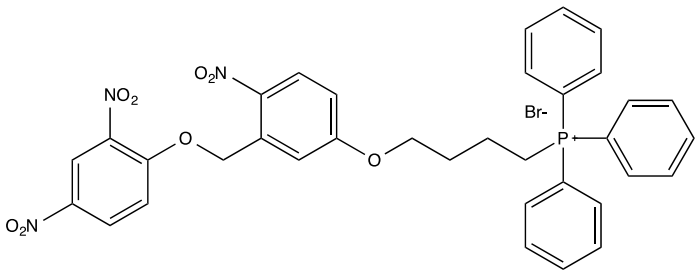
Catalog # 10-1580

Mito-Photo-DNP

(4-(3-((2,4-Dinitrophenoxy)methyl)-4-nitrophenoxy)butyl)triphenylphosphonium bromide

Lot # S103005



A mitochondria-targeted, photo-activated protonophore[1]. This novel tool consists of three structural units, a caged protonophore, a photocleavable linker coupled to a triphenylphosphonium moiety which confers selective uptake by the mitochondria[2]. Cells are treated with Mito-Photo-DNP at 200 nM and irradiated with UV light at 355 nm. It can be employed for selective uncoupling of either individual or a small number of mitochondria within a cell when used with fluorescence imaging[1,3].

1) Chalmers *et al*. (2012), *Selective uncoupling of individual mitochondria within a cell using mitochondria-targeted photoactivated protonophore*; J. Am. Chem. Soc., **134** 758

2) Smith *et al*. (2012), *Mitochondrial pharmacology*; Trends Pharmacol. Sci., **33** 341

3) Glancy *et al*. (2015), *Mitochondrial reticulum for cellular energy distribution in muscle*; Nature, **523** 617

PHYSICAL DATA

Molecular Weight:	732.51
Molecular Formula:	$C_{35}H_{31}BrN_3O_8P$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 60 mg/ml) or Ethanol (up to 30 mg/ml)
Physical Description:	Pale yellow solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 3 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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