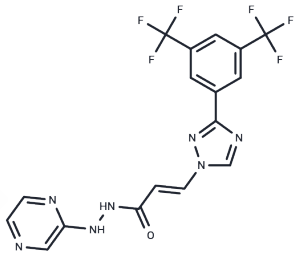
Data Sheet (Cat.No.T1844)

TargetMol

(E)-KPT330

Chemical Properties



CAS No. : 1421923-86-5

Formula: C17H11F6N7O

Molecular Weight: 443.31

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	(E)-KPT330 is a CRM1-selective inhibitor of nuclear export. It inhibits protein trafficking from the nucleus and induces cell cycle arrest and apoptosis in mesothelioma cells.
Targets(IC50)	CRM1
In vitro	As the Clinicalal candidate analog of KPT-185, KPT-330 exhibits similar effects on the viability of T-ALL cells and elicits rapid apoptotic response. KPT-330 also reduces cell growth in MOLT-4, Jurkat, HBP-ALL, KOPTK-1, SKW-3, and DND-41 cell lines, with IC50 values of 34-203 nM. [1]
Kinase Assay	KiNativ profiling of XMD8-92 is carried out with both an ATP and ADP acylphosphate-desthiobiotin with the following modifications. HeLa cell lysates (5 mg/mL total protein) are incubated in the presence of XMD8-92 at 50 μM, 10 μM, 2 μM, 0.8 μM, and 0 μM for 15 minutes prior to addition of the ATP or ADP acylphosphate probe (5 μM final probe concentration). All reactions are performed in duplicate. Probe reactions proceeded for 10 minutes and the reaction stopped by the addition of urea and processed for MS analysis. Samples are analyzed by LC-MS/MS on a linear ion trap mass spectrometer using a time segmented "target list" designed to collect MS/MS spectra from all kinase peptide-probe conjugates that can be detected in HeLa cell lysates. This target list is generated and validated by prior exhaustive analysis of HeLa lysates. Up to four characteristic fragment ions for each kinase peptide-probe conjugate are used to extract signals for each kinase, and a comparison of inhibitor treated to control (untreated) lysates allow for precise determination of % inhibition at each point. A manuscript describing the details of this targeted mass spectrometry approach is in preparation[1].
Cell Research	Cell lines are cultured in RPMI 1640 medium, supplemented with 10% fetal bovine serum and penicillin/streptomycin. Cell Titer Glo assay is used to assess cell viability upon treatment with either dimethyl sulfoxide (DMSO) or KPT-330. Cells are plated at a density of 10 000 cells per well in a 96-well plate and incubated with DMSO or increasing concentrations of KPT-330. The cell viability is measured after 72 h exposure to KPT-330 and reported as a percentage of DMSO control cells. Jurkat cells that overexpress BCL2 are generated using MSCV-IRES-GFP retroviral expression system. Jurkat cells infected with BCL2 or control vector viruses are sorted by flow cytometry and the expression of BCL2 confirmed by Western blot analysis using BCL2 antibody.(Only for Reference)

Solubility Information

Solubility	DMSO: 4.44 mg/mL (10.02 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2558 mL	11.2788 mL	22.5576 mL
5 mM	0.4512 mL	2.2558 mL	4.5115 mL
10 mM	0.2256 mL	1.1279 mL	2.2558 mL
50 mM	0.0451 mL	0.2256 mL	0.4512 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

Etchin J, et al. Br J Haematol. 2013, 161(1), 117-127.
Yuan M, Hu W, Feng Y, et al. Development and validation of an LC-MS/MS method for simultaneous determination of remdesivir and its hydrolyzed metabolite and nucleoside, and its application in a pharmacokinetic study of normal and diabetic nephropathy mice. Biomedical Chromatography. 2022: e5380
Yuan M, Hu W, Feng Y, et al. Development and validation of a LC-MS/MS method for simultaneous determination of remdesivir and its hydrolyzed metabolite and nucleoside, and its application in a pharmacokinetic study of normal and diabetic nephropathy mice. Biomedical Chromatography. 2022: e5380
Tai YT, et al. Leukemia. 2014, 28(1), 155-165.