

abberior CAGE 590 maleimide 250 µg

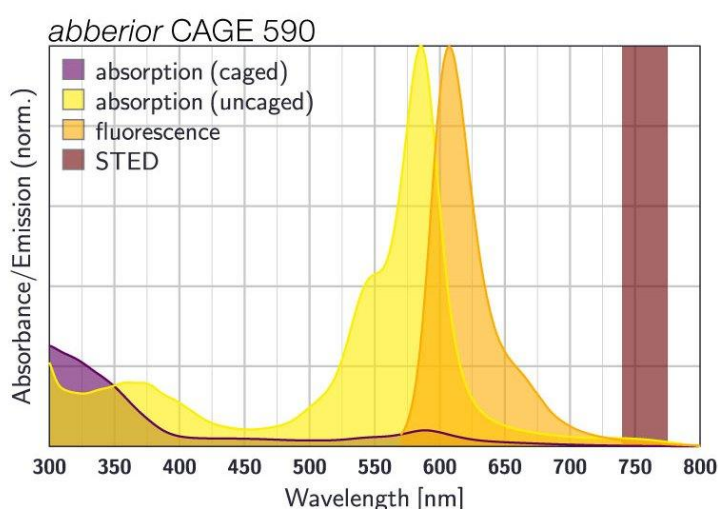
Item number

CA590-0003-250UG

Description

abberior CAGE 590 is a caged dye which is initially colorless and nonfluorescent. When illuminated with UV light it undergoes a rapid uncaging reaction and releases a highly fluorescent orange-red dye. It can most effectively be excited from 560 to 600 nm. abberior CAGE 590 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. Further, after photoactivation, abberior CAGE 590 can be tracked in confocal and epifluorescence microscopy to analyse molecular dynamics such as diffusion, flow directions and velocities, e.g. are 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]	595
Extinction Coefficient	ϵ_{max} [M ⁻¹ cm ⁻¹]	75000
Emission	λ_{em} [nm]	615
Quantum Efficiency	η_{fl} [%]	90
Activation	λ_{act} [nm]	405
STED min.	$\lambda_{\text{STED min}}$ [nm]	750
STED max.	$\lambda_{\text{STED max}}$ [nm]	800
Fluorescence Lifetime	τ_{fl} [ns]	4
Charge	Δq	0
Molecular Weight	MW [g/mol]	740.8
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.