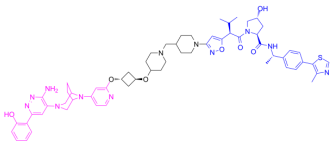
A947

Cat. No.:	HY-148381
CAS No.:	2378056-80-3
Molecular Formula:	$C_{61}H_{76}N_{12}O_7S$
Molecular Weight:	1121.4
Target:	Epigenetic Reader Domain; PROTACs; Apoptosis
Pathway:	Epigenetics; PROTAC; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

A947 is a potent and selective SMARCA2 proteolysis-targeting chimera molecule (PROTAC). A947 also is a potent and moderately selective SMARCA2 degrader. A947 has binding affinity to the SMARCA2 bromodomain with a K_d value of 93 nM. A947 can be used for the research of cancer[1].

IC_{50} & Target

Kd: 93 nM (SMARCA2), 65 nM (SMARCA4); DC50 for SMARCA2: 39 pM (in SW1573 cells)[1].

In Vitro

A947 has binding affinity to the SMARCA2 and SMARCA4 bromodomains with K_d values of 93 nM and 65 nM, respectively[1].
A947 can potently degrade SMARCA2 in SW1573 cells with a DC_{50} value of 39 pM[1].
A947 (100 nM, 500 nM) mediates ubiquitination and degradation of SMARCA2/4[1].
A947 (0-500 nM) can inhibit growth of SMARCA4-mutant NSCLC cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	SW1573 cells
Concentration:	0-10 nM
Incubation Time:	18 h
Result:	Degraded SMARCA2 with amaximal degradation of 96% in 10 nM.

Cell Viability Assay[1]

Cell Line:	NCI-H1944 cells
Concentration:	0-500 nM
Incubation Time:	7 days
Result:	Showed the dose-dependent inhibition of growth.

Cell Cycle Analysis[1]

Cell Line:	HCC2302, NCI-H1793, RERF-LC-AI, NCI-H1944, Calu-6, NCI-H460, A427 cells

Concentration:	0-500 nM
Incubation Time:	48 h
Result:	Showed G1 arrest in SMARCA4^{mut} models.

Apoptosis Analysis[1]

Cell Line:	NCI-H1944, NCI-H838 cells
Concentration:	100 nM
Incubation Time:	50 h
Result:	Induced cells toward apoptotic cell death.

In Vivo

A947 (i.v.; 40 mg/kg; single-dose, 2 week or every other week, 30 days) has active in SMARCA4-mutant NSCLC xenograft models in vivo[1].

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

Animal Model:	SMARCA4-mutant NSCLC xenograft models
Dosage:	40mg/kg
Administration:	Intravenous , single-dose, 2 week; Intravenous , every other week, 30 days
Result:	Rapidly reduced the tumor SMARCA2 protein levels and significant decreased the tumor growth.

REFERENCES

[1]. Jennifer Cantley, et al. Selective PROTAC-mediated degradation of SMARCA2 is efficacious in SMARCA4 mutant cancers. Nat Commun. 2022 Nov 10;13(1):6814.

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