

CDK9-IN-12

Chemical Properties

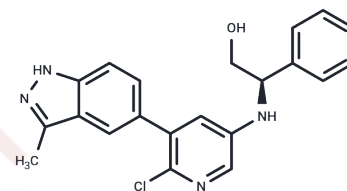
CAS No. : 1942843-54-0

Formula: C₂₁H₁₉ClN₄O

Molecular Weight: 378.86

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	CDK9-IN-12 is a highly selective CDK9 inhibitor, which is commonly used in leukemia research to regulate oncogene expression, inhibit oncogenic proliferation, and induce apoptosis by targeting CDK9-dependent transcription processes.
Targets(IC50)	CDK
In vitro	CDK9-IN-12 has an inhibitory effect on the following cells: Mino, Z-138, JeKo-1, Raji, OCI-Ly-10, TMD8, MM.1S, RPMI-8226, Kasumi-1, HL-60, CCRF-CEM, MV-4-11 cells with IC50 values of 8.4, 46, 46, 37, 3.2, 46, 1.5, 5.4, 21, 44, 2.1, 1.6 nM, respectively. [1]
In vivo	Methods: CDK9-IN-12 (7.5 mg/kg, 0.5% CMC-Na, gavage, 21 days) was used to treat MV-4-11 cell tumor xenograft model mice. First, PK experiments were performed in mice. Second, the diameter of the transplanted tumor and the weight of the mice were measured twice a week to evaluate the in vivo anticancer effect. Results: CDK9-IN-12 has a long half-life ($t_{1/2} = 8.02$ h) and acceptable bioavailability ($F = 33.7\%$). In addition, CDK9-IN-12 can significantly inhibit tumor progression, with a T/C value of 27.80%. [1]

Solubility Information

Solubility	DMSO: 80 mg/mL (211.16 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: 3.3 mg/mL (8.71 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	2.6395 mL	13.1975 mL	26.395 mL
5 mM	0.5279 mL	2.6395 mL	5.279 mL
10 mM	0.2639 mL	1.3197 mL	2.6395 mL
50 mM	0.0528 mL	0.2639 mL	0.5279 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

Han X, et al. Rational Design and Development of Novel CDK9 Inhibitors for the Treatment of Acute Myeloid Leukemia. J Med Chem. 2021 Oct 14;64(19):14647-14663.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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