

**Product number: K8-1346**

**Product name: Seta 670-mono-azide**

## General Data

**Molecular Mass:** 951.10

**Solubility:** Water, Alcohol, DMF, DMSO

**Insoluble:** acetone, chloroform, toluene

**Storage:** Store in absence of light, desiccated and refrigerate

## Description

Highly hydrophilic, alkyne-reactive reagent for click chemistry containing one azide function. Azides react with C-C-triple bonds in either a Cu(I)-catalyzed or Cu-free 1,3-dipolar cycloaddition reaction to a triazole.

## Applications

- Click Chemistry reagent
- Fluorescence intensity and fluorescence polarization-based applications
- Fluorescence Resonance Energy Transfer (FRET) applications
- Single Molecule Applications – **Seta-670** shows extremely low blinking in single molecule measurements

## Advantages

- Suited for excitation with the 380, 404, 635, 670-nm diode lasers and UV light
- 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
- **Photostability:** Higher photostability as compared to **Alexa Fluor™ 647** or **Cy5™**
- **Low molecular weight:** **Seta** dyes do not add substantial mass to the conjugates
- Ideal for non-radioactive labeling of alkyne-modified proteins, DNA and oligonucleotides

## Spectral Data

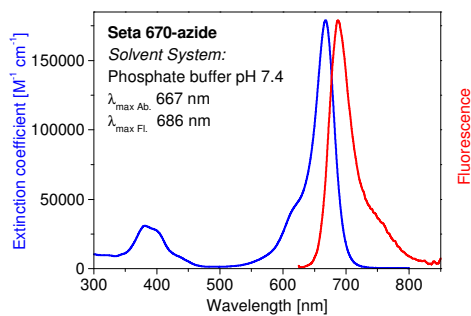
**Solvent System:** phosphate buffer pH 7.4

Sample	Absorption max. [nm]	Extinction Coefficient [M <sup>-1</sup> ·cm <sup>-1</sup> ]	Fluorescence* max. [nm]	Quantum Yield [%]
Free dye	667	180,000	686	7

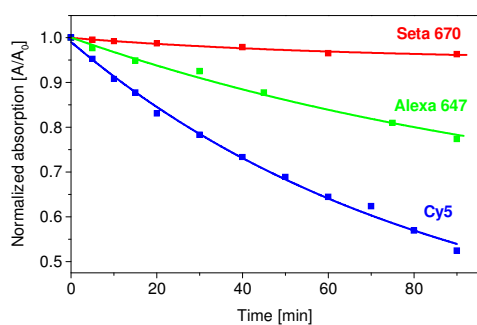
\* Excitation at 635 nm

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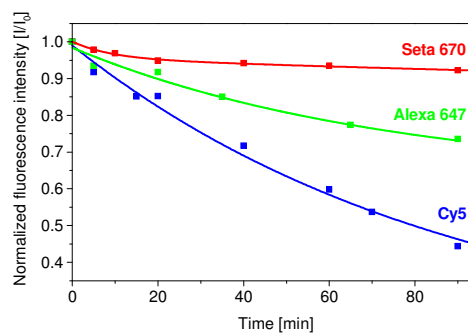
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Absorption and emission spectrum of a Seta 670-azide in phosphate buffer (pH 7.4)



Relative decrease of the long-wavelength absorption band of Seta 670-azide as compared to Cy5 and Alexa Fluor 647 upon irradiation with a Halogen lamp



Relative decrease of the emission of Seta 670-azide as compared to Cy5 and Alexa Fluor 647 upon irradiation with a Halogen lamp