SETA BioMedicals
Fluorescent Tools for BioMedical Applications
http://www.setabiomedicals.com
e-mail: info@setabiomedicals.com

Product number: K4-225
Product name: Seta-385-NHS

General Data

Molecular Mass: 528.4

Solubility: Water, alcohol, DMF, DMSO

Insoluble: Acetone, toluene

Storage: Store in absence of light, desiccated and refrigerate

Description

- Hydrophilic, positively charged, amine-reactive label containing one NHS-ester group.

Applications

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

Advantages

- Perfectly suited for excitation with the 330 and 380-nm diode lasers and UV light
- **Extremely large Stokes' shift** of over 120 nm
- High extinction coefficients and high quantum yields of 78%
- 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
- 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 [$M^{-1}cm^{-1}$]	Fluorescence max. [nm]	Q.Y.[1] [%]
Free dye	—	384	25,000	508	78
IgG conjugate 1	2.0	387		505	44
IgG conjugate 2	4.0	387		505	35
IgG conjugate 3	6.0	387		505	29

[1] Excitation at 380 nm

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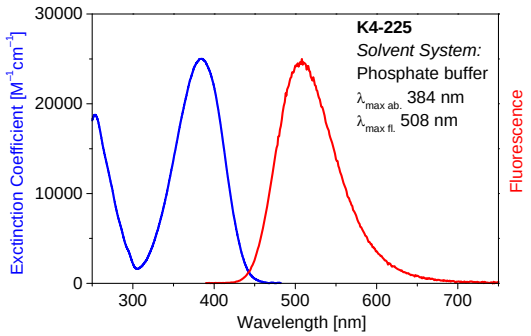
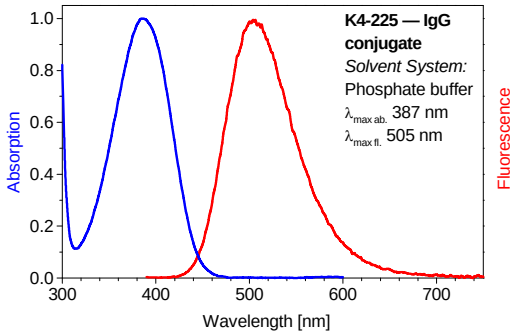
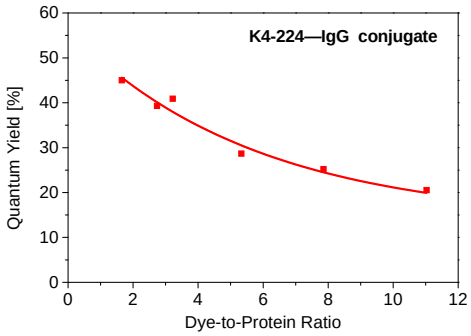


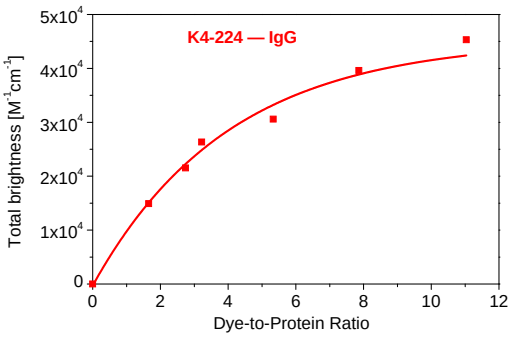
Absorption and emission spectra
of **K4-225** in phosphate buffer (pH 7.4)



Absorption and emission spectra
of **K4-225 — IgG conjugate** in phosphate buffer
(pH 7.4, Dye-to-protein ratio 1.6)



Quantum Yield *vs* Dye-to-protein Ratio
of **K4-225 — IgG conjugates**



Total brightness (QY × ε × D/P) *vs.* dye-to-protein ratio (D/P)
of **K4-225 — IgG conjugates** in phosphate buffer (pH 7.4)