

**Product number: K8-1382**  
**Product name: Seta-660-ammonium-NHS**

## General Data

- Molecular Mass:** 812.03 (without counter ion)  
**Solubility:** Alcohol, Chloroform, DMF, DMSO  
**Insoluble:** Water  
**Storage:** Store out of light, desiccated and refrigerate

## Description

Positively charged, amine-reactive fluorescent label containing reactive NHS-ester group.

## Applications

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

Fluorescence Lifetime Label — this label exhibits a distinct lifetime change upon binding to a biomolecule

Gel electrophoresis

## Advantages

- Perfectly suited for excitation with the 635, 670-nm diode laser, the 370, 405-nm diode lasers, and UV light
- Sensitive; high extinction coefficient and high quantum yield up to 25% after covalent attachment to proteins
- When bound to a protein the quantum yield is higher as compared to **Cy5<sup>TM</sup>**
- Low non-specific binding
- pH-insensitive between pH 3 and pH 10
- Good aqueous solubility; this label does not alter the solubility of the protein conjugate
- High photostability; e.g. compared to fluorescein or **Cy5<sup>TM</sup>**
- Low molecular weight — **Seta** dyes do not add substantial mass to the conjugates
- Ideal for non-radioactive labeling of proteins, amino-modified DNA probes and amino-modified oligonucleotides

## Spectral Data

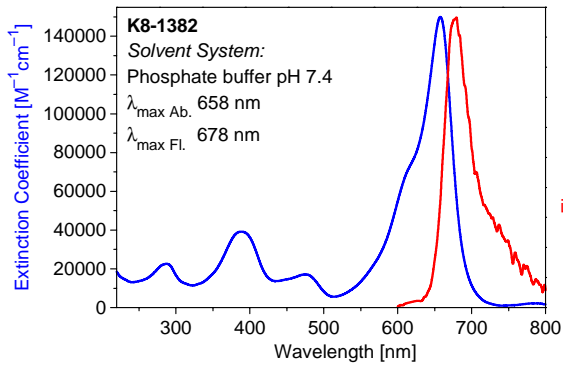
**Solvent system:** phosphate buffer, pH 7.4

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	—	658	150,000	678	2
BSA conjugate	0.1	678		696	28
BSA conjugate	0.3	678		696	10
BSA conjugate	1.0	675		693	1

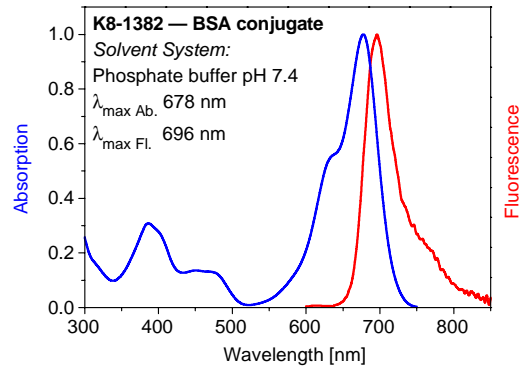
\* Excitation at 620 nm

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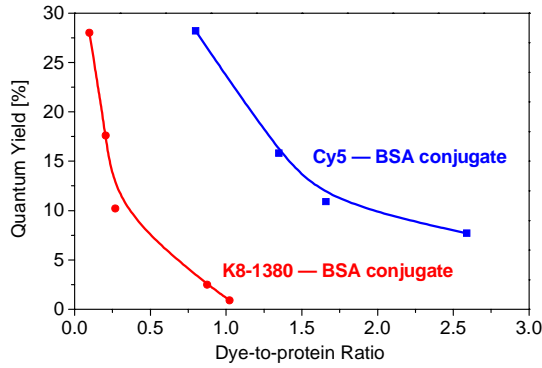
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Absorption and fluorescence spectra of **K8-1382** in phosphate buffer (pH 7.4)



Absorption and fluorescence spectra of **K8-1382 — BSA conjugate** in phosphate buffer (pH 7.4)



Quantum Yield vs Dye-to-protein Ratio of **K8-1382 — BSA conjugates** as compared to **Cy5 — BSA conjugates** in phosphate buffer (pH 7.4)