

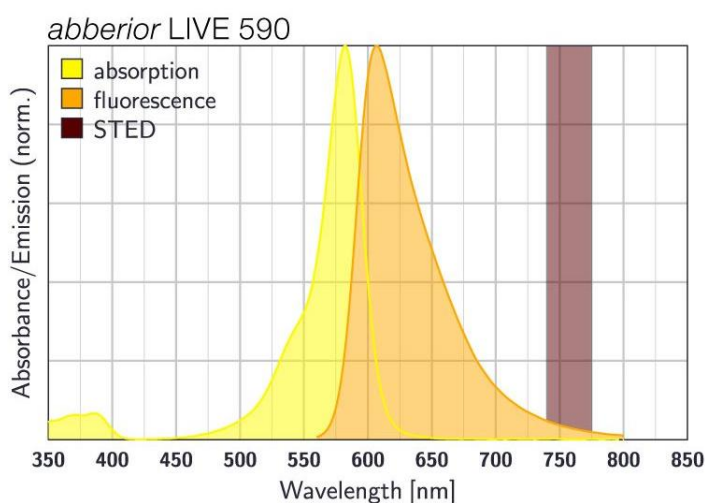
abberior LIVE 590, tubulin, 50 µg

Item number

LV590-0141-50UG

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.



Cell permeable and highly specific fluorescent probe used to label tubulin in living cells. This bright and photostable tubulin probe is based on the microtubule binding drug Larotaxel.

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]	1283.5
Derivative/Conjugate	Tubulin (Larotaxel)	

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



Storage

This product contains 1 vial of abberior LIVE 590 tubulin as lyophilized powder, a stock solution of 1 mM in DMF or DMSO is recommended. Depending on cell type or tissue a working solution of 1 nM to 100 nM is advised. Additionally, a vial containing 1 μ mol verapamil is provided as an imaging reagent. 10 to 20 nmol verapamil in 1 ml staining solution increases the signal intensity significantly. abberior LIVE labels and Verapamil are shipped freeze-dried in amounts of 50 μ g per vial (or 2 nmol in case of evaluation samples) and 1 μ mol, respectively. Upon arrival, the substances can be stored for up to one year at -20°C . Shortly before the staining procedure dissolve the probe and Verapamil in DMF or DMSO. 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 significantly reduced compared to the substances in their solid form – even if stored at -20°C .