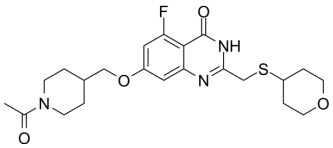
RBN-3143

Cat. No.:	HY-150207
CAS No.:	2360853-16-1
Molecular Formula:	$C_{22}H_{28}FN_3O_4S$
Molecular Weight:	449.54
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 : 25 mg/mL (55.61 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2245 mL	11.1225 mL	22.2450 mL
	5 mM	0.4449 mL	2.2245 mL	4.4490 mL
	10 mM	0.2224 mL	1.1122 mL	2.2245 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: ≥ 2.5 mg/mL (5.56 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.56 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

RBN-3143 is a potent and NAD+-competitive catalytic PARP14 inhibitor with an IC_{50} value of 4 nM. RBN-3143 inhibits PARP14-mediated ADP-ribosylation and stabilizes PARP14 in cell lines. RBN-3143 can be used in research of lung inflammation[1].

IC_{50} & Target

PARP14 4 nM (IC_{50})	PARP10 1600 nM (IC_{50})	PARP15 4200 nM (IC_{50})	PARP4 42700 nM (IC_{50})
PARP3 >100000 nM (IC_{50})	PARP2 >100000 nM (IC_{50})	PARP1 >100000 nM (IC_{50})	

In Vivo

RBN-3143 (5 μg; intranasal administration) can improve steroid-resistant asthma mouse models[1].

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

Animal Model:	Mouse of asthma models[1]
Dosage:	5 ug
Administration:	Intranasal administration
Result:	Suppressed the accumulation of alarmins TSLP, IL-33, and IL-25.

REFERENCES

[1]. Niepel M, et, al. The PARP14 inhibitor RBN-3143 suppresses lung inflammation in preclinical models. European Respiratory Journal 2022 60: 4642.

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