

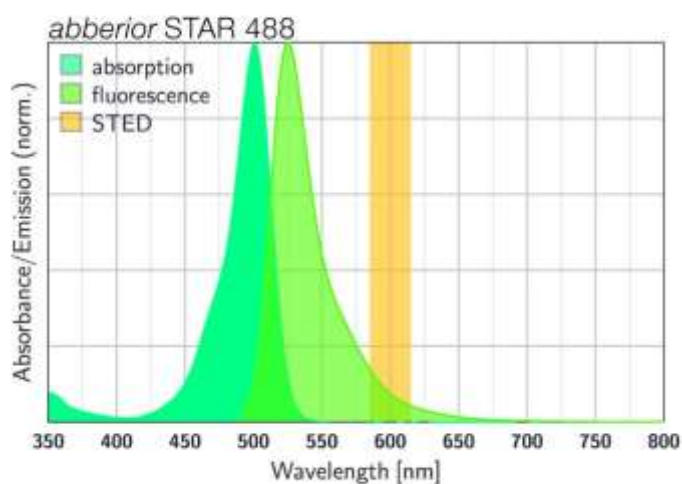
abberior STAR 488, membrane, 5 nmol

Item number

ST488-0206-5NMOL

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.



Our abberior STAR 488 membrane probes can be readily used to specifically label the outer plasma membrane of living cells or can be used for in vitro studies. All our bright and photostable abberior STAR membrane probes are modified by cholesterol as a functional group. Since the dye is not incorporated into the membrane, our unique abberior membrane probes do not change the composition of the plasma membrane by foreign substances. The natural behavior of the membrane and fluidity will maintain. This product contains 1 vial of abberior STAR 488 membrane as a lyophilized powder, a stock solution of 10 μ M in DMF or DMSO is recommended. Depending on cell type, or tissue a working solution of 10 to 50 nM in aqueous media is advised, which is sufficient for up to 1000 cell stainings.

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]	3133.6
Derivative/Conjugate	Membrane (Cholesterol)	

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

Storage

Our abberior STAR membrane probes are freeze-dried and shipped at room temperature. Upon arrival, the product can be stored for up to one year at -20 °C. Proximately before the staining procedure dissolve the probe in DMF or DMSO. Once dissolved the stock solutions should be kept at -20 °C, protected from light and moisture.

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