

SP-96

Chemical Properties

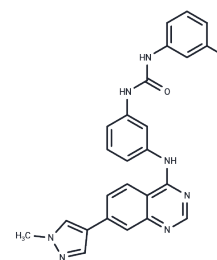
CAS No. : 2682114-54-9

Formula: C₂₅H₂₀N₇O

Molecular Weight: 453.47

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	SP-96 is a highly effective and selective inhibitor of Aurora B with an IC ₅₀ of 0.316 nM. SP-96 shows selective growth inhibition in NCI60 screening, including MDA-MD-468 (GI ₅₀ =107 nM). SP-96 can be used in triple negative breast cancer studies.
Targets(IC ₅₀)	Aurora Kinase
In vitro	SP-96 (63.2 nM) inhibits Aurora B activity in H460 cells by the characteristics of increased DNA content, and it increases cell volume with enormous nucleus. SP-96 shows >2000 fold selectivity against FLT3 (IC ₅₀ =1475.6 nM) and KIT (IC ₅₀ =1307.6 nM). SP-96 (0-2 μM) inhibits Aurora A with IC ₅₀ value of 18.975 nM. SP-96 (0-1 μM; 24 hours) is not promiscuous, rather selective for a few cell lines, it inhibits MDA-MB-468, CCRF-CEM, COLO 205 and A498 cell growth with GI ₅₀ values of 107 nM, 47.4 nM, 50.3 nM and 53.2 nM, respectively[1].

Solubility Information

Solubility	DMSO: 95 mg/mL (209.5 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (7.28 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2052 mL	11.0261 mL	22.0522 mL
5 mM	0.441 mL	2.2052 mL	4.4104 mL
10 mM	0.2205 mL	1.1026 mL	2.2052 mL
50 mM	0.0441 mL	0.2205 mL	0.441 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

Naga Rajiv Lakkaniga, et al. Discovery of SP-96, the first non-ATP-competitive Aurora Kinase B inhibitor, for reduced myelosuppression. Eur J Med Chem. 2020 Jul 12;203:112589.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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