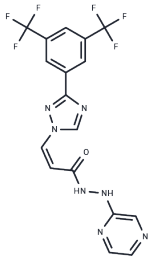
Data Sheet (Cat.No.T6106)

TargetMol

Selinexor (KPT-330)

Chemical Properties



CAS No. : 1393477-72-9

Formula: C17H11F6N7O

Molecular Weight: 443.31

Storage: Store at low temperature
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	Selinexor (KPT-330) is a small molecule inhibitor of CRM1 with selective and oral activity. Selinexor blocks the cell cycle, induces apoptosis, and has antitumor activity for the treatment of multiple myeloma.
Targets(IC50)	CRM1
In vitro	**METHODS**: Six T-ALL cells, MOLT-4, Jurkat, HBP-ALL, KOPTK-1, SKW-3 and DND-41, were treated with Selinexor (0-1000 μM) for 72 h. Cell growth inhibition was detected using Cell Titer Glo assay. **RESULTS**: Selinexor treatment inhibited T-ALL cell growth with IC50 values of 34-203 nM. [1] **METHODS**: Multiple myeloma cells MM1S were treated with Selinexor (100 nM) for 8 h. The expression levels of target proteins were detected by Western Blot. **RESULTS**: Selinexor treatment resulted in the accumulation of p53, IκB, p21 and p27 in the nucleus of MM1S cells. [2]
In vivo	**METHODS**: To assay antitumor activity in vivo, Selinexor (20-25 mg/kg) was administered by gavage to NSG mice harboring the human T-ALL tumor MOLT-4 three times per week for thirty-six days. **RESULTS**: Selinexor-treated mice exhibited significant inhibition of leukemia cell growth with significant survival benefit. [1] **METHODS**: To assay anti-tumor activity in vivo, Selinexor (20 mg/kg) was administered by gavage three times per week for four weeks to an NSG mouse model of primary AML in patients. **RESULTS**: Selinexor was cytotoxic to primary AML cells transplanted into mice. [3]

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 38 mg/mL (85.72 mM),Sonication is recommended. DMSO: 247.5 mg/mL (558.3 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: 8.2 mg/mL (18.5 mM),Solution. *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*

In vivo Formulation	*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.*

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. KPT-330 inhibitor of CRM1 (XPO1)-mediated nuclear export has selective anti-leukaemic activity in preclinical models of T-cell acute lymphoblastic leukaemia and acute myeloid leukaemia. Br J Haematol. 2013 Apr; 161(1):117-27.

Han Y, Hu A, Qu Y, et al.Covalent targeting the LAS1-NOL9 axis for selective treatment in NPM1 mutant acute myeloid leukemia.Pharmacological Research.2023: 106700.

Liu H, Shen C, Li H, et al.Discovery of Potent Covalent CRM1 Inhibitors Via a Customized Structure-Based Virtual Screening Pipeline and Bioassays.Journal of Chemical Information and Modeling.2024

Tai YT, et al. CRM1 inhibition induces tumor cell cytotoxicity and impairs osteoclastogenesis in multiple myeloma: molecular mechanisms and therapeutic implications. Leukemia. 2014 Jan;28(1):155-65.

Etchin J, et al. Activity of a selective inhibitor of nuclear export, selinexor (KPT-330), against AML-initiating cells engrafted into immunosuppressed NSG mice. Leukemia. 2016 Jan;30(1):190-9.