

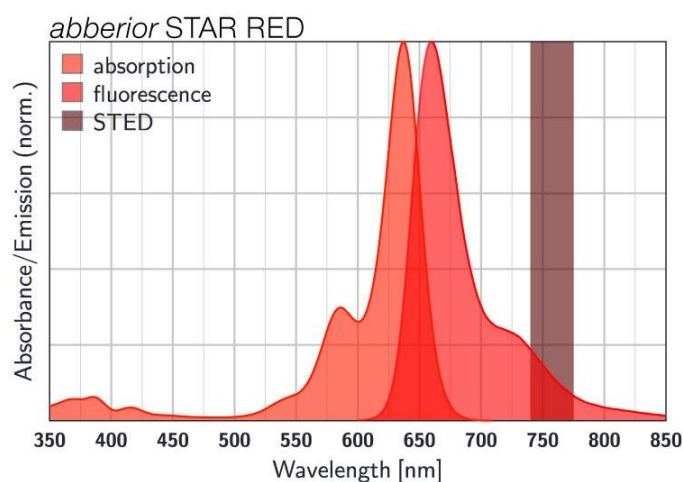
abberior STAR RED, Protein Labeling Kit, 1 Kit

Item number

STRED-0050-1KIT

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.



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]	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
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.