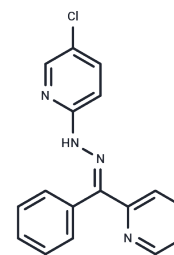


JIB-04

## Chemical Properties

CAS No. : 199596-05-9  
 Formula: C<sub>17</sub>H<sub>13</sub>ClN<sub>4</sub>  
 Molecular Weight: 308.76  
 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	JIB-04 (NSC 693627) is a pan-selective Jumonji histone demethylase inhibitor.
Targets(IC50)	Apoptosis,Histone Demethylase,Histone Methyltransferase
In vitro	In the H358 and A549 mouse xenograft models, JIB-04 inhibits the activity of Jumonji domain-containing histone demethylases, thereby suppressing tumor cell growth.
In vivo	In lung and prostate cancer cell lines (IC <sub>50</sub> =10 nM), JIB-04 downregulates proliferation genes and inhibits cell growth.
Cell Research	For cell viability assays, cells are plated at 1500-3000 cells/well in 96 well plates and treated the next day with increasing doses of compound over 4 days and their viability assessed by standard MTS assays using Promega's Cell Titer or Cell Titer-Glo reagents according to the manufacturer's protocols. Absorbance at 490 nm and 650 nm or luminescence is measured by a Spectra Max or a FlouoroStar Omega plate reader. Data are normalized to the untreated controls (100% viability). Each cell line is tested in 2-5 independent assays, each containing 4-8 replicates. IC <sub>50</sub> values are calculated using DIVISA, a high-throughput software, developed in hous, for storing and analyzing drug sensitivity assays. Dose-response curves are plotted using a non-linear regression model and IC <sub>50</sub> s are determined from the fitted curves. The average IC <sub>50</sub> derived from 2-5 independent assays, each containing 4-8 replicates is reported. (Only for Reference)

## Solubility Information

Solubility	DMSO: 36.43 mg/mL (117.99 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 (6.48 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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	1mg	5mg	10mg
1 mM	3.2388 mL	16.1938 mL	32.3876 mL
5 mM	0.6478 mL	3.2388 mL	6.4775 mL
10 mM	0.3239 mL	1.6194 mL	3.2388 mL
50 mM	0.0648 mL	0.3239 mL	0.6478 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

Wang L, et al. Nat Commun. 2013, 4, 2035.

Li P, Huang Q, Xie Y, et al. JIB-04, an inhibitor of Jumonji histone demethylase as a potent antitubercular agent against Mycobacterium tuberculosis. Archives of Microbiology. 2024, 206(12): 1-12.

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