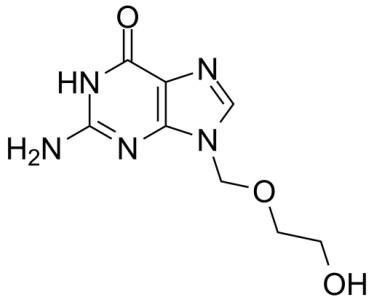
Data Sheet

Product Name:	Acyclovir
Cat. No.:	CS-1353
CAS No.:	59277-89-3
Molecular Formula:	C8H11N5O3
Molecular Weight:	225.20
Target:	HSV
Pathway:	Anti-infection
Solubility:	DMSO : ≥ 50 mg/mL (222.02 mM)



BIOLOGICAL ACTIVITY:

Acyclovir, a molecule tailored to inactivate the thymidine kinase of the herpesvirus, is a guanosine analogue antiviral drug. It is a drug for HSV infection by GlaxoSmithKline. IC50 Value: 0.53-0.75 uM [3] Target: HSV in vitro: Acyclovir sensitivity was determined in a plaque-reduction assay in Vero cells. IC50 Values were consistently 2-3 fold lower in B2 compared with the H strain of Vero cells. HSV Type 2 strains were 2-10-fold less sensitive than Type 1 strains [2]. in vivo: two patients experienced a recurrence during treatment with oral acyclovir (200 mg 4 times daily) for up to 12 weeks, compared with nine during placebo treatment (P = 0.016). There was no difference between acyclovir and placebo in the time to the next recurrence following completion of treatment [3]. low-dose oral acyclovirmay be effective in the prevention of HSV infection during OKT3 treatment of seropositive patients. Continuation of acyclovir prophylaxis for two to four weeks following the conclusion of OKT3 therapy may prevent occurrence of delayed infections [4]. Clinical trial: Acyclovir to Treat Patients Co-infected With HIV and Herpes Viruses in Uganda. Phage2

PROTOCOL (Extracted from published papers and Only for reference)

Animal administration [5] The depilated skin of all mice was scratched with a bundle of 27-gauge needles, giving a total scarified area of approximately 1.0 cm2. This area was infected immediately by spreading a 10 µl drop of mock virus stock or 7401H virus stock containing 2-6×105 p.f.u., resulting in superficial infection of the skin. Acyclovir was obtained from 200 mg Zovirax tablets. The tablets were ground to powder and suspended in water. Acyclovir (20 mg/kg/dose) or water was orally administered to infected mice, three times daily until day 10 p.i. The skin lesions of all mice were monitored, beginning at day 3 after infection, and scored. Briefly, a score of 0 means no lesion occurred; 2, vesicles were observed in a local region; 4, erosion occurred in a local region; 6, a mild zosteriform lesion occurred; 8, moderate and severe zosteriform lesions with ulceration occurred; and 10 resulted in death. Observation was performed 3 times each day at the same time as drug administration and continued until day 14, when mice recovered systemically from illness and skin lesions were reduced to a score of 0.

References:

[1]. Li Z, et al. Acyclovir treatment of skin lesions results in immune deviation in mice infected cutaneously with herpes simplex virus. Antivir Chem Chemother. 1999 Sep;10(5):251-7.

[2]. Shelley WB, Hashim M, Shelley ED. Acyclovir in the treatment of hand-foot-and-mouth disease. Cutis. 1996 Apr;57(4):232-4.

[3]. Collins P, Oliver NM. Sensitivity monitoring of herpes simplex virus isolates from patients receiving acyclovir. J Antimicrob Chemother. 1986 Oct;18 Suppl B:103-12.

[4]. Meyrick Thomas RH, Dodd HJ, Yeo JM, Oral acyclovir in the suppression of recurrent non-genital herpes simplex virus infection. Br J Dermatol. 1985 Dec;113(6):731-5.

[5]. Tang IY, Maddux MS, Veremis SA, Low-dose oral acyclovir for prevention of herpes simplex virus infection during OKT3 therapy. Transplant Proc. 1989 Feb;21(1 Pt 2):1758-60.

CAIndexNames:

6H-Purin-6-one, 2-amino-1,9-dihydro-9-[(2-hydroxyethoxy)methyl]-

SMILES:

O=C1NC(N)=NC2=C1N=CN2COCCO

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA