

Product number: K8-7055

Product name: Seta-780-NHS

General Data

- Molecular Mass:** 1231.61
988.16 (protonated form)
- Solubility:** Water, Alcohol, DMF, DMSO
- Insoluble:** Acetone, Chloroform, Toluene
- Storage:** Store in absence of light, desiccate and refrigerate

Description

- **Seta-780-NHS (K8-7055)** is a hydrophilic, amine-reactive label containing one NHS-ester group with almost identical absorption and emission as **ICG** and can therefore be used with these filter sets.

Applications

- Covalent labeling of proteins, amino-modified DNA and amino-modified oligonucleotides
- Fluorescence intensity and fluorescence polarization-based applications
- Resonance Energy Transfer (RET)
- Flow Cytometry
- Immunofluorescence
- Gene Expression
- Homogeneous Assays
- Microarrays

Advantages

- Perfectly suited for excitation with the 700 nm, 750 nm or 780 nm diode lasers
- Sensitive; high extinction coefficients and the quantum yield in water is as much as twice higher compared to Indocyanine green (ICG)
- pH-insensitive between pH 3 and pH 10
- Good aqueous solubility; this label does not alter the solubility of bioconjugates
- High photostability
- Low molecular weight — **Seta-780** does not add substantial mass to the conjugates
- Ideal for non-radioactive labeling of proteins, amino-modified oligonucleotides and amino-modified lipids

Spectral Data

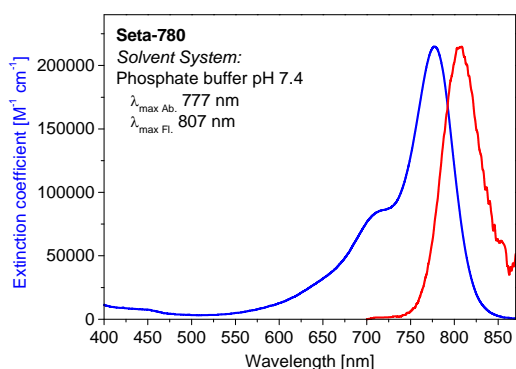
Solvent System: phosphate buffer pH 7.4

Sample	Absorption max. [nm]	Extinction Coefficient [$M^{-1}\cdot cm^{-1}$]	Fluorescence max. [nm]	Quantum Yield ^{1,2} [%]
Free dye	777	215,000	807	1.2

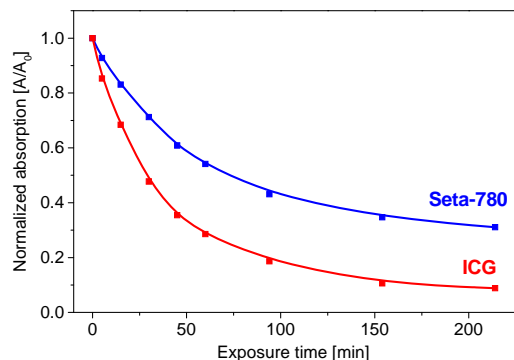
¹ Excitation at 700 nm

² Indocyanine green, ICG in water (QY 0.5% [1]) was used as the reference

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Absorption and emission spectrum of **Seta-780** in phosphate buffer (pH 7.4)



Decrease of the long-wavelength absorption of **Seta-780** compared to **ICG** upon irradiation with a NIR lamp 250W

Reference

- [1] Philip R., Penzkofer A., Biumler W., Szeimies R.M., Abels C., J. Photochem.Photobiol., A, Chem., 96 (1996) 137.