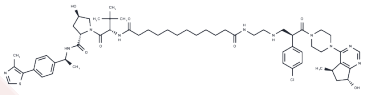
Data Sheet (Cat.No.T39930)

TargetMol

MS98

Chemical Properties



CAS No. : 2376137-31-2

Formula: C58H81ClN10O7S

Molecular Weight: 1097.86

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	MS98 is a highly effective and specific PROTAC AKT degrader compound that effectively targets and depletes total AKT (T-AKT) within cells, exhibiting a DC 50 value of 78 nM. This compound readily binds to AKT1, AKT2, and AKT3 with respective dissociation constants (Kd s) of 4 nM, 140 nM, and 8.1 nM.
Targets(IC50)	Others,Akt,PROTACs
In vitro	The VHL-recruiting degrader MS98 is a potent AKT degrader that induces AKT protein degradation and inhibits downstream signaling pathways, thereby suppressing cancer cell proliferation. Utilizing the ubiquitin-proteasome system (UPS), MS98 achieves concentration- and time-dependent AKT degradation. Specifically, at concentrations of 10 nM to 10 μM, MS98 significantly inhibits proliferation across various cancer cell lines and depletes cellular total AKT (T-AKT) with a DC50 of 78±64 nM. Cell viability assays show MS98 inhibits growth in BT474, PC3, and MDA-MB-468 cells with GI50 values of 1.3 ±0.3 μM, 9.2±1.3 μM, and 3.8±1.2 μM, respectively. Western Blot analysis of BT474 cells with MS98 (1 nM to 10 μM over 24 hours) demonstrates potent AKT degradation, confirming its efficacy in inhibiting cancer cell growth.
In vivo	MS98, administered through a single intraperitoneal (IP) injection at a dosage of 50 mg/kg, exhibits bioavailability in male Swiss albino mice. Pharmacokinetic analysis reveals that the maximum plasma concentration (C max) of approximately 3.5 μM is achieved 2 hours post-injection, with plasma levels remaining above 3 μM for a duration of over 8 hours.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.9109 mL	4.5543 mL	9.1086 mL
5 mM	0.1822 mL	0.9109 mL	1.8217 mL
10 mM	0.0911 mL	0.4554 mL	0.9109 mL
50 mM	0.0182 mL	0.0911 mL	0.1822 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

Yu X, et al. Design, Synthesis, and Evaluation of Potent, Selective, and Bioavailable AKT Kinase Degraders. J Med Chem. 2021;64(24):18054-18081.