

LDC000067

Chemical Properties

CAS No. : 1073485-20-7

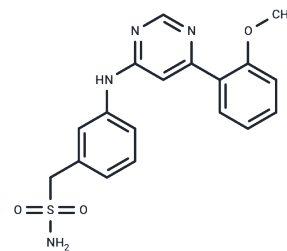
Formula: C₁₈H₁₈N₄O₃S

Molecular Weight: 370.43

Store under nitrogen

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	LDC000067 (LDC067) is a highly specific and selective CDK9 inhibitor with an IC ₅₀ value of 44±10 nM.
Targets(IC ₅₀)	Apoptosis,CDK
In vitro	LDC000067 reduces Ser2-P, induces p53 activation and leads to apoptosis in mESCs. In addition, LDC067 also dose-dependently inhibits P-TEFb-dependent de novo RNA synthesis of cellular genes.[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: < 1 mg/mL (insoluble or slightly soluble), DMSO: 18.4 mg/mL (49.67 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+90% Saline: < 1.84 mg/mL (4.97 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1.84 mg/mL (4.97 mM),Solution. <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	2.6996 mL	13.4978 mL	26.9957 mL
5 mM	0.5399 mL	2.6996 mL	5.3991 mL
10 mM	0.270 mL	1.3498 mL	2.6996 mL
50 mM	0.054 mL	0.270 mL	0.5399 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

Albert TK, et al. Br J Pharmacol. 2014, 171(1), 55-68.

Jiang L, Yu Y, Li Z, et al. BMS-265246, a Cyclin-Dependent Kinase Inhibitor, Inhibits the Infection of Herpes Simplex Virus Type 1. Viruses. 2023, 15(8): 1642.

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