

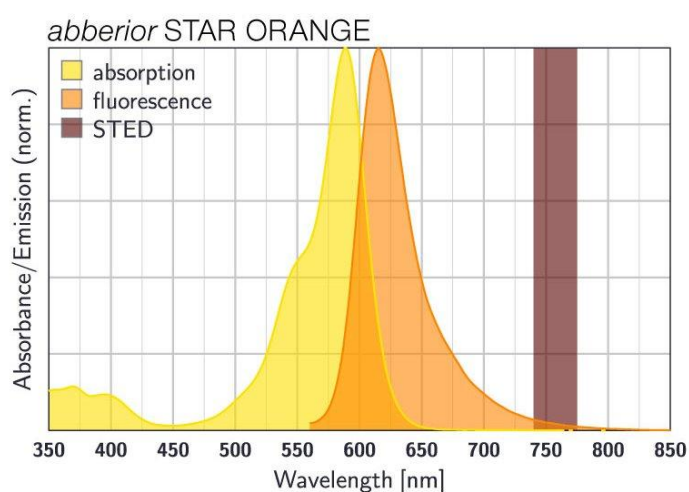
abberior STAR ORANGE, Protein Labeling Kit, 1 Kit

Item number

STORANGE-0050-1KIT

Description

abberior STAR ORANGE is a novel fluorescent dye developed for STED and confocal microscopy in the orange spectral region. Introducing negatively charged groups into its molecular structure making the dye excellently water soluble and enables background-free imaging. Thus, abberior STAR ORANGE is highly photostable and a bright orange fluorescent dye, which can be effectively excited with excitation light between 550 - 610 nm. For STED microscopy, this dye can be most efficiently used with a STED laser wavelength between 750 - 800 nm. Our abberior STAR ORANGE can substitute dyes like ATTO® 594 or Alexa Fluor® 594. Together with our abberior STAR RED you can obtain stunning 2 color STED results. In combination with our abberior STAR 580 you get the ideal pair for FLIM experiments. Best results are obtained with freshly prepared samples.



Introducing our advanced protein labeling kit, ideal for seamlessly labeling various proteins including polyclonal and monoclonal IgG antibodies, Fab fragments, nanobodies, and more, with high-quality abberior dyes. Optimized for proteins over 4 kDa, this kit contains all the necessary components for a quick and straightforward labeling process. The included protocol ensures protein conjugates with exceptional brightness and photostability. The procedure has been thoroughly tested with our abberior dyes, which react with free amines on the protein to form stable amide bonds under mild conditions, providing consistent results. Note that this kit is not suitable for IgM proteins. While proteins smaller than 4 kDa can be labeled, purification using the included ultrafiltration system will need to be carried out separately.

Properties

Absorption	λ_{ex} [nm]	589
Extinction Coefficient	ϵ_{max} [M ⁻¹ cm ⁻¹]	95000
Emission	λ_{em} [nm]	616
Quantum Efficiency	η_{fl} [%]	55
STED min.	$\lambda_{\text{STED min}}$ [nm]	750
STED max.	$\lambda_{\text{STED max}}$ [nm]	800
Fluorescence Lifetime	τ_{fl} [ns]	4.5
Correction Factor 260	CF ₂₆₀	0.55
Correction Factor 280	CF ₂₈₀	0.56
Charge	Δq	-3
Derivative/Conjugate	Protein Labeling Kit	

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

Storage

The product is shipped at room temperature. After arrival, the product can be stored for up to one year at 4 °C. The product should be protected from direct light exposure.