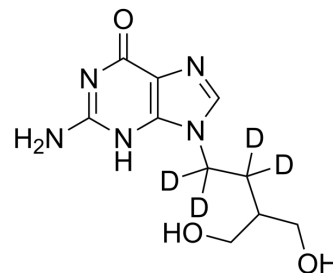


Penciclovir-d₄

Cat. No.:	HY-17424S		
CAS No.:	1020719-72-5		
Molecular Formula:	C ₁₀ H ₁₁ D ₄ N ₅ O ₃		
Molecular Weight:	257.28		
Target:	HSV; Isotope-Labeled Compounds		
Pathway:	Anti-infection; Others		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description

Penciclovir-d₄ is the deuterium labeled Penciclovir. Penciclovir is reported to be potent against HSV types 1 and 2 with IC50 of 0.04-1.8 µg/mL and 0.06-4.4 µg/mL, respectively^{[1][2]}.

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Piret J, et al. Resistance of herpes simplex viruses to nucleoside analogues: mechanisms, prevalence, and management. *Antimicrob Agents Chemother.* 2011 Feb;55(2):459-72.
- [3]. Xiong Z, et al. Imaging chemically modified adenovirus for targeting tumors expressing integrin alphavbeta3 in living micewith mutant herpes simplex virus type 1 thymidine kinase PET reporter gene. *J Nucl Med.* 2006 Jan;47(1):130-9.

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

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