

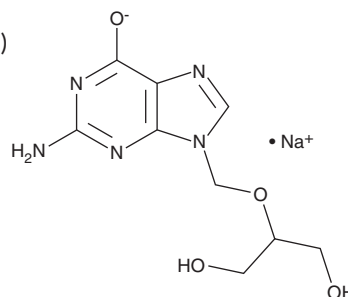
PRODUCT INFORMATION



Ganciclovir (sodium salt)

Item No. 37487

CAS Registry No.: 107910-75-8
Formal Name: 2-amino-1,9-dihydro-9-[[2-hydroxy-1-(hydroxymethyl)ethoxy]methyl]-6H-purin-6-one, monosodium salt
Synonyms: BW 759, DHPG, GCV, 9-(1,3-dihydroxy-2-propoxymethyl)Guanine, 2'-NDG, 2'-Nor-2'-deoxyguanosine, RS 21592
MF: C₉H₁₂N₅O₄ • Na
FW: 277.2
Purity: ≥98%
UV/Vis.: λ_{max}: 255 nm
Supplied as: A 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

Ganciclovir (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the ganciclovir (sodium salt) in the solvent of choice, which should be purged with an inert gas. Ganciclovir (sodium salt) is slightly soluble in ethanol, DMSO, and dimethyl formamide.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ganciclovir (sodium salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of ganciclovir (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ganciclovir is an active metabolite of the prodrug valganciclovir (Item No. 13875) and an antiviral nucleoside derivative of 2'-deoxyguanosine (Item No. 9002864).^{1,2} It reduces human, monkey, mouse, and guinea pig CMV replication in plaque reduction assays (EC₅₀s = 1.3-70 μM).² Topical application of ganciclovir (0.15%) decreases disease severity and corneal leukocyte infiltration in a cat model of ocular feline herpesvirus-1 (FHV-1) epithelial infection.³ Ganciclovir (15 mg/kg) prevents allograft histologic injury and natural killer (NK) and myeloid cell infiltration in a mouse model of murine CMV infection with renal transplantation.⁴ It induces tumor regression in a K-BALB murine sarcoma model using a mixed population of cells, which are positive or negative for expression of the gene encoding herpes simplex virus (HSV) thymidine kinase (TK).⁵ Formulations containing ganciclovir have been used in the treatment and prevention of CMV infections.

References

1. Carmichael, R.J., Whitfield, C., and Maxwell, L.K. *J. Vet. Pharmacol. Ther.* **36(5)**, 441-449 (2013).
2. Freitas, V.R., Smee, D.F., Chernow, M., et al. *Antimicrob. Agents Chemother.* **28(2)**, 240-245 (1985).
3. Ledbetter, E.C., Badanes, Z.I., