

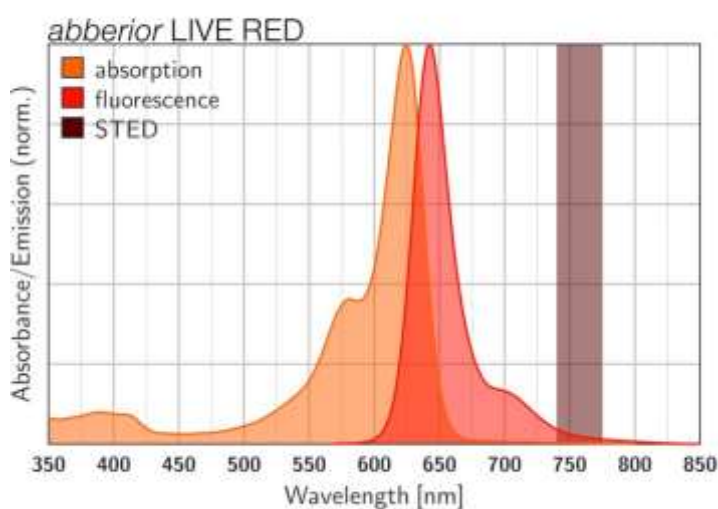
abberior LIVE RED, mito, 300 stainings

Item number

LVRED-0146-300STN

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.



abberior LIVE RED mito is a fluorescent probe that specifically stains the cristae in mitochondria. Combined with STED microscopy, these fine mitochondrial components become visible and can be investigated using this organic fluorophore. Due to the chemical structure of the mito-probe, repeated excitation with light over a long period of time is possible without generating toxic effects. This creates the possibility to observe the movement of mitochondria and their substructures through microscopic imaging. The probe can be combined with other fluorescent probes from our abberior LIVE series.

LIVE RED Mito is supplied as a lyophilized powder and should be reconstituted in 150 μ L DMF or DMSO. The resulting stock solution can be diluted 1:1000 for use. At an assay volume of 500 μ L, the product is sufficient for up to 300 stainings.

Note: Depending on the cell type and assay setup, optimization of the dilution factor may be required.

Properties

Absorption	λ_{ex} [nm]	629
Extinction Coefficient	ϵ_{max} [M ⁻¹ cm ⁻¹]	110000
Emission	λ_{em} [nm]	647
Quantum Efficiency	η_f [%]	77
STED min.	$\lambda_{STED\ min}$ [nm]	750
STED max.	$\lambda_{STED\ max}$ [nm]	800
Fluorescence Lifetime	τ_f [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]	514.6
Derivative/Conjugate	mitochondria	

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 mito as a lyophilized powder, a stock solution of 1 mM in DMF or DMSO is recommended. Depending on cell type or tissue a working solution of 100 nM to 500 nM is advised. Our abberior LIVE mito labels are freeze-dried and shipped at room temperature. Upon arrival, the product can be stored for up to one year at -20 °C. Proximately before the staining procedure dissolve the probe in DMF or DMSO. Once dissolved, the stock solution should be kept at -20 °C, protected from light and moisture.

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