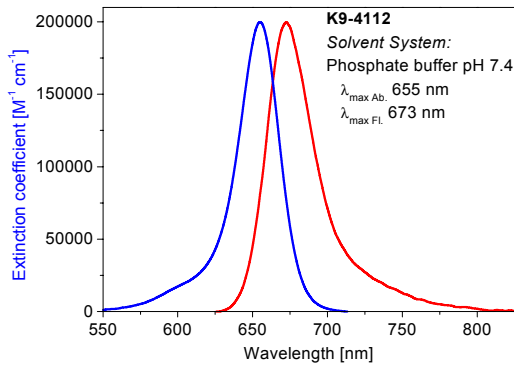
## Spectral Data

**Solvent System:** phosphate buffer pH 7.4

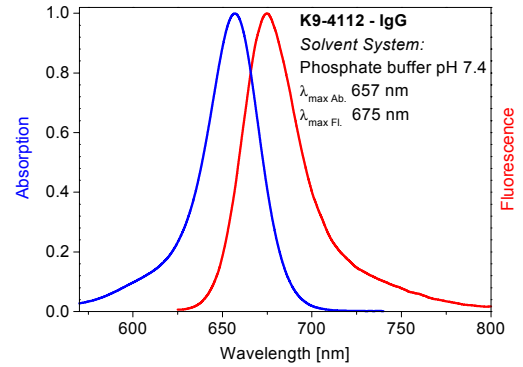
Sample	Dye-to-protein Ratio	Absorption max. [nm]	Extinction Coefficient [M <sup>-1</sup> .cm <sup>-1</sup> ]	Fluorescence* max. [nm]	Quantum Yield [%]
Free dye	—	655	200,000	673	25
IgG conjugate 1	1.0	657		675	31
IgG conjugate 2	2.0	657		675	25
IgG conjugate 3	3.0	657		675	21
IgG conjugate 4	4.0	657		675	18

\* Excitation at 620 nm

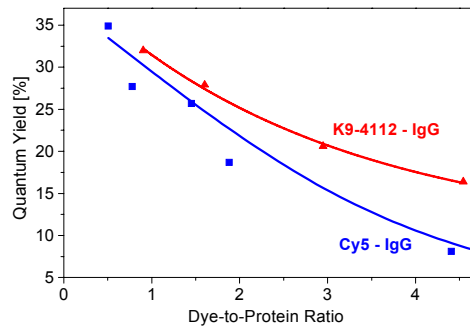
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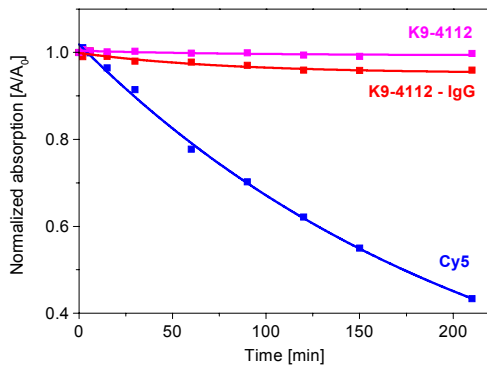
Absorption and emission spectrum of **K9-4112** in phosphate buffer (pH 7.4)



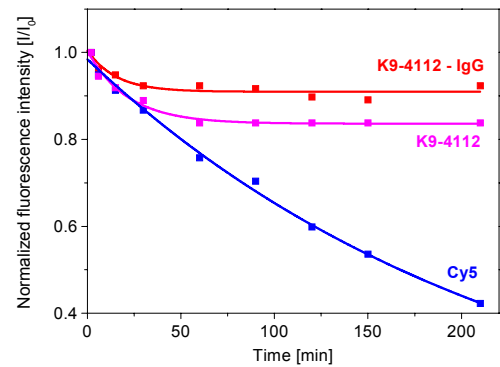
Absorption and emission spectrum of a **K9-4112 — IgG conjugate** in phosphate buffer (pH 7.4, Dye-to-protein ratio 1.0)



Quantum yield vs. dye-to-protein ratio of **K9-4112 — IgG conjugate** compared to **Cy5 — IgG conjugate** in phosphate buffer (pH 7.4)



Decay of the long-wavelength absorption band of **K9-4112** and **K9-4112 — IgG conjugate** (pH 7.4, Dye-to-protein ratio 1.0) compared to **Cy5**



Decay of the fluorescence intensity of **K9-4112** and **K9-4112 — IgG conjugate** (pH 7.4, Dye-to-protein ratio 1.0) compared to **Cy5**