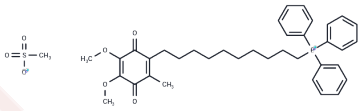
# Data Sheet (Cat.No.T12059L)

TargetMol

## Mitoquinone mesylate

### Chemical Properties



CAS No. : 845959-50-4

Formula: C38H47O7PS

Molecular Weight: 678.81

Storage: Store at low temperature
Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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|---|---|
| Description | Mitoquinone mesylate (MitoQ10 mesylate) is a potent TRAP1 inhibitor (IC50=0.2 μM). Mitoquinone mesylate is an antioxidant that prevents oxidative damage and targets mitochondria of TPP. |
| Targets(IC50) | Reactive Oxygen Species,ROS |
| In vitro | **METHODS**: MDA-MB-231 (breast cancer cells), MDA-MB-231BR (brain metastatic breast cancer cells), and U87MG (glioma cells) were treated with Mitoquinone mesylate and cell proliferation was monitored using a live cell imaging system.<br>**RESULTS**: Mitoquinone mesylate inhibited cell proliferation (IC50=0.38 μM). [1] |
| In vivo | **METHODS**: To investigate the role of Mitoquinone mesylate in acute pancreatitis in mice, mice were treated with Mitoquinone mesylate (10 mg/kg).<br>**RESULTS**: Treatment with Mitoquinone mesylate significantly reduced pancreatic edema and neutrophil infiltration. Mitoquinone mesylate increased serum amylase in a dose-dependent manner, approximately doubling at higher doses. Mitoquinone mesylate treatment nearly doubled caerulein-induced lung MPO activity at a dose of 10 mg/kg, and serum IL-6 levels were also significantly increased. [2] |

### Solubility Information

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|---|---|
| Solubility | DMSO: 240 mg/mL (353.56 mM),Sonication is recommended.<br>H2O: 10 mg/mL (14.73 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (7.37 mM),Sonication is recommended.<br>*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 1.4732 mL | 7.3658 mL | 14.7317 mL |
| 5 mM | 0.2946 mL | 1.4732 mL | 2.9463 mL |
| 10 mM | 0.1473 mL | 0.7366 mL | 1.4732 mL |
| 50 mM | 0.0295 mL | 0.1473 mL | 0.2946 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

Cheng G, et al. Redox-crippled MitoQ potently inhibits breast cancer and glioma cell proliferation: A negative control for verifying the antioxidant mechanism of MitoQ in cancer and other oxidative pathologies. Free Radic Biol Med. 2023 Aug 20;205:175-187.

Huang X, Liang N, Zhang F, et al.Lovastatin-Induced Mitochondrial Oxidative Stress Leads to the Release of mtDNA to Promote Apoptosis by Activating cGAS-STING Pathway in Human Colorectal Cancer Cells.Antioxidants.2024, 13 (6): 679.

Huang W, et al. Effects of the mitochondria-targeted antioxidant mitoquinone in murine acute pancreatitis. Mediators Inflamm. 2015;2015:901780.



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