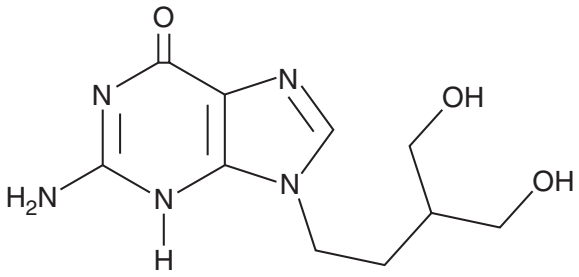
PRODUCT INFORMATION

Penciclovir

Item No. 22918

CAS Registry No.:	39809-25-1
Formal Name:	2-amino-1,9-dihydro-9-[4-hydroxy-3-(hydroxymethyl) butyl]-6H-purin-6-one
Synonym:	BRL 39123
MF:	$C_{10}H_{15}N_5O_3$
FW:	253.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 256 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Penciclovir is supplied as a crystalline solid. A stock solution may be made by dissolving the penciclovir in the solvent of choice. Penciclovir is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 0.33 mg/ml.

Description

Penciclovir is a guanosine analog with antiviral activity.[1] It has activity against multiple laboratory and clinical isolate strains of herpes simplex virus 1 (HSV-1), HSV-2, and varicella zoster virus (VZV) in a plaque reduction assay (IC_{50}s = 0.4-3.1 µg/ml). Penciclovir inhibits HSV-1 and HSV-2 replication (IC_{99}s = 0.4 and 0.7 µg/ml, respectively) and DNA synthesis (IC_{50} = 0.04 µg/ml) in MRC-5 cells.[1,2] *In vivo*, topical and systemic administration of penciclovir reduces the severity of skin lesions caused by HSV-1 in guinea pigs and mice.[3] It also prevents development of HSV-2-induced genital lesions in guinea pigs infected intravaginally.

References

1. Boyd, M.R., Bacon, T.H., Sutton, D., *et al.* Antiherpesvirus activity of 9-(4-hydroxy-3-hydroxy-methylbut-1-yl)guanine (BRL 39123) in cell culture. *Antimicrob. Agents and Chemother.* **31(8)**, 1238-1242 (1987).
2. Hodge, R.A., and Perkins, R.M. Mode of action of 9-(4-hydroxy-3-hydroxymethylbut-1-yl)guanine (BRL 39123) against herpes simplex virus in MRC-5 cells. *Antimicrob. Agents and Chemother.* **33(2)**, 223-229 (1989).
3. Boyd, M.R., Bacon, T.H., and Sutton, D. Antiherpesvirus activity of 9-(4-hydroxy-3-hydroxymethylbut-1-yl) guanine (BRL 39123) in animals. *Antimicrob. Agents Chemother.* **32(3)**, 358-363 (1988).

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