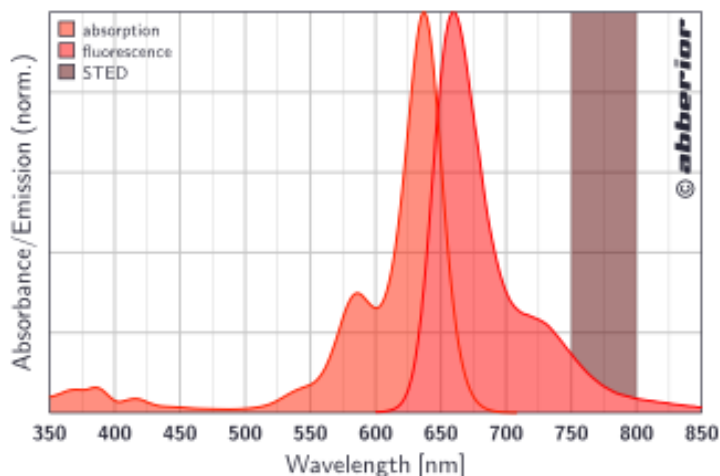


43354 Abberior® STAR RED, NHS**Absorption & Fluorescence Spectrum****Key Features**

- Unmatched, background free STED imaging contrast
- Verified in Abberior Instruments and Leica STED microscopes

Description

Abberior **STAR RED** is an already well known dye named also KK114 in literature (a scientific web search shows more than 60 publications, a selection is listed below). Please note the minimal background signal due to negligible unspecific binding. A key feature of the dye is its comparably long lifetime of ~3.5ns. The dye works exceptionally well with the Abberior Instruments STED microscope as well as with the Leica STED microscope.

Abberior STAR RED can substitute ATTO® 647N, AlexaFluor® 647, or Cy5®. It can be excited with diode lasers (635 nm, 650 nm) or with the 647 nm line of a Krypton laser. For STED, a depletion wavelength of 750 nm - 780 nm is recommended. Please see reference [2] for detailed characteristics.

Best results are obtained with freshly prepared samples.



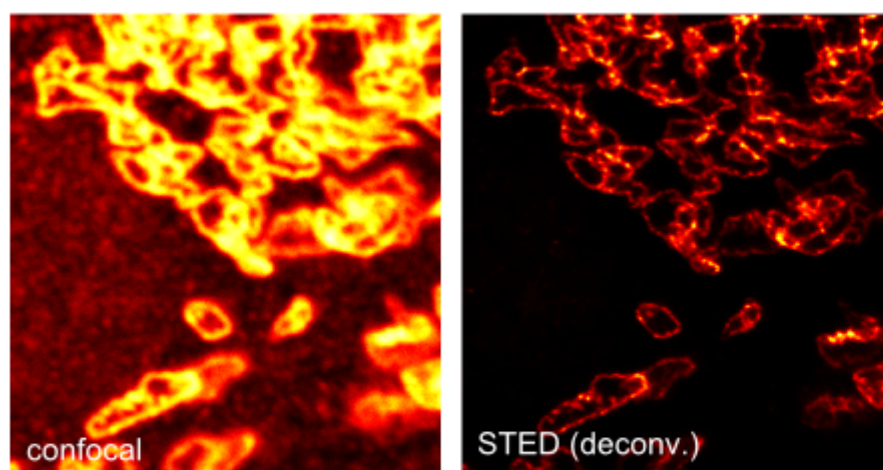
Chemical Data : Abberior® STAR RED NHS

Molecular weight:	1001 g/mol (NHS carbonate)
Solubility:	water, aqueous buffers, DMF, DMSO
Polarity:	polar
Charge:	−1
Purity:	> 95 %

