Valnivudine

Cat. No.: HY-109016

CAS No.: 956483-02-6

Molecular Formula: $C_{27}H_{35}N_3O_6$

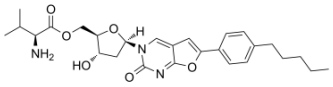
Molecular Weight: 497.58

Target: Antibiotic; Bacterial

Pathway: Anti-infection

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 : 50 mg/mL (100.49 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0097 mL	10.0486 mL	20.0973 mL
	5 mM	0.4019 mL	2.0097 mL	4.0195 mL
	10 mM	0.2010 mL	1.0049 mL	2.0097 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 (5.02 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.02 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Valnivudine (FV-100 free base), a prodrug of CF-1743, is an orally active anti-herpes zoster (HZ) nucleoside analogue. CF-1743, a bicyclic nucleoside analog (BCNA), has highly specific antiviral activity against varicella-zoster virus (VZV). Valnivudine is rapidly and extensively converted to CF-1743 in vivo[1][2].

In Vitro

In vitro cytotoxicity studies in normal human primary hepatocytes, keratinocytes, and rapidly dividing HepG2 cells, Valnivudine (FV-100 free base) demonstrates mean 50% cytotoxic concentration values of >10 μM[2].
CF-1743 (compound 4f) has anti-varicella-zoster virus (VZV) activity in VZV OKA (EC_{50}=0.3 nM), VZV YS (EC_{50}=0.1 nM) in HEL cell[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Nathan B Price, et al. Progress in the development of new therapies for herpesvirus infections. Curr Opin Virol. 2011 Dec;1(6):548-54.

[2]. Helen S Pentikis, et al. Pharmacokinetics and safety of FV-100, a novel oral anti-herpes zoster nucleoside analogue, administered in single and multiple doses to healthy young adult and elderly adult volunteers. Antimicrob Agents Chemother. 2011 Jun;55(6):2847-54.

[3]. C McGuigan, et al. Highly potent and selective inhibition of varicella-zoster virus by bicyclic furopyrimidine nucleosides bearing an aryl side chain. J Med Chem. 2000 Dec 28;43(26):4993-7.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

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