

NSC 370284

Chemical Properties

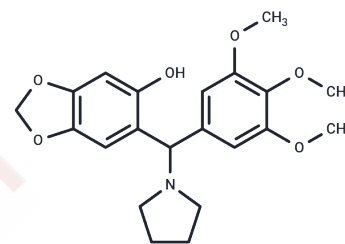
CAS No. : 116409-29-1

Formula: C₂₁H₂₅NO₆

Molecular Weight: 387.43

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	NSC 370284 is a small molecule that directly binds to and inhibits STAT3/5, significantly and selectively suppresses the viability of AML cells with high level of TET1 expression both in vitro and in vivo.
Targets(IC50)	STAT,DNA Methyltransferase
In vitro	NSC-370284 exhibited the most significant effects in inhibiting cell viability of all four TET1-high AML cell lines, whereas showing no significant inhibition on viability of NB4/t (15;17) AML cells [1].The direct binding of STAT3 and STAT5 on the TET1 loci was further validated in MONOMAC-6 cells, and such binding could be disturbed by NSC-370284 treatment [1].Analysis suggested a potential direct binding of NSC-370284 to the conserved DNA-binding domain (DBD) of STAT3 or STAT5 [1].
In vivo	NSC 370284 treatments significantly inhibited MLL-AF9-induced AML in secondary bone marrow transplantation (BMT) recipient mice, and 57% (4 out of 7) of the NSC-370284-treated mice were cured, as the pathological morphologies in peripheral blood (PB), BM, spleen, and liver tissues all turned to normal. [1]

Solubility Information

Solubility	DMSO: 55 mg/mL (141.96 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 (5.16 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	2.5811 mL	12.9056 mL	25.8111 mL
5 mM	0.5162 mL	2.5811 mL	5.1622 mL
10 mM	0.2581 mL	1.2906 mL	2.5811 mL
50 mM	0.0516 mL	0.2581 mL	0.5162 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

Xi Jiang, et al. Targeted inhibition of STAT/TET1 axis as a therapeutic strategy for acute myeloid leukemia. Nature Communications volume 8, Article number: 2099 (2017).

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481