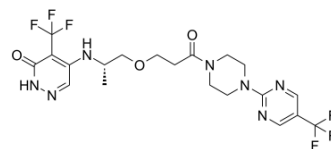


RBN-2397

Cat. No.:	HY-136174		
CAS No.:	2381037-82-5		
Molecular Formula:	C ₂₀ H ₂₃ F ₆ N ₇ O ₃		
Molecular Weight:	523.43		
Target:	PARP		
Pathway:	Cell Cycle/DNA Damage; Epigenetics		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 200 mg/mL (382.10 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Mass		1 mg	5 mg	10 mg
	Concentration				
	1 mM		1.9105 mL	9.5524 mL	19.1048 mL
	5 mM		0.3821 mL	1.9105 mL	3.8210 mL
	10 mM		0.1910 mL	0.9552 mL	1.9105 mL

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

In Vivo

- Add each solvent one by one: 1% DMSO >> 99% saline
Solubility: ≥ 0.5 mg/mL (0.96 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (3.97 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (3.97 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (3.97 mM); Clear solution
- Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (4.78 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

RBN-2397 is a potent, across species and orally active NAD⁺ competitive inhibitor of PARP7 (IC₅₀<3 nM). RBN-2397 selectively binds to PARP7 (K_d=0.001 μM) and restores IFN signaling. RBN-2397 has the potential for the study of advanced or metastatic solid tumors^{[1][2]}.

IC ₅₀ & Target	PARP-7 3 nM (IC ₅₀)	PARP-7 1 nM (Kd)
In Vitro	<p>RBN-2397 (0.0001-100 μM; 24 hours) inhibits cells proliferation with an IC₅₀ value of 20 nM in NCI-H1373 lung cancer cells^[2]. RBN-2397 (0.4 nM-1 μM; 24 hours) shows a restoration of type I IFN response by an increase in STAT1 phosphorylation as a dose-dependent manner in NCI-H1373 human lung cancer cells^[2]. RBN-2397 (0.0001-1 μM; 24 hours) inhibits cell MARYlation in a cell biochemical assay with an EC₅₀ value of 1 nM^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay^[2]</p>	
	Cell Line:	NCI-H1373 lung cancer cells
	Concentration:	0.0001 μM; 0.001 μM; 0.001 μM; 0.1 μM; 1 μM; 10 μM; 100 μM
	Incubation Time:	24 hours
	Result:	Blocked cell proliferation.
	Western Blot Analysis ^[2]	
	Cell Line:	NCI-H1373 lung cancer cells
	Concentration:	0.4 nM-1 μM
Incubation Time:	24 hours	
Result:	Increased p-STAT1 protein expression.	
In Vivo	<p>RBN-2397 (oral administration; 3-100 mg/kg; once daily; 24-32 days) induces tumor-specific adaptive immune memory in CT26 syngeneic model with durable complete responses in CT26 tumor-bearing BALB/c mice^[2]. RBN-2397 (oral administration; 3-100 mg/kg; once daily; 32 days) causes complete regressions at the dose 100 mg/kg and exerts a dose-dependent effects on tumor growth at dose levels of ≥30 mg/kg^[2]. The half-life (t_{1/2}) of RBN-2397 in vivo is 325 mins^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
	Animal Model:	CB17 SCID mice with NCI-H1373 xenografts ^[2]
	Dosage:	3 mg/kg, 10mg/kg, 30 mg/kg, 100 mg/kg
	Administration:	Oral administration; once daily; 24-32 days
	Result:	Decreased tumor volume and exerted anti-tumor effects.

CUSTOMER VALIDATION

- Cells. 2021, 10(3), 623.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. RBN-2397-Inhibiting PARP7, a Key monoPARP Cancer Dependency

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA