

Product Data Sheet

Product Name: CC-885
Cat. No.: GC18862

Chemical Properties

Cas. No. 1010100-07-8

Chemical Name N-(3-chloro-4-methylphenyl)-N'-[[2-(2,6-dioxo-3-piperidiny)-2,3-dihydro-1-oxo-1H-isindol-5-yl]methyl]-urea

SMILES O=C1NC(CCC1N2C(C(C=CC(CNC(NC3=CC(Cl)=C(C)C=C3)=O)=C4)=C4C2)=O)=O

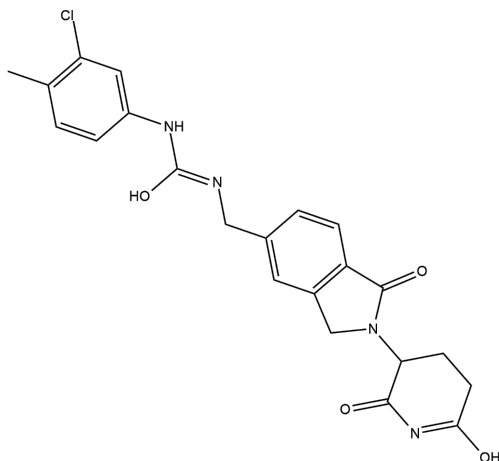
Formula $C_{22}H_{21}ClN_4O_4$ M.Wt 440.9

Solubility DMF: 12.5 mg/ml, DMSO: 12.5 mg/ml, DMSO:PBS(pH 7.2) (1:4): 0.2 mg/ml Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

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

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Cell experiment: 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 (10×10^{-6} μ M). 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 μ l 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].

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.

Background

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

Acute myeloblastic 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 IC₅₀s of 10×10^{-6} μ M. 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 IC₅₀s > 10 μ M. 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 GSPT1 Δ (1-138) only confer partial protection. Similar results are obtained in AML cell lines[1].

References:

[1]. Mary E. Matyskiela, et al. A novel cereblon modulator recruits GSPT1 to the CRL4CRBN ubiquitin

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