

## General Data

- Molecular Mass:** 390.27
- Solubility:** Water, Alcohol, DMF, DMSO
- Insoluble:** Toluene, Hexane
- Storage:** Store in absence of light, desiccated and refrigerate

## Description

- Positively charged, water-soluble label containing one amino group with extremely large Stokes shift

## Applications

- Covalent labeling of proteins, DNA and oligonucleotides
- Resonance Energy Transfer (RET)
- Flow Cytometry
- Immunofluorescence
- Gene Expression
- Homogeneous Assays
- Assessment of protein structure

## Advantages

- Perfectly suited for excitation with 370-nm, 380-nm and 405-nm diode lasers
- Extremely large Stokes' shift** of over 170 nm
- Low molecular weight — **Seta** dyes do not add substantial mass to the conjugates
- Soluble in aqueous buffers
- Ideal for non-radioactive labeling of proteins, DNA probes and oligonucleotides

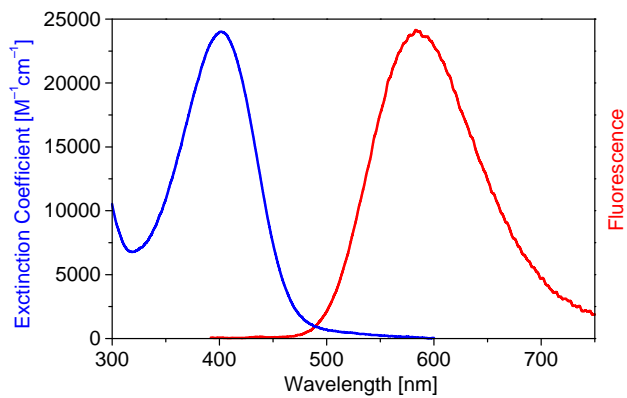
## Spectral Data

**Solvent System:** phosphate buffer (pH 7.4)

Sample	Absorption max. [nm]	Extinction Coefficient [ $M^{-1}cm^{-1}$ ]	Fluorescence max. [nm]	Quantum Yield [%]
Free dye	402	24,000	585	22 <sup>1</sup>

<sup>1</sup> Quinine in 0.1 M H<sub>2</sub>SO (QY = 54.6% [1]) was used as the reference.  $\lambda_{EX}$  = 355 nm.

[1] A.M.Brouwer (2011) Standards for photoluminescence quantum yield measurements in solution (IUPAC Technical Report). Pure Appl. Chem., Vol. 83, No. 12, pp. 2213–2228.



Absorption and emission spectra of **K4-216**  
in phosphate buffer (pH 7.4)