

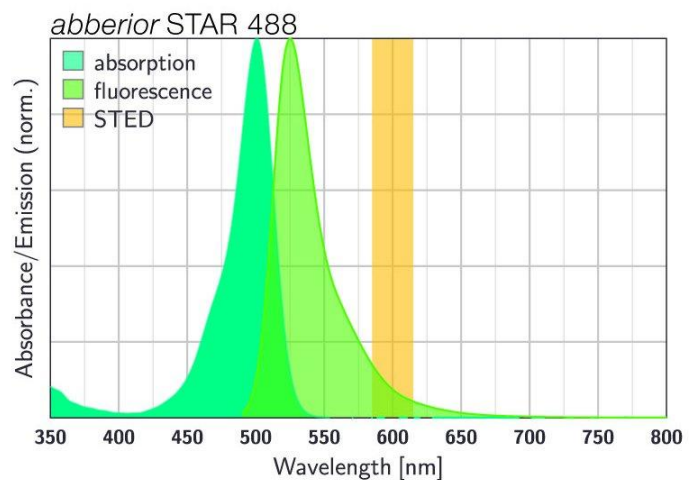
abberior STAR 488, NHS ester, 1 mg

Item number

ST488-0002-1MG

Description

abberior STAR 488 was developed for STED and confocal microscopy in the green spectral region. It can be very effectively excited with the prominent 488 nm laser line. For STED microscopy, this fluorescent dye can be efficiently used with STED laser wavelengths between 590 - 610 nm. Introducing negatively charged groups into its molecular structure making the dye excellent water soluble. Our abberior STAR 488 can substitute dyes like Oregon Green® 488, ATTO® 488 or Alexa Fluor® 488. Together with our abberior STAR 440SXP you can obtain optimal 2 color STED results with a single depletion laser. Best results are obtained with freshly prepared samples.



The NHS ester is a widespread tool for conjugating a fluorescent dye to a protein or antibody. NHS ester can be used to label primary amines of proteins or amine-modified molecules. The resulting abberior conjugate will show a bright fluorescence and photostability. abberior offers protocols for labeling antibodies via amine-reactive groups.

Properties

Absorption	λ_{ex} [nm]	503
Extinction Coefficient	ϵ_{max} [M ⁻¹ cm ⁻¹]	65000
Emission	λ_{em} [nm]	524
Quantum Efficiency	η_{fl} [%]	89
STED min.	$\lambda_{\text{STED min}}$ [nm]	590
STED max.	$\lambda_{\text{STED max}}$ [nm]	610
Fluorescence Lifetime	τ_{fl} [ns]	3.9
Correction Factor 260	CF ₂₆₀	0.28
Correction Factor 280	CF ₂₈₀	0.14
Charge	Δq	-2
Molecular Weight	MW [g/mol]	795.6
Derivative/Conjugate		NHS ester

Photophysical properties were measured for carboxylic acid in PBS pH 7.4. Fluorescence Lifetime was measured in MeOH + 0.05% TFA.

Storage

The product contains a vial of dried, solid substance and is shipped at room temperature. Upon arrival, the product can be stored at -20 °C to -80 °C for long-term storage of up to one year. The conjugate should be protected from direct light exposure and repeated freeze-thaw cycles should be avoided.

- Depending on solvent quality the shelf-life of the NHS solution might be significantly reduced compared to the NHS in its solid form – even if stored at -20 °C.