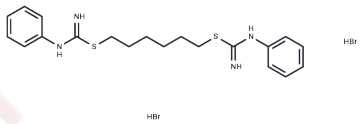
Data Sheet (Cat.No.T201371)

MS-L6

Chemical Properties



CAS No. :	63498-32-8
Formula:	C20H28Br2N4S2
Molecular Weight:	548.4
Storage:	Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	MS-L6 is an inhibitor of the mitochondrial respiratory complex I (ETC-I) with uncoupling properties. This product blocks oxidative phosphorylation (OXPHOS) by inhibiting NADH oxidation and exerting uncoupling effects. MS-L6 reduces mitochondrial membrane potential, inhibits ATP production, and induces mitochondrial dysfunction and apoptosis in tumor cells.
Targets(IC50)	Mitochondrial Metabolism
In vitro	In multiple cancer cell lines, MS-L6 dose-dependently reduces oxygen consumption rate (OCR) and ATP levels, triggering mitochondrial membrane potential loss and cytochrome c release to activate caspase-3 and induce apoptosis [1].
In vivo	In pharmacological studies using tumor xenograft mouse models, systemic administration of MS-L6 (at doses such as 10-20 mg/kg) leads to a significant reduction in tumor volume and weight; the treatment results in decreased intratumoral ATP concentrations and increased expression of apoptotic markers, demonstrating effective suppression of tumor progression through mitochondrial metabolic disruption [1].

Solubility Information

Solubility	H2O: 3.00 mg/mL (5.47 mM),Sonication is recommended. DMSO: 100.00 mg/mL (182.35 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8235 mL	9.1174 mL	18.2349 mL
5 mM	0.3647 mL	1.8235 mL	3.647 mL
10 mM	0.1823 mL	0.9117 mL	1.8235 mL
50 mM	0.0365 mL	0.1823 mL	0.3647 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

Alaa Al Assi, et al. A novel inhibitor of the mitochondrial respiratory complex I with uncoupling properties exerts potent antitumor activity. Cell Death Dis. 2024 May 2;15(5):311.