

abberior STAR 580, maleimide, 1 mg

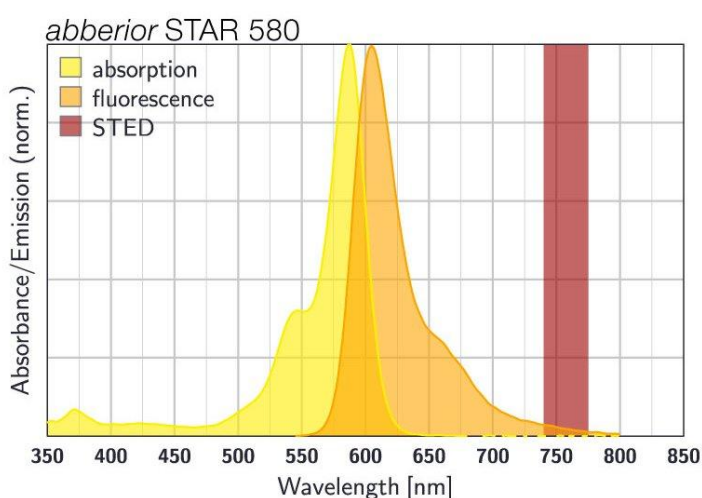
Item number

ST580-0003-1MG

Description

abberior STAR 580 was developed for STED and confocal microscopy in the orange spectral region. Characteristic features of this dye are exceptional photostability and high fluorescent quantum yield of 90%. abberior STAR 580 can be very effectively excited with excitation wavelength between 550 - 600 nm. For STED microscopy, abberior STAR 580 can be used most efficiently with a STED laser wavelength between 750 - 800 nm. Our abberior STAR 580 can substitute dyes like Cy3, ATTO® 590 or Alexa Fluor® 568. abberior STAR 580 is the ideal partner for abberior STAR RED or abberior STAR 635P to obtain optimal 2 color STED results. Together with our abberior STAR ORANGE you get the ideal pair for FLIM experiments. Best results are obtained with freshly prepared samples.

The maleimide is used for conjugating a fluorescent dye to a thiol group (cysteine residues) on a protein or thio-modified molecules. The resulting abberior conjugate will show a bright fluorescence and photostability. abberior offers labeling protocols for labeling of antibodies via thiol-reactive groups.



Properties

Absorption	λ_{ex} [nm]	587
Extinction Coefficient	ϵ_{max} [M ⁻¹ cm ⁻¹]	85000
Emission	λ_{em} [nm]	607
Quantum Efficiency	η_{fl} [%]	90
STED min.	$\lambda_{\text{STED min}}$ [nm]	750
STED max.	$\lambda_{\text{STED max}}$ [nm]	800
Fluorescence Lifetime	τ_{fl} [ns]	3.5
Correction Factor 260	CF ₂₆₀	0.17
Correction Factor 280	CF ₂₈₀	0.17
Charge	Δq	1
Molecular Weight	MW [g/mol]	825.9
Derivative/Conjugate		Maleimide

Photophysical properties were measured for carboxylic acid in PBS pH 7.4.

Storage

The product contains a vial of lyophilized powder and is shipped at room temperature. Upon arrival, please store the product at -20 °C. For proper long-term storage up to one year, protect the product from light and moisture.

- Our abberior maleimides are freeze-dried and should be dissolved only shortly before the coupling reaction. Recommended solvents include amine- and water-free DMF, DMSO, or acetonitrile.