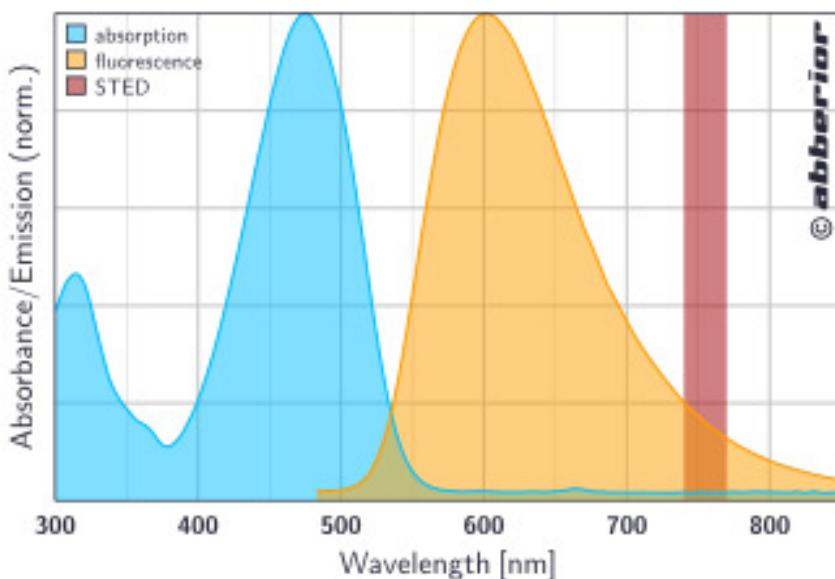


Product Information

95348 Abberior® STAR 470SX, NHS ester



Absorption & Fluorescence Spectrum



Key Features

- Designed for STED microscopy@ ~750 nm
- Long Stokes' shift (>130 nm) for 2-color applications
- Tested in the Leica TCS STED Ti:Sa 2-color system

Description

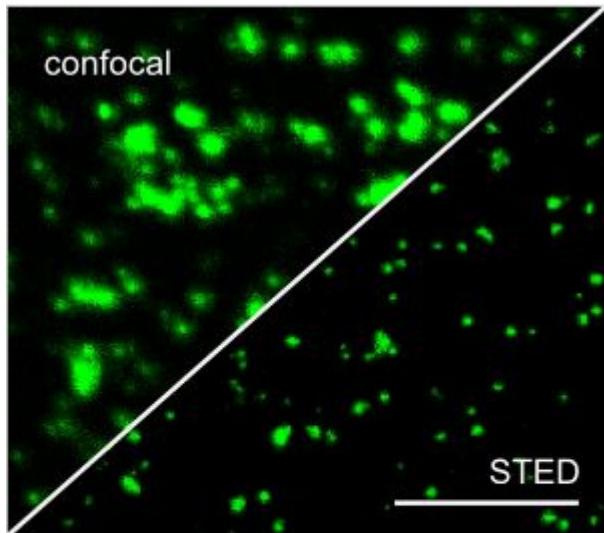
Abberior STAR 470SX is the latest development of long-Stokes-Shift dyes for STED microscopy. The dye can be excited from 450 to 480nm. It can substitute dyes like Chromeo® 494. For STED, a depletion wavelength ~750 nm is recommended. It is therefore well suited for **2-color STED imaging** as implemented in the Leica TCS STED Ti:Sa microscope.

Chemical Data : Abberior® STAR 470SX

Molecular weight:	595.57 g/mol (NHS ester)
Solubility:	water, acetonitrile, MeOH, DMSO, DMF
Polarity:	medium hydrophilic
Charge:	0 (when conjugated)
Purity:	> 90 %

Photophysical Data : Abberior® STAR 470SX

Absorption Maximum, λ_{\max} :	475 nm (MeOH), 477 nm (PBS, pH 7.4)
Extinction Coefficient, $\epsilon(\lambda_{\max})$:	30,400 M ⁻¹ cm ⁻¹ (MeOH), 22,700 M ⁻¹ cm ⁻¹ (PBS, pH 7.4)
Correction Factor, $CF_{260} = \epsilon_{260}/\epsilon_{\max}$:	0.69
Correction Factor, $CF_{280} = \epsilon_{280}/\epsilon_{\max}$:	0.47
Fluorescence Maximum, λ_{fl} :	609 nm (MeOH), 627 nm (PBS, pH 7.4)
Recommended STED Wavelength, λ_{STED} :	740 – 770 nm
Fluorescence Quantum Yield, η :	0.80 (EtOH),
Fluorescence Lifetime, τ :	3.9 (EtOH)



*Synaptophysin on Endosomes stained with
Abberior STAR 470SX and imaged with the Leica
2color Ti:Sa STED system (Courtesy of Prof. Silvio
Rizzoli, European Neuroscience Institute ,
Göttingen)*

Applications

Abberior STAR 470SX is the dye of choice for long Stokes STED applications in the orange fluorescent regime. The dye is particularly designed and tested for 2-color STED microscopy in combination with our STAR 635 using a single STED wavelength. The dye is our recommendation for usage in the Leica TCS STED Ti:Sa 2-color system. For more information see our [2-color dye package](#) section

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Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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