

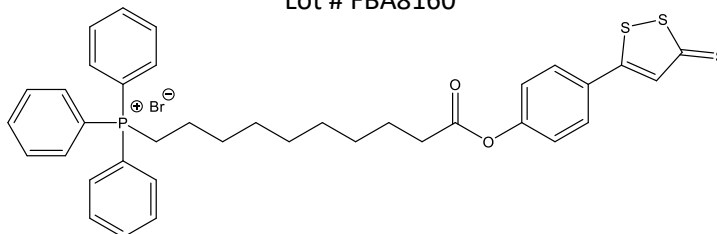
Catalog# 10-3916

AP39

(10-Oxo-10-(4-(3-thioxo-3H-1,2-dithiol-5-yl)phenoxy)decyl)triphenylphosphonium bromide

CAS# 1429173-57-8

Lot # FBA8160



AP39 is a mitochondrially targeted hydrogen sulfide donor. At lower concentrations (30 -100 nM), it acts as an electron donor and stimulator of mitochondrial electron transport and ATP production. AP39 displayed antioxidant and cytoprotective effects in oxidatively stressed endothelial cells.¹ It displayed protective effects in various pathological states including renal injury^{2,3}, Alzheimer's⁴, ischemia⁵, and reperfusion injury⁶. Improves outcomes in subnormothermic organ preservation models.^{7,8}

- 1) Szczesny *et al.* (2014), *AP39, a hydrogen sulfide donor, stimulates cellular bioenergetics, exerts cytoprotective effects and protects against the loss of mitochondrial DNA integrity in oxidatively stressed endothelial cells in vitro*; Nitric Oxide, **41** 120
- 2) Ahmad *et al.* (2016), *AP39, a Mitochondrially Targeted Hydrogen Sulfide Donor, Exerts Protective Effects In Renal Epithelial Cells Subjected to Oxidative Stress in Vitro and in Acute Renal Injury in Vivo*; Shock, **45** 88
- 3) Cao *et al.* (2018), *Renal Protective Effect of Hydrogen Sulfide in Cisplatin-Induced Nephrotoxicity* Antioxid. Redox Signal., **29** 455
- 4) Zhao *et al.* (2016), *AP39, a Mitochondria-Targeted Hydrogen Sulfide Donor, Supports Cellular Bioenergetics and Protects against Alzheimer's Disease by Preserving Mitochondrial Function in APP/PS1 Mice and Neurons*; Oxid. Med. Cell. Longev., **2016** 8360738
- 5) Pomierny *et al.* (2021), *The Slow-Releasing and Mitochondria-Targeted Hydrogen Sulfide (H₂S) Delivery Molecule AP39 Induces Brain Tolerance to Ischemia*; Int. J. Mol. Sci., **22** 7816
- 6) Karwi *et al.* (2017), *AP39, a mitochondria-targeting hydrogen sulfide (H₂S) donor, protects against myocardial reperfusion injury independently of salvage kinase signaling*; Br. J. Pharmacol., **174** 287
- 7) Juriasingani *et al.* (2018), *H₂S supplementation: A novel method for successful organ preservation at subnormothermic temperatures*; Nitric Oxide, **81** 57
- 8) Juriasingani *et al.* (2021), *Subnormothermic Perfusion with H₂S Donor AP39 Improves DCD Porcine Renal Graft Outcomes in an Ex Vivo Model of Kidney Preservation and Reperfusion*; Biomolecules, **11** 446

PHYSICAL DATA

Molecular Weight:	721.77
Molecular Formula:	C ₃₇ H ₃₈ BrO ₂ PS ₃
Purity:	>98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (at least 35 mg/ml)
Physical Description:	Orange solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 1 month. Hygroscopic! Protect from moisture and air.

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

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