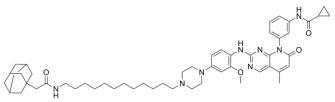
Akt3 degrader 1

Cat. No.:	HY-151606
CAS No.:	2836342-69-7
Molecular Formula:	$C_{53}H_{72}N_8O_4$
Molecular Weight:	885.19
Target:	Akt
Pathway:	PI3K/Akt/mTOR
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Akt3 degrader 1 (compound 12l) is a selective Akt3 degrader that overcomes Osimertinib (HY-15772)-induced resistance in H1975OR NSCLC cells. Akt3 degrader 1 also has anti-proliferative activity and significantly inhibits tumour growth in mice. Akt3 degrader 1 can be used in the study of drug-resistant non-small cell lung cancer[1].

IC_{50} & Target

Akt3[1].

In Vitro

Akt3 degrader 1 (0.001-100 μM; 24 h) shows antiproliferative effects on H1975OR cells with an IC_{50} of 0.972 μM[1].
Akt3 degrader 1 (1.6, 8, 40, 200, 1000 nM; 24 h) induces degradation of Akt3 through the ubiquitin proteasome-mediated proteolysis process in NSCLC cell lines[1].
Akt3 degrader 1 (10, 100 nM) selectively and dose-dependently degrades exogenous PH domain-only Akt3 protein but not the Akt3 del PH mutant in H1975OR cells[1].
Akt3 degrader 1 overcomes osimertinib-induced resistance in H1975OR NSCLC cells via disrupting the noncatalytic functions of Akt3[1].

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

Cell Proliferation Assay[1]

Cell Line:	H1975OR cells
Concentration:	0.001-100 μM
Incubation Time:	24 h
Result:	Inhibited growth of H1975OR cells with an IC_{50} of 0.972 μM.

Western Blot Analysis[1]

Cell Line:	A549, HCC827, H1975, H1975OR, PC9, H1299, and H460 cells
Concentration:	1.6, 8, 40, 200, 1000 nM
Incubation Time:	24 h
Result:	Selectively induced Akt3 degradation in all of these cell lines in a dose-dependent manner, whereas had minimal influence on Akt1 and Akt2 protein levels.

In Vivo	Akt3 degrader 1 (10, 20 mg/kg; i.p.; every 3 days for 5 weeks) induces significant tumor growth inhibition (TGI) with an approximately TGI value of 75% in mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	NOD-SCID-IL2Rg-/-(NSI) mice (H1975OR xenograft model)[1].
Dosage:	10, 20 mg/kg
Administration:	Intraperitoneal administration; every 3 days for 5 weeks
Result:	Inhibited tumor growth without causing obvious body weight loss or other signs of toxicity.

REFERENCES

[1]. Xu F, et al. Discovery of Isoform-Selective Akt3 Degraders Overcoming Osimertinib-Induced Resistance in Non-Small Cell Lung Cancer Cells. J Med Chem. 2022 Oct 27;65(20):14032-14048.

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