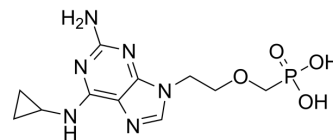


cPrPMEDAP

Cat. No.:	HY-101677		
CAS No.:	182798-83-0		
Molecular Formula:	C ₁₁ H ₁₇ N ₆ O ₄ P		
Molecular Weight:	328.26		
Target:	Drug Metabolite		
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 : 10 mg/mL (30.46 mM; ultrasonic and warming and heat to 60°C)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.0464 mL	15.2318 mL	30.4637 mL
	5 mM	0.6093 mL	3.0464 mL	6.0927 mL
	10 mM	0.3046 mL	1.5232 mL	3.0464 mL

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

BIOLOGICAL ACTIVITY

Description

cPrPMEDAP is an intermediate metabolite of GS-9219. cPr-PMEDAP functions as a proagent of the guanine nucleotide analog PMEG and has antiproliferative activity. cPrPMEDAP is negatively charged at physiologic pH and has poor permeability into the skin^{[1][2]}.

In Vitro

cPrPMEDAP shows antiproliferative activity in SiHa cells with an EC₅₀ of 290 nM (SiHa cells: HPV-transformed cervical carcinoma cell lines)^[1]. PMEG forms an active phosphorylated metabolite, PMEG diphosphate (PMEG-DP), in cells, which inhibits the growth of various transformed cell lines due to potent inhibition of the nuclear DNA polymerases α, δ and ε, resulting in inhibition of DNA synthesis and/or DNA repair. In animal models, PMEG has antiproliferative effects; the utility of PMEG as an antiproliferative agent is limited by its poor cellular permeability and toxicity. cPrPMEDAP has similar antiproliferative effects in vitro and reduced toxicity in vivo but, like PMEG, is negatively charged at physiologic pH and has poor permeability into the skin^[1].

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

REFERENCES

[1]. Compton ML, et al. 9-(2-Phosphonylmethoxyethyl)-N6-cyclopropyl-2,6-diaminopurine (cpr-PMEDAP) as a prodrug of 9-(2-phosphonylmethoxyethyl)guanine (PMEG). *Biochem Pharmacol.* 1999;58(4):709-714.

[2]. Wolfgang GH, et al. GS-9191 is a novel topical prodrug of the nucleotide analog 9-(2-phosphonylmethoxyethyl)guanine with antiproliferative activity and possible utility in the treatment of human papillomavirus lesions. *Antimicrob Agents Chemother.* 2009;53(7):2777-2784.

Caution: Product has not been fully validated for medical applications. For research use only.

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