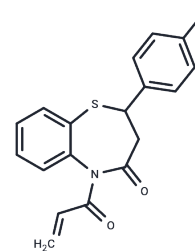


GSK-3 $\beta$  inhibitor 3

## Chemical Properties

CAS No. :	1448990-73-5
Formula:	C <sub>18</sub> H <sub>14</sub> FNO <sub>2</sub> S
Molecular Weight:	327.37
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	GSK-3 $\beta$ inhibitor 3 is a potent, selective, and irreversible covalent inhibitor of glycogen synthase kinase 3 $\beta$ (GSK-3 $\beta$ ) with an IC <sub>50</sub> of 6.6 $\mu$ M, and can be used to study acute promyelocytic leukemia.
Targets(IC <sub>50</sub> )	Apoptosis,GSK-3
In vitro	GSK-3 $\beta$ inhibitor 3 (compound 4-3) (6.25-100 $\mu$ M; 24-48 h) dose-dependently inhibits cell viability, with IC <sub>50</sub> s of 19.56 $\mu$ M and 26.42 $\mu$ M in NB4 and NB4-R1 cells at 24 h, respectively. It (12.5-100 $\mu$ M; 24 h) also significantly increases apoptosis in a dose-dependent manner in NB4 and NB4-R1 cells. Additionally, GSK-3 $\beta$ inhibitor 3 (100 $\mu$ M) inhibits GSK-3 $\alpha$ activity by 87.3%. [1]
In vivo	GSK-3 $\beta$ inhibitor 3 (compound 4-3) (15 mg/kg; a single i.p.; Balb/c female nude mice) demonstrates a T <sub>1/2</sub> of 14.2 hours, an AUClast of 3503.42 ng/mL·h, and a C <sub>max</sub> of 515 ng/mL in mice. [1] Additionally, GSK-3 $\beta$ inhibitor 3 (15 mg/kg/d; i.p. for 2 weeks; Balb/c female nude mice) inhibits tumor growth by 75.97% compared to the vehicle control. [1]

## Solubility Information

Solubility	DMSO: 225 mg/mL (687.3 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.0546 mL	15.2732 mL	30.5465 mL
5 mM	0.6109 mL	3.0546 mL	6.1093 mL
10 mM	0.3055 mL	1.5273 mL	3.0546 mL
50 mM	0.0611 mL	0.3055 mL	0.6109 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

Zhang P, et al. Discovery of Novel Benzothiazepinones as Irreversible Covalent Glycogen Synthase Kinase 3 $\beta$  Inhibitors for the Treatment of Acute Promyelocytic Leukemia. J Med Chem. 2021;64(11):7341-7358.

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