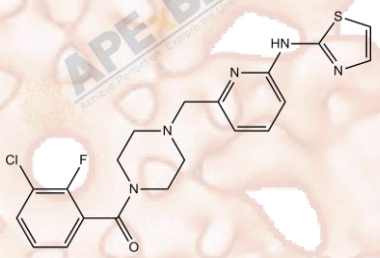
Product Data Sheet

MK-8745



Cat. No.:	A8807
CAS No.:	885325-71-3
Formula:	C20H19ClFN5OS
M.Wt:	431.91
Synonyms:	
Target:	Cell Cycle/Checkpoint
Pathway:	Aurora Kinase
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

⩾21.6 mg/mL in DMSO; insoluble in H2O; ⩾2.28 mg/mL in EtOH with gentle warming and ultrasonic

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	2.3153 mL	11.5765 mL	23.1530 mL
5 mM	0.4631 mL	2.3153 mL	4.6306 mL
10 mM	0.2315 mL	1.1576 mL	2.3153 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Aurora A inhibitor,potent and selective
IC_{50} & Target	0.6 nM (Aurora A)

In Vitro

Cell Viability Assay

Cell Line:	Human non-Hodgkin lymphoma cell lines(NHL cell lines)
Preparation method：	The solubility of this compound in DMSO is >21.6mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	1μM for 24 h and 48 h

	Applications:	In NHL cell lines, MK-8745 treatment for 48 h significantly decreased the cell number in TPX2 (targeting protein for Xenopus kinaselike protein 2) knockdown in cells in comparison to control cells. MK-8745 treatment induced an approximately 160-fold increase in cell death by 96 h and led to cell cycle arrest at the G2/M phase with accumulation of tetraploid nuclei followed by cell death in NHL cell lines.
In Vivo	**Animal experiment**	
	Animal models:	Female athymic mice at the age of 4 to 5 weeks (HCT116 isogenic cells were transplanted into both flanks of mice)
	Dosage form:	s.c, 800 nM for 7 to 12 days.
	Applications:	Xenograft experiments indicated that MK-8745 showed anti-tumor activity, however, it did not regress tumors completely, and drug-resistant tumors still remained in mice. Tumor growth of HCT116 Puma(-), HCT116 p21(-), HCT116 Bax(-) and HCT116 Chk2(-) cells was significantly inhibited with MK-8745 in female athymic mice.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Chowdhury, A., S. Chowdhury, M.Y., et al. Tsai, A novel Aurora kinase A inhibitor MK-8745 predicts TPX2 as a therapeutic biomarker in non-Hodgkin lymphoma cell lines. Leuk Lymphoma, 2012. 53(3): p. 462-71

[2]. Shionome, Y., et al. Integrity of p53 associated pathways determines induction of apoptosis of tumor cells resistant to Aurora-A kinase inhibitors. PLoS One, 2013. 8(1): p. e55457.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt

of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com