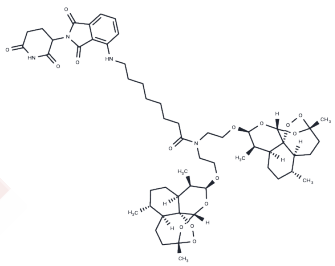
Data Sheet (Cat.No.T78805)

TargetMol

AD4

Chemical Properties



CAS No. : 2918262-09-4

Formula: C55H78N4O15

Molecular Weight: 1035.23

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	AD4 is an artemisinin-derived proteolysis targeting chimera that selectively degrades PCLAF protein with subnanomolar potency in RS4;11 leukemia cells,AD4 leads to activation of the p21/Rb signaling axis, robust anti-tumor activity, and significantly prolonged survival in RS4;11 xenograft NOD/SCID mouse models, demonstrating both in vitro and in vivo therapeutic efficacy.
Targets(IC50)	Others,PROTACs
In vitro	AD4 functions as a bifunctional PROTAC that recruits an E3 ubiquitin ligase to the PCLAF protein. Mechanistically, it utilizes an Artemisinin-based scaffold as a warhead to bind PCLAF, facilitating its proximity to the E3 ligase. This interaction leads to the polyubiquitination of PCLAF and its subsequent degradation via the proteasome pathway. In cellular assays, AD4 exhibits an IC50 of 0.6 nM against PCLAF. The depletion of PCLAF levels results in the disruption of DNA repair mechanisms and the suppression of tumor cell proliferation [1].

Solubility Information

Solubility	DMSO: 80 mg/mL (77.28 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.966 mL	4.8298 mL	9.6597 mL
5 mM	0.1932 mL	0.966 mL	1.9319 mL
10 mM	0.0966 mL	0.483 mL	0.966 mL
50 mM	0.0193 mL	0.0966 mL	0.1932 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Li Y, et al. Facilitated Drug Repurposing with Artemisinin-Derived PROTACs: Unveiling PCLAF as a Therapeutic Target. J Med Chem. 2023 Aug 24;66(16):11335-11350. .