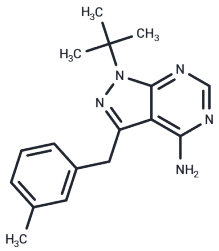
Data Sheet (Cat.No.T21678)

TargetMol

3MB-PP1

Chemical Properties



CAS No. : 956025-83-5

Formula: C17H21N5

Molecular Weight: 295.38

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	3MB-PP1 is a bulky purine analog and a Polo-like kinase 1 (Plk1) inhibitor. In cells expressing analog-sensitive Plk1 alleles, 3MB-PP1 blocks mitotic progression and cell division arise by targeting Plk1. 3MB-PP1 specifically inhibits analog-sensitive Ssn3 (Cdk8). 3MB-PP1 inhibits Leu93 Mutant Zipper-interacting protein kinase with IC50 of 2 μM. 3MB-PP1 can be used for the research of cell division and hypha formation of Candida albicans.
Targets(IC50)	CDK,DAPK,PLK
In vitro	In a strain bearing analog-sensitive alleles of SSN3(Cdk8), 3MB-PP1 (5 μM) stimulates hyphal growth[1].

Solubility Information

Solubility	DMSO: 55 mg/mL (186.2 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 (6.77 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	3.3855 mL	16.9273 mL	33.8547 mL
5 mM	0.6771 mL	3.3855 mL	6.7709 mL
10 mM	0.3385 mL	1.6927 mL	3.3855 mL
50 mM	0.0677 mL	0.3385 mL	0.6771 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

Al-Ghabkari A, et al. Validation of chemical genetics for the study of zipper-interacting protein kinase signaling. Proteins. 2018 Nov;86(11):1211-1217.
Burkard ME, et al. Enabling and disabling polo-like kinase 1 inhibition through chemical genetics. ACS Chem Biol. 2012 Jun 15;7(6):978-81.
Hollomon JM, et al. The Candida albicans Cdk8-dependent phosphoproteome reveals repression of hyphal growth through a Flo8-dependent pathway. PLoS Genet. 2022;18(1):e1009622. Published 2022 Jan 4.