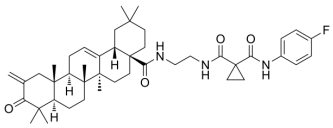
Anti-CSCs agent-1

Cat. No.:	HY-148713
CAS No.:	2251753-58-7
Molecular Formula:	$C_{44}H_{60}FN_3O_4$
Molecular Weight:	713.96
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Anti-CSCs agent-1 is a potent anti-CSCs agent. Anti-CSCs agent-1 inhibits cell growth and cell migration. Anti-CSCs agent-1 induces Apoptosis. Anti-CSCs agent-1 inhibits the viability of CSCs. Anti-CSCs agent-1 enhances the production of ROS in CSCs. Anti-CSCs agent-1 shows antitumor activity[1].

In Vitro

Anti-CSCs agent-1 (compound 48) (0, 0.25, 0.5 μM) inhibits the colony formation and cell migration in A375 and B16F10 cells in a dose-dependent manner[1].

Anti-CSCs agent-1 (0, 1, 2, 3, 4 μM; 48 h) induces apoptosis with increases in the expression of cleaved PARP, cleaved caspase-3, P-53 and Bax in a dose-dependent manner[1].

Anti-CSCs agent-1 (0, 0.25, 0.5, 1.0, 2.0 μM; 24 h) reverses epithelial-mesenchymal transition (EMT) by significantly upregulating the expression of E-cadherin in a dose-dependent manner[1].

Anti-CSCs agent-1 (0-10 μM; 15 days) inhibits the viability of cancer stem cells (CSCs) with IC_{50}s of 3.04, 1.24 μM for spheriod A357, B16F10 cells, respectively[1].

Anti-CSCs agent-1 (0-2 μM; 24 h) markedly enhances the production of ROS in CSCs in a dose-dependent manner[1].

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

Cell Proliferation Assay[1]

Cell Line:	MDA-MB-231, 4T1, A375, B16F10, PANC-1, A549, LLC cells
Concentration:	0-50 μM
Incubation Time:	48 h
Result:	Showed antiproliferative activity with IC_{50}s of 3.152, 0.7401, 0.8929, 0.6744, 1.107, 11.56, 0.9066 μM for MDA-MB-231, 4T1, A375, B16F10, PANC-1, A549, LLC cells, respectively.

Apoptosis Analysis[1]

Cell Line:	A375, B16F10 cells
Concentration:	0, 1, 2, 3 μM
Incubation Time:	48 h
Result:	Induced cell apoptosis in a dose-dependen manner.

Western Blot Analysis[1]

Cell Line:	A375, B16F10 cells
Concentration:	0, 1, 2, 3, 4 μM
Incubation Time:	48 h
Result:	Increased the expression of cleaved PARP, cleaved casepase-3, P-53 and Bax in a dose-dependent manner.

In Vivo

Anti-CSCs agent-1 (5 mg/kg; i.p.; daily for 15 days) shows antitumor activity in mouse[1].

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

Animal Model:	C57BL/6J mice (A375 cells)[1]
Dosage:	5 mg/kg
Administration:	I.p.; daily for 15 days
Result:	Significantly inhibited tumor growth.

REFERENCES

[1]. Liu X, et al. Synthesis and Discovery Novel Anti-Cancer Stem Cells Compounds Derived from the Natural Triterpenoic Acids. J Med Chem. 2018 Dec 13;61(23):10814-10833.

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