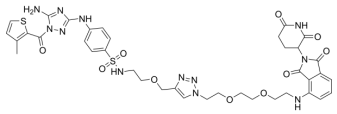
CPS2

Cat. No.:	HY-141680
CAS No.:	2756741-90-7
Molecular Formula:	$C_{38}H_{42}N_{12}O_{10}S_2$
Molecular Weight:	890.94
Target:	CDK; PROTACs
Pathway:	Cell Cycle/DNA Damage; PROTAC
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 : 32.5 mg/mL (36.48 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1224 mL	5.6121 mL	11.2241 mL
	5 mM	0.2245 mL	1.1224 mL	2.2448 mL
	10 mM	0.1122 mL	0.5612 mL	1.1224 mL

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

BIOLOGICAL ACTIVITY

Description

CPS2 is a first-in-class, highly potent, selective and irreversible PROTAC CDK2 degrader (IC_{50}= 24 nM). CPS2 can be used for the research of acute myeloid leukemia[1].

IC_{50} & Target

CDK2
24 nM (IC_{50})

In Vitro

CPS2 (5~333 nM; 12 hours; Ramos cells) stands out as the most potent degrader[1].
CPS2 (0.5~2 μM; HSCs) inhibits the proliferation of HSCs without inducing cytotoxicity. CPS2 (1~10000 nM; 48 hours; NB4 cells) induces potent CDK2 degradation. CPS2 (250 nM; 0~6 hours; Ramos and NB4 cells) rapidly induces the degradation of CDK2. CPS2 (10~500 nM; 6 hours; Ramos cells) induces only CDK2 degradation and does not directly perturb the other CDK proteins under subnanomolar concentration conditions. CPS2 (250 nM; 6 hours; NB4 cells) stands out as the most downregulated protein in cells treated for 6 hours with CPS2, confirming the selectivity of CPS2 for CDK2. CPS2 (0~250 nM; NB4 cells) makes the levels of CDK2 obviously decreased. CPS2 (2 μM; 3 days; HL60 cells) obviously promotes ATRA-induced CD11b upregulation[1].
The antileukemic effects of CPS2 are mediated by CDK2 degradation. CPS2 also induces granulocytic differentiation of HSCs,

as assessed by cell morphological analysis[1].

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

Western Blot Analysis[1]

Cell Line:	Ramos cells
Concentration:	5~333 nM
Incubation Time:	12 hours
Result:	Stood out as the most potent degrader.

CUSTOMER VALIDATION

- bioRxiv. 2024 Feb 2:2024.01.31.578216.

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REFERENCES

[1]. Wang L, et al. Discovery of a first-in-class CDK2 selective degrader for AML differentiation therapy. Nat Chem Biol. 2021;17(5):567-575

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