

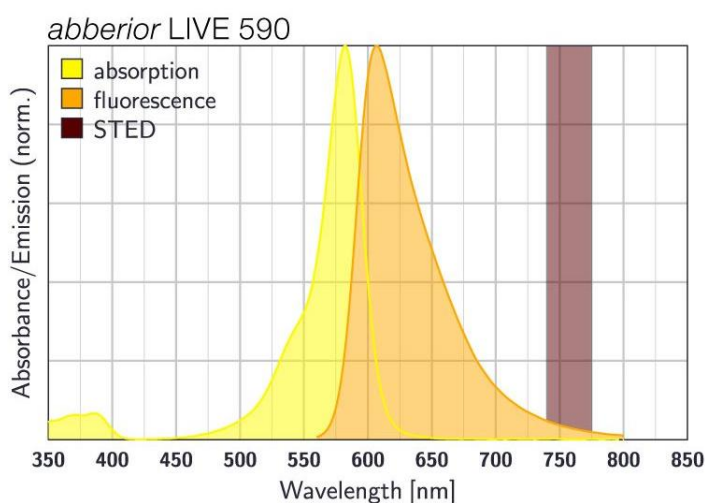
abberior LIVE 590, HaloX, 10 nmol

Item number

LV590-0146-10NMOL

Description

abberior LIVE 590 is a member of a new class of fluorescent dyes for live-cell imaging exclusively offered by abberior. This dye is highly photostable and bright orange fluorescent dye, which can be effectively excited with excitation light between 550 - 610 nm. For STED, a depletion wavelength between 750 - 800 nm is recommended. Due to the unique isomeric structure the favored conformation is stabilized, leading to an enhanced cell permeability of the dye. abberior LIVE 590 can therefore be used in very low nanomolar concentration, reducing background and cytotoxicity effectively, allowing long-term STED and confocal imaging of living cells or tissue.



Our abberior LIVE 590 HaloX[®] probe can reversibly bind the active site of your HaloTag7 fusion protein in living cells and at the cell surface. Due to a high affinity, the probes interact with the HaloTag[®] protein but exchange regularly. This is made possible by preventing the formation of a covalent bond and allowing free exchange of fresh probes. In confocal and STED microscopy, this transient binding ensures that proteins can be detected in the living cell over longer periods of time, as bleaching processes are no longer crucial.

This product is covered by one or more license from Spirochrome AG and, is intended for Research Use Only (RUO). HaloX[®] is registered trademark of Spirochrome AG. HaloTag[®] is registered trademark of Promega Corporation.

Properties

Absorption	λ_{ex} [nm]	585
Extinction Coefficient	ϵ_{max} [M ⁻¹ cm ⁻¹]	105000
Emission	λ_{em} [nm]	609
Quantum Efficiency	η_{fl} [%]	60
STED min.	$\lambda_{\text{STED min}}$ [nm]	750
STED max.	$\lambda_{\text{STED max}}$ [nm]	800
Fluorescence Lifetime	τ_{fl} [ns]	3.5
Charge	Δq	0
Molecular Weight	MW [g/mol]	732.8
Derivative/Conjugate		HaloX

Photophysical properties were measured for carboxylic acid in PBS pH 7.4.

Storage

This product contains 1 vial of abberior LIVE 590 HaloX as lyophilized powder, a stock solution of 1 mM in DMF or DMSO is recommended. Depending on cell type, tissue, and expression rate of the HaloTag7 fusion protein a working solution of 100 nM to 1 μ M is advised. Our abberior LIVE HaloX[®] labels are shipped freeze-dried in amounts of 10 nmol per vial. Upon arrival, the substances can be stored for up to one year at –20 °C. Dissolve the probe in DMF or DMSO shortly before staining. Once dissolved the stock solutions should be kept at –20 °C, protected from light and moisture.

- Note: Depending on solvent quality the shelf-life of the stock solutions might be reduced compared to the substances in their solid form – even if stored at –20 °C.