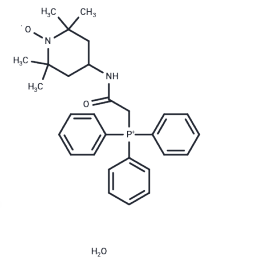


MitoTEMPO hydrate

Chemical Properties

CAS No. :	1569257-94-8
Formula:	C ₂₉ H ₃₇ ClN ₂ O ₃ P
Molecular Weight:	528.04
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	MitoTEMPO hydrate is a mitochondria-targeted antioxidant and superoxide scavenger. It mimics SOD activity to protect against mitochondrial oxidative stress in hypertension and neurodegeneration research.
Targets(IC50)	Antioxidant, Mitochondrial Metabolism
In vitro	MitoTEMPO hydrate scavenges mitochondrial superoxide to inhibit mPTP opening, reducing necrosis and apoptosis in renal and endothelial cells [2][4].
In vivo	In hypertensive mice, MitoTEMPO hydrate significantly lowers blood pressure and improves endothelium-dependent vasodilation by scavenging mitochondrial superoxide [3].

Solubility Information

Solubility	DMSO: 5 mg/mL (9.47 mM), Sonication is recommended. PBS (pH 7.2): < 1 mg/mL (insoluble), Sonication is recommended. Ethanol: 7.5 mg/mL (14.2 mM), Sonication is recommended. DMF: 7.5 mg/mL (14.2 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	---

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8938 mL	9.469 mL	18.938 mL
5 mM	0.3788 mL	1.8938 mL	3.7876 mL
10 mM	0.1894 mL	0.9469 mL	1.8938 mL
50 mM	0.0379 mL	0.1894 mL	0.3788 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Dikalov, S. Cross talk between mitochondria and NADPH oxidases. *Free Radical Biology & Medicine* 51(7), 1289-1301 (2011).

Chen H, Tang B Q, Chen L, et al. Neo-clerodane diterpenes and phytoecdysteroids from *Ajuga decumbens* Thunb. and evaluation of their effects on cytotoxic, superoxide anion generation and elastase release in vitro[J]. *Fitoterapia*, 2018, 129: 7-12.

Dikalova, A.E., Bikineyeva, A.T., Budzyn, K., et al. Therapeutic targeting of mitochondrial superoxide in hypertension. *Circulation Research* 107(1), 106-116 (2010).

Liang, H.L., Sedlic, F., Bosnjak, Z., et al. SOD1 and MitoTEMPO partially prevent mitochondrial permeability transition pore opening, necrosis, and mitochondrial apoptosis after ATP depletion recovery. *Free Radical Biology & Medicine* 49(10), 1550-1560 (2010). Product Citations

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481