Data Sheet (Cat.No.T216907)

TargetMol

PROTAC HIF-1α degrader-2

Chemical Properties

CAS No. : 3095636-64-6

Formula: C50H65N7O9S

Molecular Weight: 940.17

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	PROTACHIF-1αdegrader-2 is a highly efficient and selective PROTAC degrader targeting HIF-1α. It facilitates the degradation of HIF-1α via the ubiquitin-proteasome pathway by promoting the formation of the HIF-1α/VHL ternary complex. This compound inhibits the proliferation, migration, and colony formation of HeLa cells while inducing apoptosis (apoptosis). Additionally, PROTACHIF-1αdegrader-2 reduces the expression of p-MEK and p-AKT in the MAPK and PI3K/AKT pathways. It is useful for cervical cancer research.
Targets(IC50)	Apoptosis,HIF/HIF Prolyl-Hydroxylase,Akt,p38 MAPK,PI3K,PROTACs
In vitro	PROTAC HIF-1α degrader-2 (Compound Z12) exhibits significant antiproliferative activity against HeLa cells with an IC50 of 10.10 μM. In a dose-dependent manner, it degrades HIF-1α protein in HeLa cells (0-80 μM, 24 hours) with a DC50 of 22.40 μM, exhibiting a "hook effect" at concentrations over 40 μM. At 20 μM, it degrades HIF-1α in a time-dependent fashion, achieving a degradation rate of 59.7% after 36 hours of incubation, maintaining the effect for 24 hours post-removal of the compound. Over a period of 48 hours, at concentrations ranging from 0 to 20 μM, the compound induces acute cytotoxicity in HeLa cells, reducing live cells (green fluorescence) and increasing dead cells (red fluorescence) in a dose-dependent manner. It also inhibits colony formation in HeLa cells over 15 days at concentrations between 0 and 10 μM in a dose-dependent manner. Additionally, PROTAC HIF-1α degrader-2 impedes the migratory ability of HeLa cells (0-20 μM, 0-24 hours)and induces apoptosis in HeLa cells, causing morphological changes and increasing apoptotic rates at 0-20 μM over 24-48 hours. Furthermore, it reduces protein levels of p-MEK (44.6%-89.1%) and p-AKT (39.0%-63.0%) dose-dependently in HeLa cells within 24 hours.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.0636 mL	5.3182 mL	10.6364 mL
5 mM	0.2127 mL	1.0636 mL	2.1273 mL
10 mM	0.1064 mL	0.5318 mL	1.0636 mL
50 mM	0.0213 mL	0.1064 mL	0.2127 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.