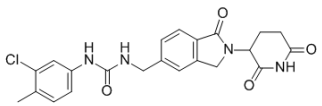
CC-885

Cat. No.:	HY-101488
CAS No.:	1010100-07-8
Molecular Formula:	$C_{22}H_{21}ClN_4O_4$
Molecular Weight:	440.88
Target:	E1/E2/E3 Enzyme
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



Solvent & Solubility

In Vitro

DMSO : 67.5 mg/mL (153.10 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2682 mL	11.3410 mL	22.6819 mL
	5 mM	0.4536 mL	2.2682 mL	4.5364 mL
	10 mM	0.2268 mL	1.1341 mL	2.2682 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: ≥ 2.25 mg/mL (5.10 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: 2.25 mg/mL (5.10 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

CC-885 is a cereblon (**CRBN**) modulator with potent anti-tumour activity.

IC_{50} & Target

CRBN[1].

In Vitro

Acute myeloblatlic leukemia (AML) cell lines, human liver epithelial cell line (THLE-2) and human peripheral blood mononuclear cells (PBMC) are treated with varying concentrations of CC-885, with IC_{50}s of $10\times^{-6}$-1 μM. The effect of CC-885 on cell proliferation in AML cell lines, THLE-2 and human PBMC is more powerful than Lenalidomide and Pomalidomide with IC_{50}s>10 μM. To address whether the cereblon-dependent degradation of GSPT1 is responsible for the cytotoxic effects of CC-885, a GSPT1 mutant that retains its normal function, but loses CC-885-dependent cereblon binding, is used to distinguish the role of GSPT1 from that of other substrates. CC-885 is tested in 293T HEK

cells stably expressing the CC-885-sensitive or -resistant GSPT1 variants. Overexpression of a resistant variant GSPT1 Δ(1–138)/(G575N) completely abrogate the CC-885-induced anti-proliferation, whereas overexpression of a CC-885-sensitive variant GSPT1Δ(1-138) only confer partial protection. Similar results are obtained in AML cell lines[1].

PROTOCOL

Cell Assay [1]

Human cancer cell lines cultured in the growth medium are seeded into black 384-well plates containing DMSO or test compounds such as **CC-885** (**10×$^{-6}$-1 μM**). The seeding density for each cell line is optimized to allow the cell growth in the linear range during a 3-day culture period. To test the compound effect on cell proliferation in acute myeloid leukaemia (AML) cell lines, 5,000 to 10,000 cells per well in 200 μl complete culture media are seeded into black 96-well plates containing DMSO or test compounds such as CC-885. After 48 or 72 h, cell proliferation is assessed using the CellTiter-Glo (CTG) Luminescent Cell Viability Assay[1].

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

REFERENCES

[1]. Mary E. Matyskiela, et al. A novel cereblon modulator recruits GSPT1 to the CRL4CRBN ubiquitin ligase. Nature. 2016 Jul 14;535(7611):252-7.

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