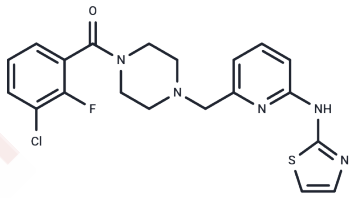
# Data Sheet (Cat.No.T2471)

TargetMol

MK-8745

## Chemical Properties



CAS No. : 885325-71-3

Formula: C20H19ClFN5OS

Molecular Weight: 431.91

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

## 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 | H2O: < 1 mg/mL (insoluble or slightly soluble),<br>Ethanol: 1 mg/mL (2.32 mM),Sonication is recommended.<br>DMSO: 55 mg/mL (127.34 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

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.

Reference

Chowdhury A, et al. Leuk Lymphoma. 2012, 53(3), 462-471.
Nair JS, et al. Cell Cycle, 2012, 11(4), 807-817.





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