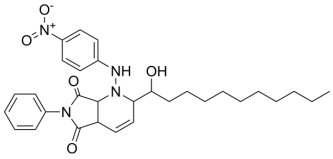
A12B4C3

Cat. No.:	HY-100683
CAS No.:	1005129-80-5
Molecular Formula:	$C_{30}H_{38}N_4O_5$
Molecular Weight:	534.65
Target:	Phosphatase
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 53 mg/mL (99.13 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8704 mL	9.3519 mL	18.7038 mL
	5 mM	0.3741 mL	1.8704 mL	3.7408 mL
	10 mM	0.1870 mL	0.9352 mL	1.8704 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

A12B4C3 is a potent human polynucleotide kinase/phosphatase (hPNKP) inhibitor with an IC_{50} value of 0.06 μM. A12B4C3 has antiproliferative activity against cancer cells. A12B4C3 can also enhance the radiosensitivity of certain cancer cells[1].

IC_{50} & Target

IC_{50}: 0.06 μM (hPNKP)[1]

In Vitro

A12B4C3 (0-10 μM) strongly inhibits hPNKP phosphatase activity[1].
A12B4C3 (0-100 μM; 72 h) reduces A549 and MDA-MB-231 cell proliferation in a dose dependent manner[1].
A12B4C3 (1 μM; 24 h) increases the radiosensitivity of A549 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	A549 and MDA-MB-231
Concentration:	0, 1, 5, 10, 50 and 100 μM

Incubation Time:	72 h
Result:	Reduced cell proliferation in a dose dependent manner, and up to ~50% at 100 μM.

Cell Proliferation Assay[1]

Cell Line:	A549 and MDA-MB-231 (incubated with A12B4C3 for 2h then irradiated 0-10 Gy)
Concentration:	1 μM
Incubation Time:	24 h
Result:	Almost doubled the radiosensitivity of A549 cells.

REFERENCES

[1]. Freschauf GK, et al. Identification of a small molecule inhibitor of the human DNA repair enzyme polynucleotide kinase/phosphatase. Cancer Res. 2009 Oct 1;69(19):7739-46.

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