Sangivamycin

Cat. No.: HY-118384

CAS No.: 18417-89-5

Molecular Formula: $C_{12}H_{15}N_5O_5$

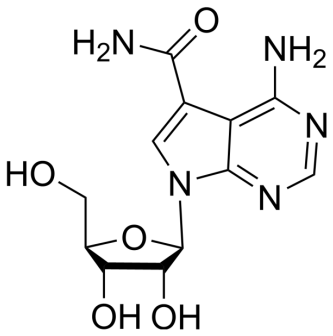
Molecular Weight: 309

Target: PKC; Nucleoside Antimetabolite/Analog

Pathway: Epigenetics; TGF-beta/Smad; Cell Cycle/DNA Damage

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 : 100 mg/mL (323.62 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.2362 mL	16.1812 mL	32.3625 mL
5 mM	0.6472 mL	3.2362 mL	6.4725 mL
10 mM	0.3236 mL	1.6181 mL	3.2362 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (8.09 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.09 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sangivamycin (NSC 65346), a nucleoside analog, is a potent inhibitor of protein kinase C (PKC) with an K_i of 10 μM. Sangivamycin has potent antiproliferative activity against a variety of human cancers[1][2].

In Vitro

Sangivamycin has differential antitumor effects in drug-sensitive MCF7/wild type (WT) cells, causing growth arrest, and in multidrug-resistant MCF7/adriamycin-resistant (ADR) human breast carcinoma cells, causing massive apoptotic cell death[2].

Sangivamycin (0.3 μM; 0-72 hours), shows almost maximal cytocidal (for MCF7/ADR) or cytostatic (for MCF7/WT) effects[2].
Sangivamycin activates caspases in MCF7/ADR cells. Upon exposure of MCF7/ADR cells to Sangivamycin (0.3 μM;), a vast amount of cleavage of lamin A to a 28-kDa fragment is detected within 48 hours[2].

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

CUSTOMER VALIDATION

- Cell Death Dis. 2023 Oct 13;14(10):676.

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REFERENCES

[1]. Loomis CR, Bell RM. Sangivamycin, a nucleoside analogue, is a potent inhibitor of protein kinase C. J Biol Chem. 1988;263(4):1682-1692.

[2]. Lee SA, et al. The nucleoside analog sangivamycin induces apoptotic cell death in breast carcinoma MCF7/adriamycin-resistant cells via protein kinase Cdelta and JNK activation. J Biol Chem. 2007;282(20):15271-15283.

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