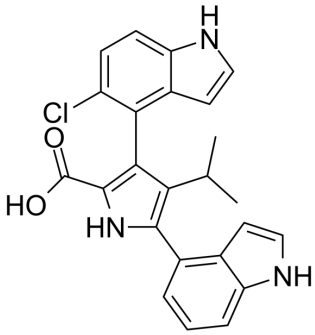
RB-3

Cat. No.:	HY-139514
CAS No.:	2396639-11-3
Molecular Formula:	$C_{24}H_{20}ClN_3O_2$
Molecular Weight:	417.89
Target:	E1/E2/E3 Enzyme
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (239.30 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3930 mL	11.9649 mL	23.9297 mL
	5 mM	0.4786 mL	2.3930 mL	4.7859 mL
	10 mM	0.2393 mL	1.1965 mL	2.3930 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: ≥ 3.25 mg/mL (7.78 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.25 mg/mL (7.78 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

RB-3, a PRC1 inhibitor, binds to RING1B-BMI1f, with a K_d of 2.8 μM[1].

IC_{50} & Target

Kd: 2.8 μM (RING1B-BMI1f)[1].

In Vitro

RB-3 decreases the global level of H2A ubiquitination and induces differentiation in leukemia cell lines and primary acute myeloid leukemia (AML) samples[1].
RB-3 inhibits H2A ubiquitination with an IC_{50} of 1.6 μM[1].
RB-3 inhibits PRC1 and disrupts the interaction with nucleosomes[1].
RB-3 reduces colony formation in a mixed lineage leukemia (MLL)-eleven nineteen leukemia (ENL) model[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	TEX cells.
Concentration:	6, 12, 25 μM.
Incubation Time:	8d.
Result:	Dose-dependently increased C/EBPα-p42 protein levels.

REFERENCES

[1]. Shirish Shukla, et al. Small-molecule inhibitors targeting Polycomb repressive complex 1 RING domain. Nat Chem Biol. 2021 Jul;17(7):784-793.

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