Antitumor agent-91

Cat. No.: HY-149927

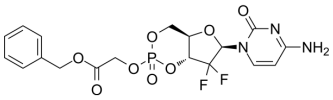
Molecular Formula: $C_{18}H_{18}F_2N_3O_8P$

Molecular Weight: 473.32

Target: Others

Pathway: Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Antitumor agent-91 is a cyclic phosphate ester derivative with anticancer and anti-proliferative activities. Antitumor agent-91 has potential application in human castration resistant prostate cancer and pancreatic cancer[1].

In Vitro

Antitumor agent-91 (Compound 18c) has anti-tumor activity against MM1. S, BxPC-3, MP-2, 22Rv1, MV4-11, Jeko-1 and HUH7 cells with IC_{50} values of 3.6 nM, 16.5 nM, 12.5 nM, 10.6 nM, 5.4 nM, 19.2 nM and 16.2 nM, respectively[1].

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

Western Blot Analysis[1]

Cell Line:	BxPC-3 cells.
Concentration:	25 nM, 50 nM and 100 nM.
Incubation Time:	24 h.
Result:	Increased the expression of P21.

Cell Cycle Analysis[1]

Cell Line:	BxPC-3 cells.
Concentration:	25 nM, 50 nM and 100 nM.
Incubation Time:	24 h.
Result:	Induced cell S phase arrest.

In Vivo

Antitumor agent-91 (Compound 18c) (50 mg/kg; i.p.; twice a week for four weeks) significantly inhibits tumor growth in a castrated male Balb/c nude mouse model implanted with 22Rv1 tumor[1].

Pharmacokinetic (PK) parameters of Antitumor agent-91 in Beagle Dogs[1]

Route	Dose (mg/kg)	$AUC_{0-\infty}$ (h•ng/mL)	$T_{1/2}$ (h)	CL (mL/h/kg)	C_{max} (ng/mL)
Intravenous	1	520.24±79.49	0.12±0.046	1952±295	3600.3±325.59

injection

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REFERENCES

[1]. Zhang L, et al. Design, Synthesis, and Anti-Cancer Evaluation of Novel Cyclic Phosphate Prodrug of Gemcitabine. J Med Chem. 2023 Mar 23;66(6):4150-4166.

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