

Product number: K8-1300
Product name: Square-670-di-carboxy

General Data

Molecular Mass: 934.13
Solubility: Water, Alcohol, DMF, DMSO
Insoluble: Acetone, Chloroform, Toluene
Storage: Store in absence of light, desiccate and refrigerate

Description

Fluorescent probe

Advantages

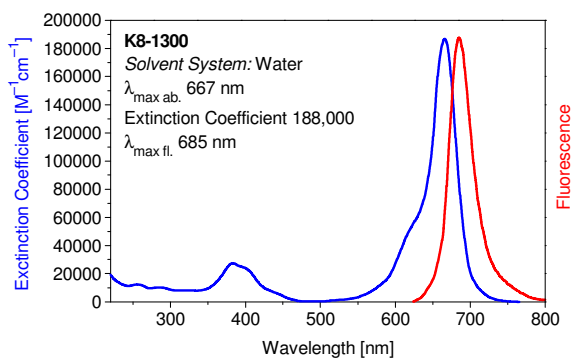
- Perfectly suited for excitation with the 670-nm diode laser, 404-nm laser and UV light
- Sensitive; high extinction coefficients and high quantum yields up to 30% in presence of proteins
- Good aqueous solubility
- High photostability compared to Fluorescein or Cy5™
- Low molecular weight

Spectral Data

Solvent system: phosphate buffer, pH 7.4

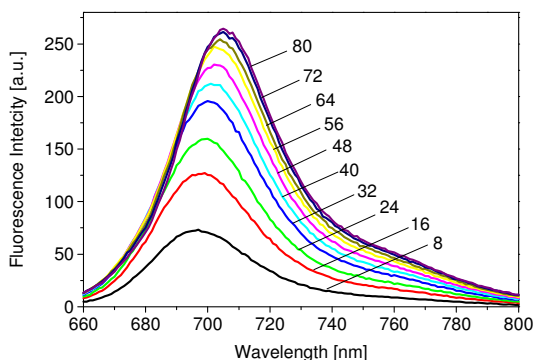
Concentration of BSA	Absorption max. [nm]	Extinction Coefficient [$M^{-1}\cdot cm^{-1}$]	Fluorescence* max. [nm]	Quantum yield [%]	Fluorescence Lifetime [ns]
0	665	188,000	685	7	0.46
6 mg/ml	695		698	28	3.2

* Excitation at 620 nm

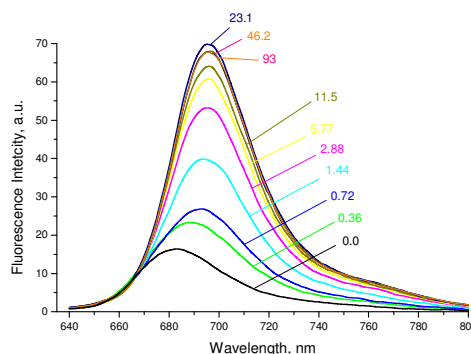


Absorption and emission spectrum of **K8-1300** in water

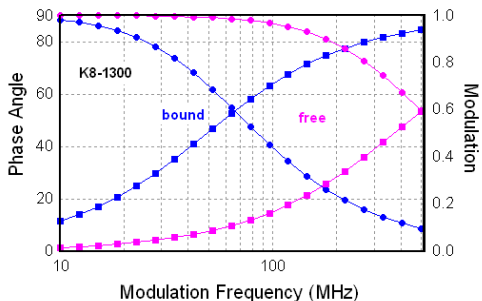
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BSA (1.03×10^{-4} M) titrated with **K8-1300**
 (from 8 to 80×10^{-7} M), excitation at 610 nm

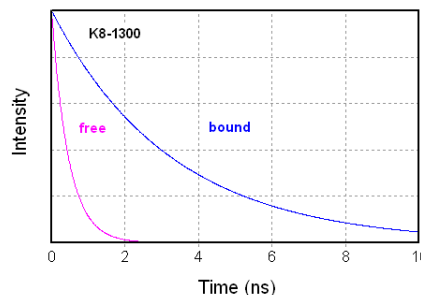


K8-1300 (4.4×10^{-7} M) titrated with BSA
 (from 0 to 93×10^{-6} M), excitation at 600 nm



Comparison of the frequency responses of **K8-1300** before and after binding to protein.

($\tau_{\text{free}} = 460$ ps; $\tau_{\text{bound}} = 3.26$ ns)



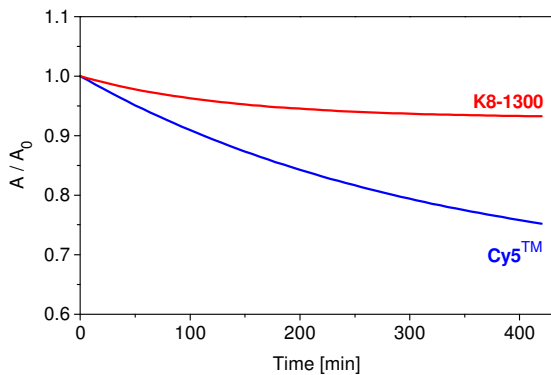
Comparison of the intensity decays of **K8-1300** before and after binding to protein.

($\tau_{\text{free}} = 460$ ps; $\tau_{\text{bound}} = 3.26$ ns)

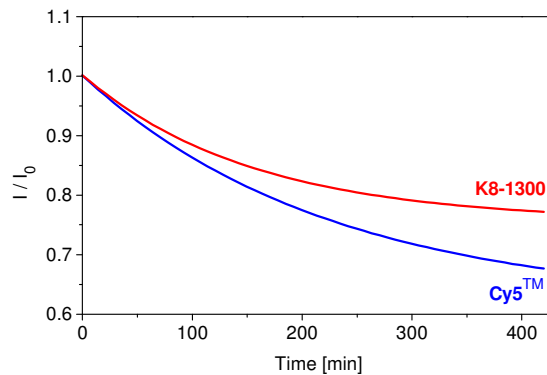
Photostability

upon exposure to light from a Xenon lamp (200 W)

Solvent System: phosphate buffer pH 7.4



Decrease of absorption maximum of **K8-1300** as compared to **Cy5** upon exposure to light



Relative decrease in fluorescence intensity of **K8-1300** as compared to **Cy5** upon exposure to light