Photophysical Data : Abberior® STAR RED NHS

Absorption Maximum, λ_{max} :	637 nm (water)
Extinction Coefficient, $\epsilon(\lambda_{\text{max}})$:	92,000 M ⁻¹ cm ⁻¹ (water)
Correction Factor, $CF_{260} = \epsilon_{260}/\epsilon_{\text{max}}$:	0.176
Correction Factor, $CF_{280} = \epsilon_{280}/\epsilon_{\text{max}}$:	0.334
Fluorescence Maximum, λ_{fl} :	660 nm (water)
Recommended STED Wavelength, λ_{STED} :	750 – 780 nm
Fluorescence Quantum Yield, η :	0.80 (water)
Fluorescence Lifetime, τ :	3.7 (water)

Applications

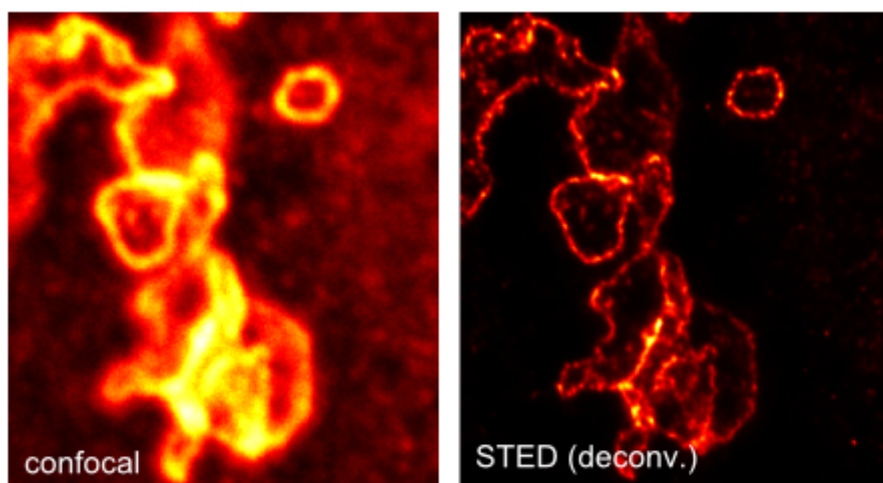


*Comparison of confocal and STED image of Giantin stained with Abberior STAR RED.
The STED image was deconvolved.*

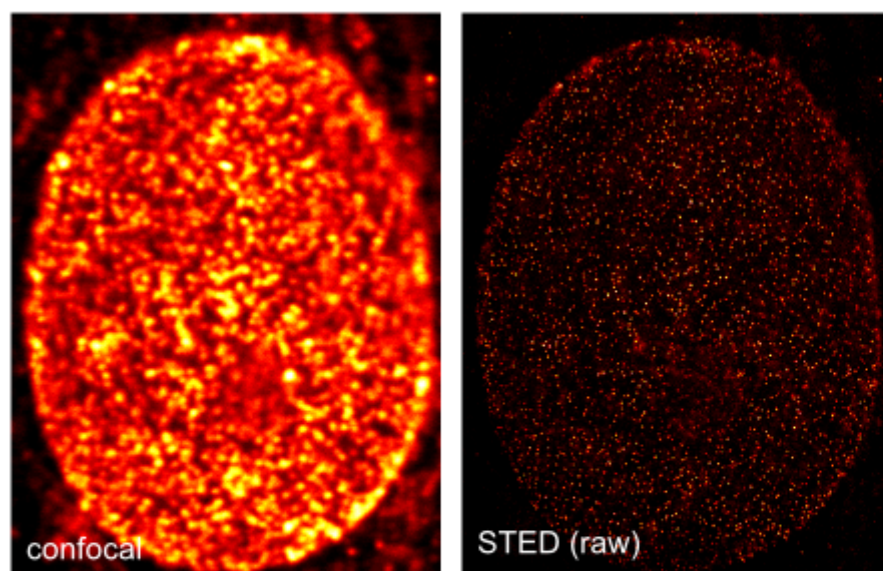
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Comparison of confocal and STED image of Giantin stained with Abberior STAR RED. The STED image was deconvolved.



Comparison of confocal and STED image of nuclear pore complexes (nup153) stained with Abberior STAR RED. Both images represent raw data.

The STED images were measured with the Abberior Instruments STED microscope.

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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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