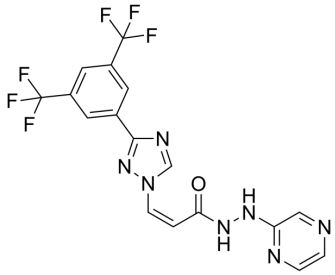
Selinexor

Cat. No.:	HY-17536
CAS No.:	1393477-72-9
Molecular Formula:	$C_{17}H_{11}F_6N_7O$
Molecular Weight:	443.31
Target:	CRM1
Pathway:	Membrane Transporter/Ion Channel
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 48 mg/mL (108.28 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	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

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.64 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.69 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (4.69 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Selinexor (KPT-330), analog of KPT-185, is an orally bioavailable and selective CRM1 inhibitor[1][2].

IC_{50} & Target

CRM1

In Vitro

As the clinical 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 IC_{50} values of 34-203 nM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Selinexor (KPT-330) dramatically suppresses the growth of T-ALL cells (MOLT-4) and AML cells (MV4–11) in vivo, with little toxicity to normal haematopoietic cells[1]. In SCID mice with diffuse human MM bone lesions, KPT-330 inhibits MM-induced bone lysis and prolongs survival. Moreover, KPT-330 directly impairs osteoclastogenesis and bone resorption by blocking RANKL-induced NF-κB and NFATc1, with minimal impact on osteoblasts and BMSCs[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Exp Med. 2020 Jul 6;217(7):e20192083.
- Leukemia. 2023 Mar 28.
- Int J Biol Sci. 2023 Jul 3; 19(11):3412-3427.
- J Ethnopharmacol. 2024 Mar 20:328:118057.

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REFERENCES

[1]. 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.

[2]. 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.

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