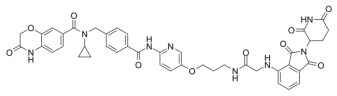
MS159

Cat. No.:	HY-151101
CAS No.:	3031353-59-7
Molecular Formula:	$C_{43}H_{40}N_8O_{10}$
Molecular Weight:	828.83
Target:	PROTACs
Pathway:	PROTAC
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 (120.65 mM; ultrasonic and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.2065 mL	6.0326 mL	12.0652 mL
5 mM	0.2413 mL	1.2065 mL	2.4130 mL
10 mM	0.1207 mL	0.6033 mL	1.2065 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 (3.02 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MS159 is a potent nuclear receptor binding SET structural domain protein 2 (NSD2) PROTACdegrader. MS159 inhibits the growth of tumour cells. MS159 is a useful chemical tool for exploring the role of NSD2 in health and disease[1].

In Vitro

MS159 (0.5-10 μM, 48 h) can induce the degradation of NSD2 protein in a time- and dose-dependent manner while the induced NSD2 degradation is reversible in 293FT cells[1].
MS159 (2.5 μM, 72 h) can effectively degrade NSD2 as well as IKZF1 and IKZF3 in multiple myeloma cell lines KMS11 and H929 while the degradation of IKZF1/3 is mediated through a ubiquitin-proteasome system (UPS-) and cereblon (CRBN-) dependent mechanism[1].
MS159 (2.5 μM, 8 days) can effectively inhibit the growth of KMS11 and H929 multiple myeloma cells through induced NSD2 degradation[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Western Blot Analysis[1]

Cell Line:	293FT cells
Concentration:	0.5-10 μM
Incubation Time:	0-72 hours
Result:	Resulted in binding affinity for the NSD2-PWWP1 structural domain with a K_d value of 1.1 μM, and induced degradation of NSD2 with the DC_{50} value of 5.2 μM after 48 hours.

REFERENCES

[1]. Fanye Meng, et al. Discovery of a First-in-Class Degrader for Nuclear Receptor Binding SET Domain Protein 2 (NSD2) and Ikaros/Aiolos. J Med Chem. 2022 Aug 11;65(15):10611-10625.

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