

Product Name: MitoPY1

Catalog No.: 4428

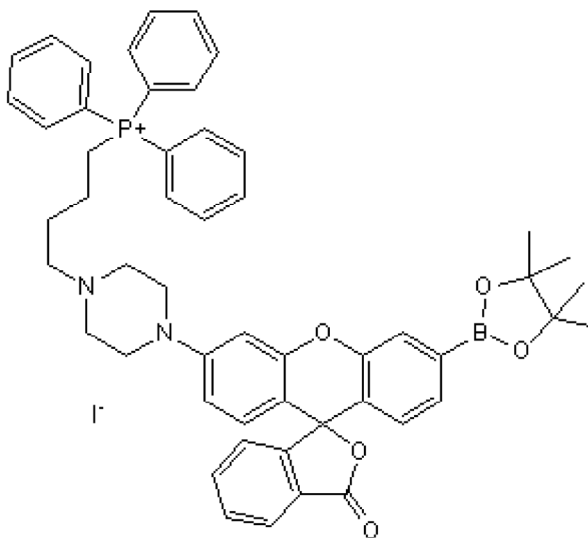
Batch No.: 6

CAS Number: 1041634-69-8

IUPAC Name: [4-[4-[3-Oxo-6'-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)spiro[isobenzofuran-1(3*H*),9'-[9*H*]xanthen]-3'-yl]-1-piperazinyl]butyl]triphenyl-phosphonium iodide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₅₂ H ₅₃ BN ₂ O ₅ P
Batch Molecular Weight:	954.68
Physical Appearance:	Pink solid
Solubility:	DMSO to 100 mM
Storage:	Store at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

¹H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Key information: mitochondria peroxy yellow 1 (MitoPY1) is a fluorescent probe for imaging hydrogen peroxide (H₂O₂) in mitochondria of living cells. Used for: imaging hydrogen peroxide (H₂O₂) in mitochondria of living cells. Can also detect local increases in H₂O₂ in an in vitro model of Parkinson's Disease. Application: confocal microscopy. Properties and Photophysical Data: selective for H₂O₂ over superoxide, nitric oxide and hydroxyl radical. Excitation and emission maxima (λ) are 510 nm and 530 nm, respectively, quantum yield = 0.405.

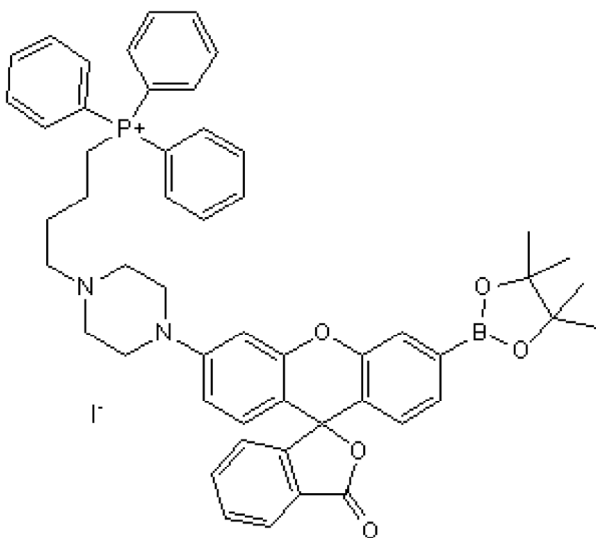
Physical and Chemical Properties:

Batch Molecular Formula: C₅₂H₅₃BN₂O₅P

Batch Molecular Weight: 954.68

Physical Appearance: Pink solid

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 100 mM

This product may be used for research purposes only. It is not licensed for resale and may only be used by the buyer. This product may not be used and is not licensed for clinical assays, where the results of such assays are provided as a diagnostic service. If a diagnostic or therapeutic use is anticipated, then a license must be requested from the University of California. The availability of such diagnostic and therapeutic use license(s) cannot be guaranteed from the University of California.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Licensing Information:

Sold under license from the Regents of the University of California

References:

Guo et al (2013) Two-photon fluorescence imaging of intracellular hydrogen peroxide with chemoselective fluorescent probes. *J.Biomed.Opt.* **18**. PMID: 24084856.

Zhao (2009) Lighting up H₂O₂: the molecule that is a "necessary evil" in the cell. *Angew.Chem.Int.Ed.Engl.* **48** 3022. PMID: 19165849.

Dickinson and Chang (2008) A targetable fluorescent probe for imaging hydrogen peroxide in the mitochondria of living cells. *J.Am.Chem.Soc.* **130** 9638. PMID: 18605728.

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