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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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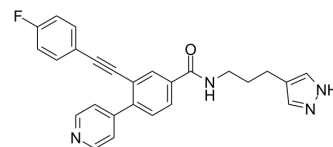
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OT-82

Cat. No.:	HY-136241
CAS No.:	1800487-55-1
Molecular Formula:	C ₂₆ H ₂₁ FN ₄ O
Molecular Weight:	424.47
Target:	NAMPT; Caspase
Pathway:	Metabolic Enzyme/Protease; Apoptosis
Storage:	<div> Powder -20°C 3 years </div> <div> 4°C 2 years </div> <div> In solvent -80°C 2 years </div> <div> -20°C 1 year </div>



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (235.59 mM; Need ultrasonic)				
	Preparing Stock Solutions	<div>Solvent Concentration</div> <div>Mass</div>	1 mg	5 mg	10 mg
		1 mM	2.3559 mL	11.7794 mL	23.5588 mL
		5 mM	0.4712 mL	2.3559 mL	4.7118 mL
		10 mM	0.2356 mL	1.1779 mL	2.3559 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.90 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.90 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.90 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	OT-82 is a potent, selective and orally active inhibitor of NAMPT. OT-82 is selectively toxic to cells of hematopoietic origin and induces cell death in a NAD ⁺ dependent manner. OT-82 is a promising antineoplastic agent for the study of hematological malignancies ^[1] .
IC ₅₀ & Target	IC ₅₀ : Nampt ^[1]
In Vitro	OT-82 (0.0001-10 μM; 72 hours) demonstrates tissue-selective (HP vs non-HP) cytotoxicity. It is against HP cell lines MV4-11,

U937, RS4;11, HEL92.1.7 and PER485 cell growth with IC₅₀ values of 2.11 nM, 2.70 nM, 1.05 nM and 1.36 nM, respectively. It also against nonHP cell lines MCF-7, U87, HT29, and H1299 cell growth with IC₅₀ values of 37.92 nM, 29.52 nM, 15.67 nM and 7.95 nM, respectively^[1].

OT-82 demonstrates cancer-selective (tumor vs normal) cytotoxicity. It more sensitive to BMMNC from leukemia patients, the IC₅₀ values are 31 nM and 7.10 nM for AML and ALL donors, respectively. The IC₅₀ value is 62.69 nM for BMMNC from healthy donors^[1].

OT-82 (0.001-10 µM; 48 hours) inhibits recombinant NAMPT activity and causes dose-dependent reductions in cellular NAD and ATP concentrations in MV4-11 cells^[1].

OT-82 (0.01-100 nM; 48 hours) results in activation of caspase-3, an increase in the proportion of cells with sub-G1 DNA content, and depolarization of the mitochondrial membrane in MV4-11 cells^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay^[1]

Cell Line:	HP cell lines (MV4-11, U937, RS4;11, HEL92.1.7, PER485) Non-HP cell lines (MCF-7, U87, HT29, H1299)
Concentration:	0.0001 µM-10 µM
Incubation Time:	72 hours
Result:	Was against human cell lines derived from hematological malignancies (HP) with IC ₅₀ values ranging from 1.10 nM to 5.86 nM, and was against non-HP cancers with IC ₅₀ ranging from 1.10 nM to 37.92 nM ^[1] .

Apoptosis Analysis^[1]

Cell Line:	MV4-11 cells
Concentration:	0.01-100 nM
Incubation Time:	48 hours
Result:	Exhibited hallmarks of apoptotic cell death

In Vivo

OT-82 (oral gavage; 20 or 40 mg/kg; 3 weeks) treatment increases survival to 100% and 56% at 40 or 20 mg/kg, respectively after treatment discontinuation in SC xenograft model of Burkitt's lymphoma^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	SC xenograft model of Burkitt's lymphoma in SCID mice ^[1]
Dosage:	20 or 40 mg/kg
Administration:	oral gavage; 3 weeks
Result:	Potently inhibited tumor growth of multiple myeloma mouse model.

REFERENCES

[1]. Korotchkina L, et al. OT-82, a novel anticancer drug candidate that targets the strong dependence of hematological malignancies on NAD biosynthesis. *Leukemia*. 2020 Jan 2.

Caution: Product has not been fully validated for medical applications. For research use only.

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