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

Product number: K6-5052
Product name: Seta-405-NHS

General Data

Molecular Mass: 339.20

Solubility: Water, alcohol, DMF, DMSO

Insoluble: Acetone, toluene

Storage: Store in absence of light, desiccated and refrigerate

Description

- Hydrophilic, 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 380 and 405-nm diode lasers and UV light
- High quantum yields of up to 70%
- Low non-specific binding
- 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	—	401	30,000	452	70
BSA conjugate	1.8	410		454	25
IgG conjugate 1	1.0	405		453	56
IgG conjugate 2	3.0	404		453	56
IgG conjugate 3	10	404		453	48

[1] Excitation at 380 nm

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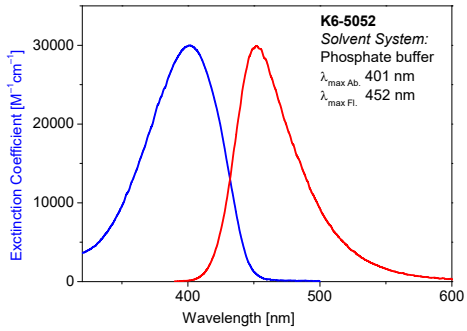
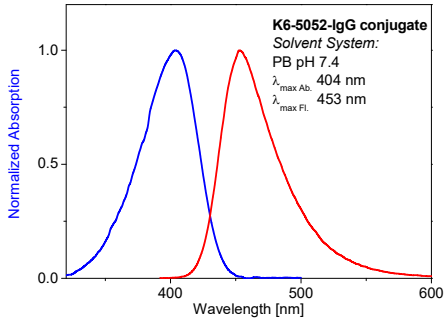
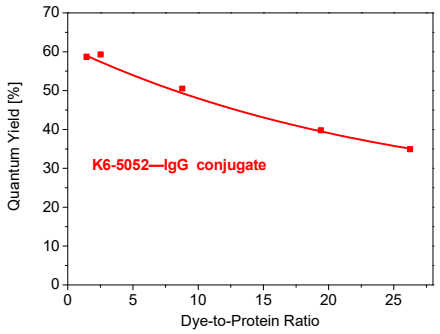


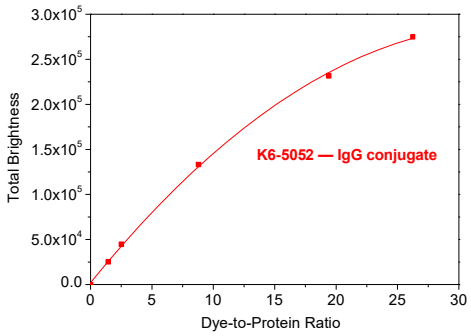
Absorption and emission spectrum of **K6-5052** in phosphate buffer, pH 7.4



Absorption and emission spectrum of **K6-5052-IgG** conjugate in phosphate buffer, pH 7.4 (D/P = 3)



Quantum Yield *vs* Dye-to-Protein ratio (D/P) of **K6-5052 — IgG conjugates**



Total brightness (QY × ε × D/P) *vs.* Dye-to-Protein ratio (D/P) of **K6-5052 — IgG conjugates** in phosphate buffer (pH 7.4)