

Product number: K8-1346
Product name: Seta-670-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, long-lifetime 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 triazole.

Applications

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

Advantages

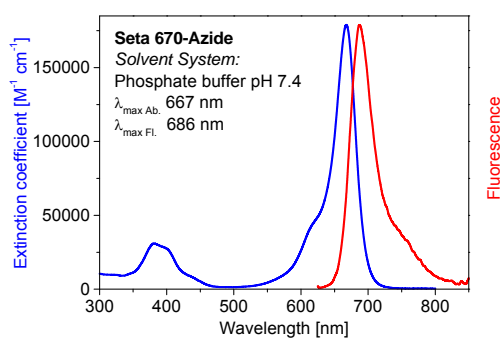
- Perfectly suited for excitation with the 380, 404, 635, 670-nm diode lasers, LEDs, and UV light
- Sensitive; high extinction coefficients and high quantum yields after covalent attachment to biomolecules
- Quantum yield is highly increased after covalent and non-covalent association with proteins
- 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

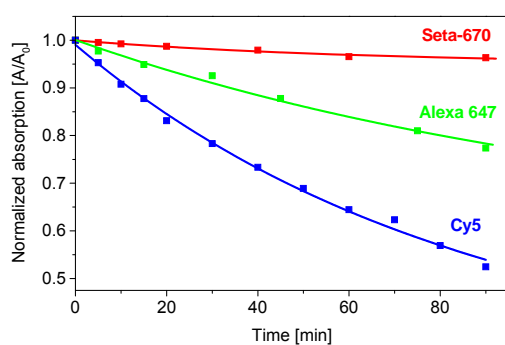
Solvent System: phosphate buffer pH 7.4

Sample	Absorption max. [nm]	Extinction Coefficient [M ⁻¹ cm ⁻¹]	Fluorescence max. [nm]	Quantum Yield ¹ [%]
Free dye	667	180,000	686	7

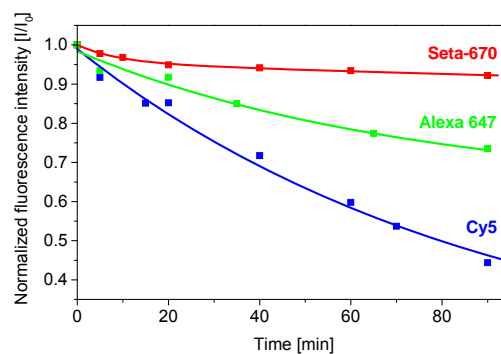
¹ Excitation at 635 nm



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