

abberior CAGE 552 maleimide, 1 mg

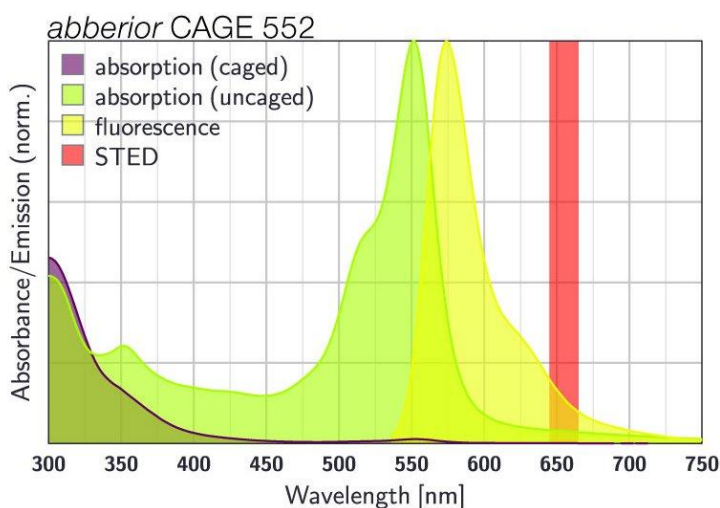
Item number

CA552-0003-1MG

Description

abberior CAGE 552 is a caged dye which is initially nonfluorescent and colorless substance which, upon photolysis at 360 - 440 nm, readily transforms into a red and highly fluorescent dye. It absorbs around 552 nm and emits around 575 nm. abberior CAGE 552 is designed for single-molecule photoswitching microscopy modes such as PALM, STORM and GSDIM and, in its uncaged form, also performs well in STED microscopy. After uncaging it can be effectively used for STED with a depletion wavelength between 650 - 775 nm. High brightness and a very good photostability are key features of the uncaged form of this dye. It is the smallest and lightest caged rhodamine dye available. Further, after photoactivation, abberior CAGE 552 can be tracked to analyze molecular dynamics such as diffusion, flow directions and velocities in tracking experiments (in which the fluorescence signal is observed over time after the initial release of the fluorophore).

The maleimide is used for conjugating a fluorescent dye to a thiol group (cysteine residues) on a protein or thio-modified molecules. The resulting abberior conjugate will show a bright fluorescence and photostability. abberior offers labeling protocols for labeling of antibodies via thiol-reactive groups.



Properties

Absorption	λ_{ex} [nm]	552
Extinction Coefficient	ϵ_{max} [M ⁻¹ cm ⁻¹]	66000
Emission	λ_{em} [nm]	574
Quantum Efficiency	η_{fl} [%]	73
Activation	λ_{act} [nm]	405
STED min.	$\lambda_{\text{STED min}}$ [nm]	650
STED max.	$\lambda_{\text{STED max}}$ [nm]	775
Fluorescence Lifetime	τ_{fl} [ns]	4
Charge	Δq	0
Molecular Weight	MW [g/mol]	576.6
Derivative/Conjugate		Maleimide

*Photophysical properties were measured for carboxylic acid in PBS pH 7.4.
Values refer to the photoactivated state of the dye.*

Storage

The product contains a vial of lyophilized powder and is shipped at room temperature. Upon arrival, please store the product at -20 °C. For proper long-term storage up to one year, protect the product from light and moisture.

- Our abberior maleimides are freeze-dried and should be dissolved only shortly before the coupling reaction. Recommended solvents include amine- and water-free DMF, DMSO, or acetonitrile.