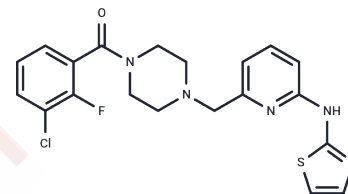


MK-8745

Chemical Properties

CAS No. : 885325-71-3
 Formula: C₂₀H₁₉ClFN₅O₅
 Molecular Weight: 431.91
 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	MK-8745 is a potent and selective Aurora A inhibitor.
Targets(IC50)	Apoptosis,Aurora Kinase
In vivo	MK-8745 induces apoptosis in a p53-dependent manner across various cell lines in vitro. Exposure of p53 wild-type cells to MK-8745 leads to the induction of p53 phosphorylation (ser15) and an increase in p53 protein expression. This p53-dependent apoptotic effect of MK-8745 is further confirmed in HCT 116 p53 (-/-) cells transfected with wild-type p53. In non-Hodgkin's lymphoma cell lines, MK-8745 causes cell cycle arrest at the G2/M phase with the accumulation of tetraploid nuclei, followed by cell death. Treatment with MK-8745 induces p21 (waf1/cip1) and CycB1, indicating cell cycle arrest and an increased population of cells in the G2/M phase. Additionally, MK-8745 treatment leads to the rapid degradation of Aurora-A substrates (TACC3, Eg5, and TPX2) following the reduction of phospho-Aurora-A.

Solubility Information

Solubility	H ₂ O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 1 mg/mL (2.32 mM),Sonication is recommended. DMSO: 55 mg/mL (127.34 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 (4.63 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	2.3153 mL	11.5765 mL	23.153 mL
5 mM	0.4631 mL	2.3153 mL	4.6306 mL
10 mM	0.2315 mL	1.1576 mL	2.3153 mL
50 mM	0.0463 mL	0.2315 mL	0.4631 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

Chowdhury A, et al. Leuk Lymphoma. 2012, 53(3), 462-471.

Nair JS, et al. Cell Cycle, 2012, 11(4), 807-817.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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