

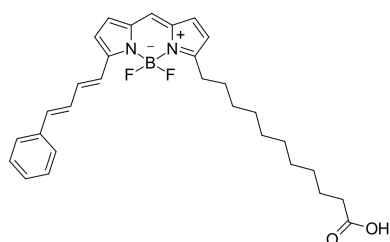
BDP® 581/591 C11, lipid peroxidation probe

<http://www.lumiprobe.com/p/bdp-581-591-c11>

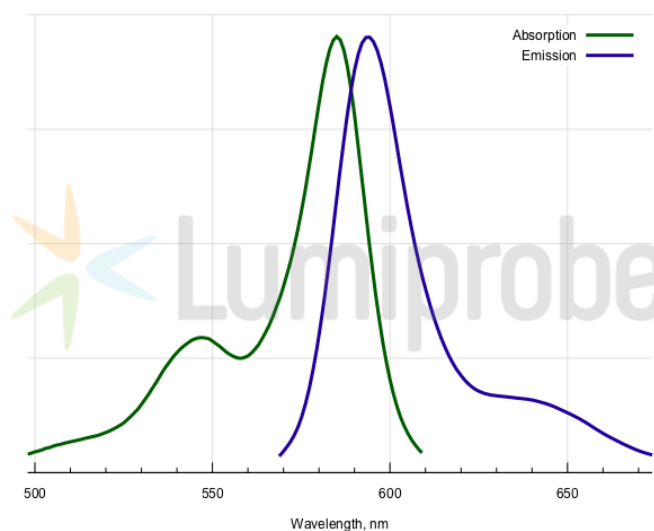
BDP® 581/591 C11 is a lipophilic ratiometric probe based on boron dipyrromethene, designed for monitoring oxidative stress in living cells. Thanks to its fatty acid tail (C11), the probe efficiently incorporates into cellular membranes, where it selectively reacts with lipid hydroperoxides and reactive oxygen species.

Oxidation of the dye's polyene chain shifts its fluorescence maximum from the red region of the spectrum (~594 nm) to the green region (~510 nm), enabling quantitative ratiometric analysis independent of probe concentration, excitation light intensity, and staining efficiency.

BDP® 581/591 C11 is suitable for long-term cell imaging and kinetic studies; it can be used to investigate ferroptosis and cell death, analyze oxidative stress induced by UV radiation, toxins, hypoxia, and other factors, screen for antioxidant compounds, and assess membrane integrity in metabolic studies.



Structure of BDP® 581/591 C11



Absorption and emission spectra of BDP® 581/591

General properties

Appearance:	purple solid
Molecular weight:	504.43
CAS number:	217075-36-0
Molecular formula:	C ₃₀ H ₃₅ BF ₂ N ₂ O ₂
IUPAC name:	11-[2,2-difluoro-12-[(1E,3E)-4-phenylbuta-1,3-dienyl]-3-aza-1-azonia-2-boranuidatricyclo[7.3.0.0.3,7]dodeca-1(12),4,6,8,10-pentaen-4-yl]undecanoic acid
Solubility:	DCM, DMSO, DMF, ethyl acetate
Quality control:	NMR ¹ H and HPLC-MS (95+%)
Storage conditions:	24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.

Spectral properties

Excitation/absorption maximum, nm:	585 (reduced form)
Emission maximum, nm:	594 (reduced form)

BDP® is a trademark of Lumiprobe