

ML324

Chemical Properties

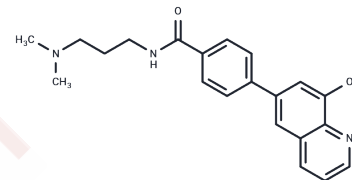
CAS No. : 1222800-79-4

Formula: C₂₁H₂₃N₃O₂

Molecular Weight: 349.43

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	ML324(IC ₅₀ =920 nM) is a specific inhibitor of jumonji histone demethylase (JMJD2).
Targets(IC ₅₀)	Histone Demethylase,HSV,Virus Protease
In vitro	ML324 exhibits good Caco-2 cell permeability, and possesses excellent microsomal stability in the presence of both mouse and rat liver microsomes. ML324 demonstrates potent anti-viral activity against both herpes simplex virus (HSV) and human cytomegalovirus (hCMV) infection by inhibiting viral IE gene expression. [1]
In vivo	In a mouse ganglia explant model of latently infected mice, ML324 suppresses the formation of HSV plaques, and blocks HSV-1 reactivation. [1]
Kinase Assay	The fluorescence resonance energy transfer (FRET)-based LANCE Ultra KinaSelect Ser/Thr kit is used to determine IC ₅₀ values for various CDK inhibitors. Briefly, a specific ULight MBP peptide substrate (50 nM final concentration) is phosphorylated by a CDK-cyclin pair in buffer (50 mM HEPES-KOH pH 7.5, 10 mM MgCl ₂ , 1 mM EGTA, 2 mM dithiothreitol) containing ATP at the concentration of the K _m values of the individual kinases for 1 h at room temperature. Subsequently, phosphorylation is detected by addition of specific Eu-labelled anti-phospho-antibodies (2 nM), which upon binding to the phosphopeptide give rise to a FRET signal. FRET signals are then recorded[1].

Solubility Information

Solubility	Ethanol: 3 mg/mL (8.59 mM),Heating is recommended. DMSO: 40 mg/mL (114.47 mM),Sonication is recommended. H ₂ O: < 1 mg/mL (insoluble or slightly soluble), (< 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 (5.72 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	2.8618 mL	14.309 mL	28.618 mL
5 mM	0.5724 mL	2.8618 mL	5.7236 mL
10 mM	0.2862 mL	1.4309 mL	2.8618 mL
50 mM	0.0572 mL	0.2862 mL	0.5724 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

Rai G, et al. Probe Reports from the NIH Molecular Libraries Program, 2010-2012.

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