

abberior LIVE 510, click, 30 nmol

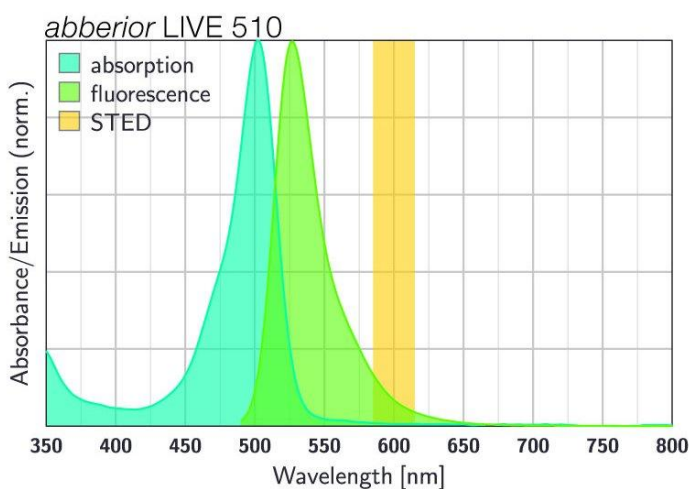
Item number

LV510-0006-30NMOL

Description

abberior LIVE 510 is a dye designed for live-cell STED and confocal microscopy. Its molecular structure renders the dye strongly fluorogenic and facilitates its ability to overcome cell membranes. It can be optimally excited between 485 - 500 nm. For STED, a depletion wavelength between 590 - 610 nm is recommended. Conjugates of abberior LIVE 510 enable live-cell labeling of proteins and other biological structures e.g. actin or tubulin cytoskeleton.

All our bright and photostable abberior LIVE click probes are modified by a tetrazine substrate as a functional group. They react with dienophiles such as trans-cyclooctene (TCO) or bicyclononyne (BCN) derivatives. Along with this bioorthogonal reaction, LIVE click probes are particularly useful in combination with unnatural amino acid (uAA) with a TCO or BCN side chain. The incorporation of uAAs prepares site-selective protein conjugates with a very specific and minimum-sized tag. abberior LIVE click is optimal for super-resolution microscopy within living cells, on cell surfaces, or for in vitro applications.



Properties

Absorption	λ_{ex} [nm]	498
Extinction Coefficient	ϵ_{max} [M ⁻¹ cm ⁻¹]	53000
Emission	λ_{em} [nm]	529
Quantum Efficiency	η_{fl} [%]	94
STED min.	$\lambda_{\text{STED min}}$ [nm]	590
STED max.	$\lambda_{\text{STED max}}$ [nm]	610
Fluorescence Lifetime	τ_{fl} [ns]	3.8
Correction Factor 260	CF ₂₆₀	0.26
Correction Factor 280	CF ₂₈₀	0.18
Charge	Δq	0
Molecular Weight	MW [g/mol]	743.6
Derivative/Conjugate	Click (Tetrazine)	

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

Storage

This product contains 1 vial of abberior LIVE 510 click as a lyophilized powder, a stock solution of 1 mM in DMF or DMSO is recommended. Depending on cell type, tissue, and expression rate of the unnatural amino acid a working solution of 10 nM to 1 μ M is advised. 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.