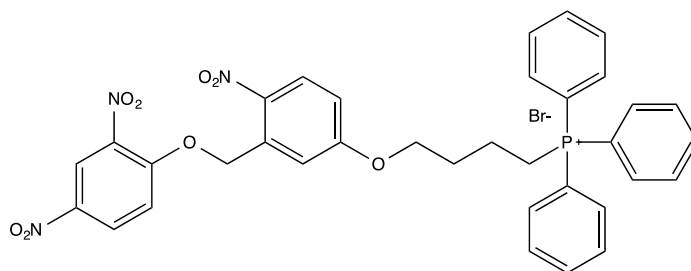


**Catalog # 10-1580**

**Mito-Photo-DNP**

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

Lot # S103005



A mitochondria-targeted, photo-activated protonophore<sup>1</sup>. 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<sup>2</sup>. 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<sup>1,3</sup>.

- 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 <sub>35</sub> H <sub>31</sub> BrN <sub>3</sub> O <sub>8</sub> P
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.

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**