

Product number: K8-1613

Product name: Square-635-Maleimide

Not licensed for use in time-resolved FRET application!

General Data

- Molecular Mass:** 1051.36
792.88 (protonated form)
- Solubility:** water, alcohol, DMF, DMSO
- Insoluble:** acetone, chloroform, toluene
- Storage:** Store in absence of light, desiccated and refrigerate

Description

- Thiol-reactive, pH-sensitive fluorescent label containing one reactive maleimide group.

Applications

- Covalent labeling of thiol-modified peptides, oligonucleotides, and proteins.
- Fluorescence Lifetime Label — this label exhibits a distinct lifetime change upon binding to a biomolecule.

Advantages

- Perfectly suited for excitation with the 594-nm and 635-nm diode laser.
- Sensitive; high extinction coefficient and high quantum yield after covalent attachment to proteins.
- Low non-specific binding.
- pH-sensitive between pH 9 and pH 12, and pH-insensitive between pH 3 and pH 9.
- Good aqueous solubility; this label does not alter the solubility of the protein conjugate.
- High photostability; e.g. compared to **CypHer 5™**.
- Low molecular weight — **Square** dyes do not add substantial mass to the conjugates.
- Ideal for non-radioactive labeling of thiol-modified peptides, oligonucleotides, and proteins.

Spectral Data

Solvent system: phosphate buffer, pH 7.4

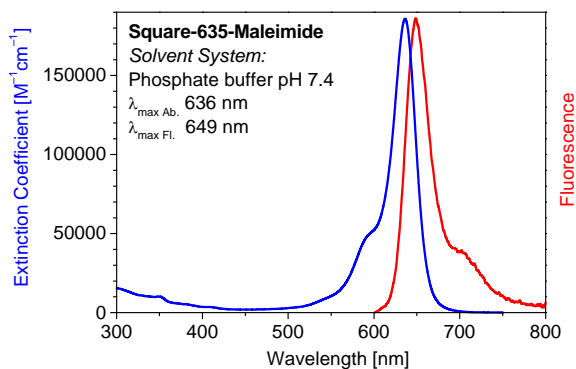
Protonated form (phosphate buffer, pH < 8.0)				Deprotonated form (pH > 12.0)	pK _a	pH-Range
Absorption max. [nm]	Extinction Coefficient [M ⁻¹ cm ⁻¹]	Fluorescence max. [nm]	Quantum Yield ¹ [%]	Absorption max. [nm]		
636	180,000	649	8	520	10.7	9.6–11.7

¹ Excitation at 620 nm

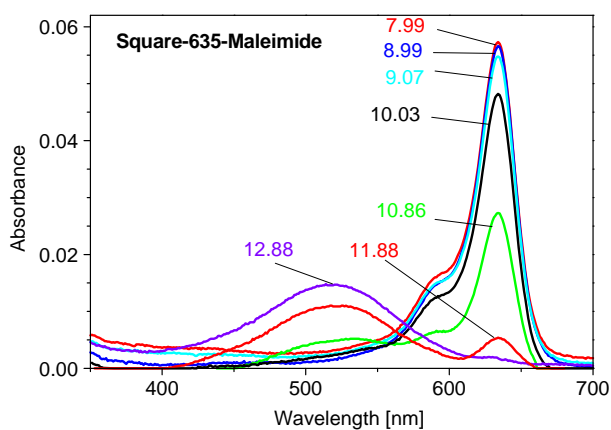
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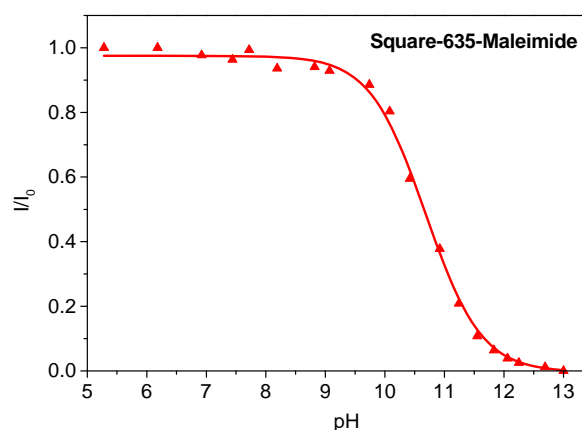
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Absorption and fluorescence spectra of **Square-635-Maleimide** in phosphate buffer (pH 7.4)



Absorption spectrum of **Square-635-Maleimide** vs. pH



Normalized fluorescence intensity of **Square-635-Maleimide** vs. pH (pKa 10.7)