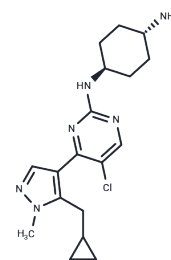


## Casein Kinase inhibitor A51

### Chemical Properties

CAS No. :	2079068-74-7
Formula:	C <sub>18</sub> H <sub>25</sub> ClN <sub>6</sub>
Molecular Weight:	360.88
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



### Biological Description

Description	Casein Kinase inhibitor A51 is an orally active casein kinase 1 $\alpha$ (CK1 $\alpha$ ) inhibitor with anticancer activity that induces apoptosis in leukemia cells, and may be used in the study of neck cancers, acute myeloid leukemia, breast and prostate cancers.
Targets(IC50)	Apoptosis,Casein Kinase,CDK
In vitro	VEGFR2-IN-1 ( 0.1,1,10,100 $\mu$ M ; 48 h ) were effective selective inhibitors of MCF-7, Mda-Mb-231 and MCF-10A : MCF-7 ( IC50 = 1.18 $\mu$ M ), MDA-MB-231 ( IC50 = 10.49 $\mu$ M ), MCF-10A ( IC50 = 24.76 $\mu$ M )[1].
In vivo	In Male Swiss albino mice, 21-28 g ( Xenograft model ), VEGFR2-IN-1 ( 4.2 mg/kg; i.p.; once a days ; 7 days ) Showed anticancer activity by having a tumor inhibition ratio of 54.2 % [1].

### Solubility Information

Solubility	DMSO: 80 mg/mL (221.68 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: 3.3 mg/mL (9.14 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

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.771 mL	13.855 mL	27.710 mL
5 mM	0.5542 mL	2.771 mL	5.542 mL
10 mM	0.2771 mL	1.3855 mL	2.771 mL
50 mM	0.0554 mL	0.2771 mL	0.5542 mL

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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

Waleed Minzel, et al. Small Molecules Co-targeting CK1 $\alpha$  and the Transcriptional Kinases CDK7/9 Control AML in Preclinical Models. Cell. 2018 Sep 20;175(1):171-185.e25.

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