

abberior LIVE RED, DNA, 50 µg

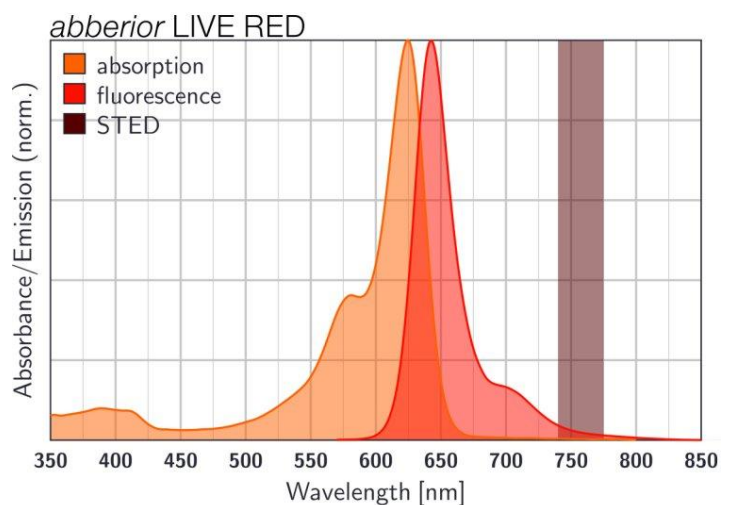
Item number

LVRED-0143-50UG

Description

abberior LIVE RED is a member of a new class of fluorescent dyes for live-cell imaging exclusively offered by abberior. This dye is highly photostable and a bright red fluorescent dye, which can be effectively excited with excitation light between 630 - 650 nm. For STED, a depletion wavelength between 750 - 800 nm is recommended. Dedicated selection of the optimal isomeric structure leads to unrivaled cell permeability of this dye. abberior LIVE RED 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 RED is the ideal partner for abberior LIVE 590, abberior LIVE ORANGE and abberior LIVE 460L to obtain optimal 2 or even 3 color live-cell imaging results.

Cell permeable and photostable fluorescent probe used to label double stranded DNA in fixed and living cells. This highly specific DNA probe is based on Hoechst.



Properties

Absorption	λ_{ex} [nm]	629
Extinction Coefficient	ϵ_{max} [M ⁻¹ cm ⁻¹]	110000
Emission	λ_{em} [nm]	647
Quantum Efficiency	η_{fl} [%]	77
STED min.	$\lambda_{\text{STED min}}$ [nm]	750
STED max.	$\lambda_{\text{STED max}}$ [nm]	800
Fluorescence Lifetime	τ_{fl} [ns]	4.5
Correction Factor 260	CF ₂₆₀	0.16
Correction Factor 280	CF ₂₈₀	0.14
Charge	Δq	0
Molecular Weight	MW [g/mol]	985.5
Derivative/Conjugate	DNA (Hoechst)	

Photophysical properties were measured for carboxylic acid in PBS pH 7.4 + 0,1% SDS.

Storage

This product contains 1 vial of abberior LIVE RED DNA 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.