

SPC-180002

Chemical Properties

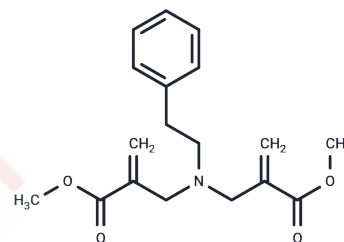
CAS No. : 2170274-53-8

Formula: C₁₈H₂₃N₂O₄

Molecular Weight: 317.38

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	SPC-180002, a dual SIRT1/3 inhibitor, exhibits IC ₅₀ values of 1.13 and 5.41 μM for SIRT1 and SIRT3, respectively. It disrupts redox homeostasis through ROS generation, consequently enhancing p21 protein stability and inducing mitochondrial dysfunction. Furthermore, this compound significantly impedes cell cycle progression and malignancy proliferation, while also activating the Nrf2 signaling pathway [1].
Targets(IC ₅₀)	Reactive Oxygen Species, Nrf2, Sirtuin
In vitro	SPC-180002 (0-5 μM, 24 hours) inhibits cell cycle progression via accumulation of p21, leading to subsequent cellular senescence [1]. Moreover, SPC-180002 does not induce apoptosis or autophagy [1].
In vivo	SPC-180002 (1-5mg/kg, bi-weekly, intraperitoneally) can inhibit the growth of various cancer cells and impede tumor growth in MCF7 xenograft mice [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1508 mL	15.754 mL	31.508 mL
5 mM	0.6302 mL	3.1508 mL	6.3016 mL
10 mM	0.3151 mL	1.5754 mL	3.1508 mL
50 mM	0.063 mL	0.3151 mL	0.6302 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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

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