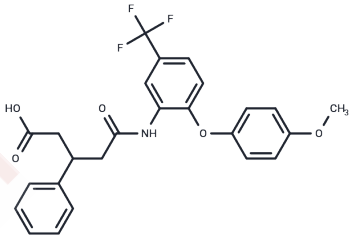
Data Sheet (Cat.No.T75268)

TargetMol

84-B10

Chemical Properties



CAS No. : 698346-43-9

Formula: C25H22F3NO5

Molecular Weight: 473.44

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	84-B10 protects against cisplatin-induced acute kidney injury, reversing lipid peroxidation accumulation and downregulation of key ferroptosis inhibitors, inhibiting mitochondrial damage and mtROS production, and restoring superoxide dismutase to reduce cisplatin-induced kidney damage.
Targets(IC50)	Ferroptosis
In vitro	84-B10 (10-100 μM,2 h) inhibited cisplatin induced iron death in renal tubular epithelial cells in a dose-dependent manner. Treatment with 84-B10 (40 μM, 2 hours) restored cisplatin induced mitochondrial structural damage and dysfunction. 84-B10 (40 μM, 2 hours) mitigated MTROS-induced oxidative stress in cisplatin-induced AKI. 84-B10 (40 μM, 2 hours) alleviates cisplatin induced epithelial cell damage by eliminating mtROS and restoring mitochondrial homeostasis [1].
In vivo	84-B10 plays a protective role in cisplatin induced acute kidney injury, but has no tumor-promoting effect. [1]

Solubility Information

Solubility	H2O: < 0.1 mg/mL (insoluble) DMSO: 80 mg/mL (168.98 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.22 mM),Sonication is recommended. *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	2.1122 mL	10.561 mL	21.122 mL
5 mM	0.4224 mL	2.1122 mL	4.2244 mL
10 mM	0.2112 mL	1.0561 mL	2.1122 mL
50 mM	0.0422 mL	0.2112 mL	0.4224 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

Fan J, et al. A novel 3-phenylglutaric acid derivative (84-B10) alleviates cisplatin-induced acute kidney injury by inhibiting mitochondrial oxidative stress-mediated ferroptosis. Free Radic Biol Med. 2023 Jan;194:84-98.