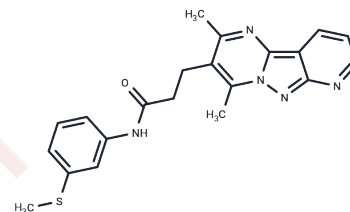


Pantothenate Kinase Inhibitor

Chemical Properties

CAS No. :	902614-04-4
Formula:	C ₂₁ H ₂₁ N ₅ O ₅
Molecular Weight:	391.49
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	Pantothenate Kinase Inhibitor (PANKi) is a reversible inhibitor of pantothenate kinase (PanK; IC ₅₀ s = 70, 92, and 25 nM for PanK1 β , PanK2, and PanK3, respectively), the rate-limiting enzyme in the synthesis of coenzyme A. It binds to the ATP-PanK3 complex with an apparent binding constant of 300 nM and exhibits mixed-type inhibition with respect to ATP and pantothenate. PANKi inhibits CoA biosynthesis in C3A cells (IC ₅₀ = 0.9 μ M) with no effect on cell viability when used at concentrations up to 8 μ M. PANKi (5 μ M) synergizes with BSO to induce ferroptosis in PANC-1 cells and sensitizes the cells to imidazole ketone erastin-induced ferroptosis. ²
Targets(IC ₅₀)	Others

Solubility Information

Solubility	DMF: 1 mg/mL (2.55 mM), Sonication is recommended. DMSO:PBS (pH 7.2) (1:4): 0.25 mg/mL (0.64 mM), Sonication is recommended. DMSO: 1 mg/mL (2.55 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5543 mL	12.7717 mL	25.5434 mL
5 mM	0.5109 mL	2.5543 mL	5.1087 mL
10 mM	0.2554 mL	1.2772 mL	2.5543 mL
50 mM	0.0511 mL	0.2554 mL	0.5109 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

Sharma, L.K., Leonardi, R., Lin, W., et al. A high-throughput screen reveals new small-molecule activators and inhibitors of pantothenate kinases. *J. Med. Chem.* 58(3):1563-1568(2015)

Badgley, M.A., Kremer, D.M., Maurer, H.C., et al. Cysteine depletion induces pancreatic tumor ferroptosis in mice. *Science* 368(6486):85-89(2020)

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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