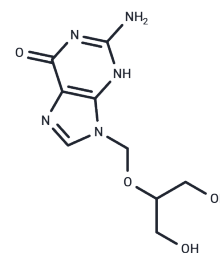


Ganciclovir

Chemical Properties

CAS No. :	82410-32-0
Formula:	C ₉ H ₁₃ N ₅ O ₄
Molecular Weight:	255.23
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Ganciclovir (2'-Nor-2'-deoxyguanosine) is an ACYCLOVIR analog that is a potent inhibitor of the Herpesvirus family including cytomegalovirus. Ganciclovir is used to treat complications from AIDS-associated cytomegalovirus infections.
Targets(IC50)	Nucleoside Antimetabolite/Analog,Antibiotic,Antifection,HSV,Virus Protease
In vivo	In adult rats, the intracochlear diffusion of ganciclovir is shown to achieve the same concentration as in blood. In gestating mice, transplacental diffusion is observed, with a fetal-to-maternal blood ratio of 0.5. In newborn mice, the plasma concentration profile of ganciclovir shows a peak at 2 h followed by a gradual decrease. In adult mice, the concentration peaked at 1 h, but becomes undetectable by 2 h after injection. Counts of white blood cells, red blood cells and platelets decreases significantly in ganciclovir-treated newborn mice[7].
Kinase Assay	For assessment of Akt protein kinase activity in vitro, substrate (2 µg histone H2B or 25 µg eNOS peptide) is incubated with Akt immunoprecipitated from cell lysate using goat polyclonal anti-Akt1 antibody. Kinase reactions are initiated following the addition of reaction components to a final concentration of ATP (50 µM) containing 10 µCi of 32P-γATP, dithiothreitol (1 mM), HEPES buffer (20 mM, pH 7.4), MnCl ₂ (10 mM), MgCl ₂ (10 mM). After incubation for 30 min at 30°C, phosphorylated histone H2B is visualized after SDS-PAGE (15%) and autoradiography. To estimate the extent of 32P incorporation into eNOS peptides, each reaction mixture is measured by spotting onto phosphocellulose disc filter and the amount of phosphate incorporated is measured by Cerenkov counting. The wild-type peptide sequence is 1174-RIRTQSFSLQERHLRGAVPWA-1194, and the mutant eNOS peptide is identical except that serine 1179 is substituted by alanine.

Solubility Information

Solubility	DMSO: 50 mg/mL (195.9 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2.5 mg/mL (9.8 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.918 mL	19.5902 mL	39.1803 mL
5 mM	0.7836 mL	3.918 mL	7.8361 mL
10 mM	0.3918 mL	1.959 mL	3.918 mL
50 mM	0.0784 mL	0.3918 mL	0.7836 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Matthews T, et al. Rev Infect Dis, 1988, 10, S490-494.

Horvathova I, Voigt F, Kotrys A V, et al. The dynamics of mRNA turnover revealed by single-molecule imaging in single cells. Molecular cell. 2017 Nov 2;68(3):615-625.e9.

Wilbertz J H, Voigt F, Horvathova I, et al. Single-molecule imaging of mRNA localization and regulation during the integrated stress response. Molecular cell. 2019 Mar 7;73(5):946-958.e7.

Hamel W, et al. Cancer Res, 1996, 56(12), 2697-2702.

St Clair MH, et al. Antimicrob Agents Chemother, 1987, 31(6), 844-849.

Zhao M, Wang B, Zhang C, et al. The DJ1-Nrf2-STING axis mediates the neuroprotective effects of Withaferin A in Parkinson's disease. Cell Death & Differentiation. 2021: 1-19.

Wei SJ, et al. Exp Cell Res, 1998, 241(1), 66-75.

Rubsam LZ, et al. Cancer Res, 1998, 58(17), 3873-3882.

BoujemLa I, et al. Pharmacokinetics and tissue diffusion of ganciclovir in mice and rats. Antiviral Res. 2016 Aug; 132:111-5.

Zhao M, Wang B, Zhang C, et al. The DJ1-Nrf2-STING axis mediates the neuroprotective effects of Withaferin A in Parkinson's disease[J]. Cell Death & Differentiation. 2021: 1-19.

Wilbertz J H, Voigt F, Horvathova I, et al. Single-molecule imaging of mRNA localization and regulation during the integrated stress response[J]. Molecular cell. 2019 Mar 7;73(5):946-958.e7.

Horvathova I, Voigt F, Kotrys A V, et al. The dynamics of mRNA turnover revealed by single-molecule imaging in single cells[J]. Molecular cell. 2017 Nov 2;68(3):615-625.e9.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481