

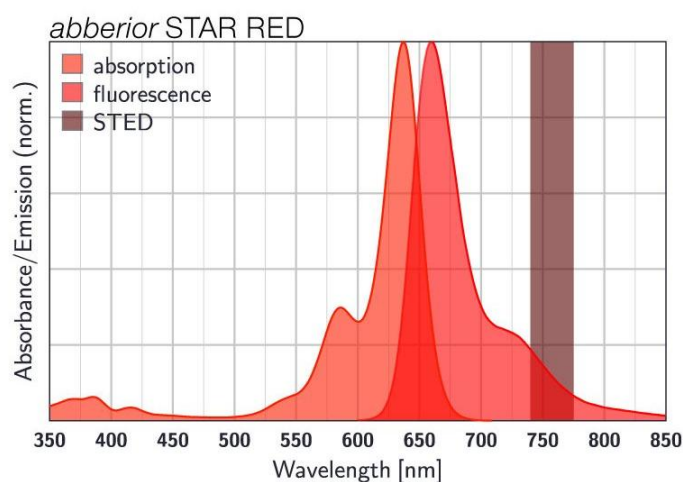
abberior STAR RED, membrane, 5 nmol

Item number

STRED-0206-5NMOL

Description

abberior STAR RED is a well-known red dye, named also KK114 in literature. It was developed for STED and confocal imaging in the red spectral region. It shows an exceptional brightness and low background, delivering stunning STED images. abberior STAR RED can be excited with lasers at wavelength between 630 - 650 nm. For STED, a depletion wavelength around 750 - 800 nm is recommended. abberior STAR RED can substitute dyes like ATTO® 647N, Alexa Fluor® 647, or Cy5®. Our abberior STAR RED is the ideal partner for abberior STAR ORANGE or abberior STAR 580 to obtain optimal 2 color STED results. Best results are obtained with freshly prepared samples.



Our abberior STAR ORANGE 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 ORANGE 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]	638
Extinction Coefficient	ϵ_{max} [M ⁻¹ cm ⁻¹]	120000
Emission	λ_{em} [nm]	655
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]	3.4
Correction Factor 260	CF ₂₆₀	0.16
Correction Factor 280	CF ₂₈₀	0.32
Charge	Δq	-1
Molecular Weight	MW [g/mol]	3381.1
Derivative/Conjugate	Membrane (Cholesterol)	

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

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.

- 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.