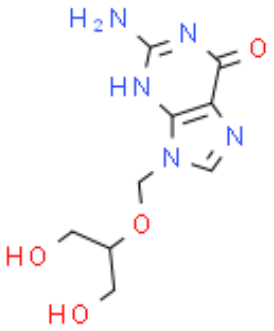
Product Data Sheet

Cas No.:	82410-32-0	Cat. No:	PC12933
Product Name:	Ganciclovir.		
Product synonym:	更息洛韦;更昔洛韦;更昔洛韦水合物;迪克珠利;伐昔洛韦;更昔洛韦 EP标准品;更昔洛韦 USP标准品;更昔洛韦 标准品;更昔洛韦-D5;更昔洛韦钠;更昔洛韦杂质混合 EP标准品;聚(3-癸基噻吩-2,5-二基);注射用阿奇霉素;9-(1,3-二羟基-2-丙氧甲基)鸟嘌呤;丙氧鸟苷;9-[[2-羟基-1-(羟甲基)乙氧基]甲基]鸟嘌呤 水合物		
Chemical name:	Ganciclovir.		
MF:	C9H13N5O4	FW:	255.2306
Purity:	≥98%	Batch No.:	-
Storage:			
Structural formula:			
λmax:	-	Formulation:	-
Solubility :			
SMILES :	O(C([H])([H])N1C([H])=NC2C(N([H])C(N([H])[H])=NC1=2)=O)C([H])(C([H])([H])O[H])C([H])([H])O[H]		
InChI Code:	-		
InChI Key:			
WARNING This product is not for human or veterinary use.			

Product Description

针对CMV感染的抗病毒药，Ganciclovir 是有效的单纯疱疹病毒 (HSV) 抑制剂，包括巨细胞病毒（CMV），抑制FHV-1的 IC50 值为5.2 μM 。

生物活性	Ganciclovir (BW 759), a nucleoside analogue, is an orally active antiviral agent with activity against **CMV**. Ganciclovir also has activity 体外研究 against members of the **herpes group** and some other DNA viruses. Ganciclovir inhibits the 体外研究 replication of human herpes viruses (HSV 1 and 2, CMV) and adenovirus serotypes 1, 2, 4, 6, 8, 10, 19, 22 and 28. Ganciclovir has an **IC_{50}** of 5.2 μM for feline herpesvirus type-1 (**FHV-1**) and can diffuse into the brain.
IC50 & Target[1][2]	CMV; HSV-1; HSV-2; FHV-1: 5.2 μM (IC_{50})

体外研究(In Vitro)	Ganciclovir (BW 759) is an acyclic deoxyguanosine analog structurally similar to acyclovir but with superior activity against CMV. The median Ganciclovir concentration required to inhibit viral replication by 50 percent is 2.15 μM versus 72 μM for acyclovir. The primary mechanism of Ganciclovir action against CMV is inhibition of the replication of viral DNA by ganciclovir-5-triphosphate (ganciclovir-TP). This inhibition includes a selective and potent inhibition of the viral DNA polymerase. Ganciclovir is metabolized to the triphosphate form by primarily three cellular enzymes: a deoxyguanosine kinase induced by CMV-infected cells; guanylate kinase; and phosphoglycerate kinase. **Medlife has not independently confirmed the accuracy of these methods. They are for reference only.**
体内研究(In Vivo)	Ganciclovir (BW 759) (50 mg/kg; i.p.; twice a day for five injections) significantly decreases white blood cells, red blood cells and platelets in newborn mice, and can diffuse into the brain and the perilymphatic space of the inner ear. Ganciclovir (1-80 mg/kg; i.h.; daily for 5 days) delays murine cytomegalovirus (MCMV)-induced wasting syndrome and mortality. **Medlife has not independently confirmed the accuracy of these methods. They are for reference only.**

Animal Model:	Non-inbred Oncins France 1 (OF1) mice and albino rats non-immunized for MCMV
Dosage:	50 mg/kg
Administration:	Intraperitoneal injection, twice a day for five injections (mice) or 3 days (adult rats) (Pharmacokinetic Study)
Result:	In adult rats, the intracochlear diffusion of Ganciclovir was shown to achieve the same concentration as in bloo Significantly decreased white blood cells, red blood cells and platelets in newborn mice.
Animal Model:	Female SCID mice inoculated with MCMV
Dosage:	0, 1, 10, 80 and 160 mg/kg
Administration:	Subcutaneous injection, once daily for 5 days
Result:	Dose dependently delayed the wasting syndrome and mortality in a dose range up to 80 mg/kg per day, where

包装储存

Powder	**-20°C**	3 years
	4°C	2 years
In solvent	**-80°C**	6 months
	-20°C	1 month

体外研究:

DMSO : 60 mg/mL (235.08 mM; Need ultrasonic)

H_2O : 1.67 mg/mL (6.54 mM; Need ultrasonic)

	溶剂体积 质量 浓度	1 mg	5 mg	10 mg
配制储备溶液	1 mM	3.9180 mL	19.5902 mL	39.1803 mL
	5 mM	0.7836 mL	3.9180 mL	7.8361 mL
	10 mM	0.3918 mL	1.9590 mL	3.9180 mL

* 产品不同，其溶解度不同。建议根据产品选择合适的溶剂配制储备溶液；配成溶液后，**建议分装保存，避免反复冻融造成的产品失效**。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，建议在 6 个月内使用，-20°C 储存时，建议在 1 个月内使用。

溶解度数据	*体内研究:* 建议根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都建议先按照 **体外研究** 方式配制澄清的储备液，再依次添加助溶剂： ——为保证实验结果的可靠性，**澄清的储备液可以根据储存条件，适当保存**；体内实验的工作液，**建议您现用现配，当天使用**； 以下溶剂前显示的百分比是指**该溶剂在您配制终溶液中的体积占比**；如在配制过程中出现沉淀、析出现象，可以通过**加热和/或超声的方式助溶** 1. 建议依照次序添加每种溶剂： PBS Solubility: 3.33 mg/mL (13.05 mM); Clear solution; Need ultrasonic and warming and heat to 60°C 2. 建议依照次序添加每种溶剂： 10% DMSO 40% PEG300 5% Tween-80 45% saline Solubility: 2.08 mg/mL (8.15 mM); Suspended solution; Need ultrasonic 此方案可获得 2.08 mg/mL (8.15 mM) 的均匀悬浊液，悬浊液可用于口服和腹腔注射。 以 1 mL 工作液为例，取 100 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入50 μL Tween-80，混合均匀；然后继续加入 450 μL生理盐水定容至 1 mL。 将 0.9 g 氯化钠，完全溶解于 100 mL ddH?O 中，得到澄清透明的生理盐水溶液 3. 建议依照次序添加每种溶剂： 10% DMSO 90% (20% SBE-β-CD in saline) Solubility: 2.08 mg/mL (8.15 mM); Suspended solution; Need ultrasonic 此方案可获得 2.08 mg/mL (8.15 mM) 的均匀悬浊液，悬浊液可用于口服和腹腔注射。 以 1 mL 工作液为例，取 100 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。 将 2 g 磺丁基醚 β-环糊精加入 5 mL 生理盐水中，再用生理盐水定容至 10 mL，完全溶解，澄清透明 4. 建议依照次序添加每种溶剂： 10% DMSO 90% corn oil Solubility: ≥ 2.08 mg/mL (8.15 mM); Clear solution 此方案可获得 ≥ 2.08 mg/mL (8.15 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例，取 100 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL玉米油中，混合均匀。 *