

XX-650-23

## Chemical Properties

CAS No. : 117739-40-9

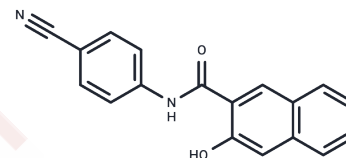
Formula: C<sub>18</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub>

Molecular Weight: 288.3

Store at low temperature

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	XX-650-23 is a small molecule CREB inhibitor that blocks the critical interaction between CREB and its required coactivator, CBP (CREB-binding protein), inducing apoptosis and cell cycle arrest in AML cells, and can be used in the study of acute myelogenous leukaemia (AML).
Targets(IC50)	Apoptosis,Epigenetic Reader Domain
In vitro	During split Renilla luciferase complementation analysis, XX-650-23 exhibited an IC <sub>50</sub> of 3.20 ± 0.43 μM in inhibiting the interaction between CREB and CBP [1]. Following treatment with XX-650-23 (100 pM - 10 μM) for 48 hours, four AML cell lines showed IC <sub>50</sub> values ranging from 870 nM to 2.3 μM, defined as a 50% reduction in viable cell count compared to DMSO-treated cells, indicating the inhibition of AML growth by XX-650-23 [1].
In vivo	XX-650-23 (2.3 mg/kg, intravenous injection) extends the survival of AML mouse model (NSG mice) and exhibits no toxicity[1].

## Solubility Information

Solubility	DMSO: 12.5 mg/mL (43.36 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 (11.45 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	3.4686 mL	17.343 mL	34.6861 mL
5 mM	0.6937 mL	3.4686 mL	6.9372 mL
10 mM	0.3469 mL	1.7343 mL	3.4686 mL
50 mM	0.0694 mL	0.3469 mL	0.6937 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

B Mitton, et al. Small molecule inhibition of cAMP response element binding protein in human acute myeloid leukemia cells. *Leukemia*. 2016 Dec;30(12):2302-2311.

François S, Sen N, Mitton B, Xiao X, Sakamoto KM, Arvin A. Varicella-Zoster Virus Activates CREB, and Inhibition of the pCREB-p300/CBP Interaction Inhibits Viral Replication In Vitro and Skin Pathogenesis In Vivo. *J Virol*. 2016 Sep 12;90(19):8686-97. doi: 10.1128/JVI.00920-16. Print 2016 Oct 1. PubMed PMID: 27440893; PubMed Central PMCID: PMC5021407.

Mitton B, Chae HD, Hsu K, Dutta R, Aldana-Masangkay G, Ferrari R, Davis K, Tiu BC, Kaul A, Lacayo N, Dahl G, Xie F, Li BX, Breese MR, Landaw EM, Nolan G, Pellegrini M, Romanov S, Xiao X, Sakamoto KM. Small molecule inhibition of cAMP response element binding protein in human acute myeloid leukemia cells. *Leukemia*. 2016 Dec;30(12):2302-2311. doi: 10.1038/leu.2016.139. Epub 2016 May 23. PubMed PMID: 27211267; PubMed Central PMCID: PMC5143163.

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