Thalidomide-Propargyne-PEG2-COOH

Cat. No.: HY-138777

CAS No.: 2797619-65-7

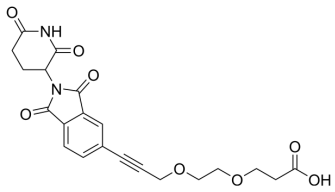
Molecular Formula: $C_{21}H_{20}N_2O_8$

Molecular Weight: 428.39

Target: E3 Ligase Ligand-Linker Conjugates

Pathway: PROTAC

Storage: -20°C, stored under nitrogen, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (291.79 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3343 mL	11.6716 mL	23.3432 mL
	5 mM	0.4669 mL	2.3343 mL	4.6686 mL
	10 mM	0.2334 mL	1.1672 mL	2.3343 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: ≥ 2.08 mg/mL (4.86 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.86 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.86 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Thalidomide-Propargyne-PEG2-COOH is a synthesized E3 ligase ligand-linker conjugate that incorporates the Thalidomide based cereblon ligand and a linker used in PROTAC technology[1]. Thalidomide-Propargyne-PEG2-COOH is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

IC_{50} & Target

Cereblon

In Vitro

PROTACs contain two different ligands connected by a linker; one is a ligand for an E3 ubiquitin ligase and the other is for

the target protein. PROTACs exploit the intracellular ubiquitin-proteasome system to selectively degrade target proteins[2].

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

REFERENCES

[1]. Sato T, et al. Cereblon-Based Small-Molecule Compounds to Control Neural Stem Cell Proliferation in Regenerative Medicine. Front Cell Dev Biol. 2021;9:629326. Published 2021 Mar 11.

[2]. Nalawansha DA, et al. PROTACs: An Emerging Therapeutic Modality in Precision Medicine. Cell Chem Biol. 2020;27(8):998-989.

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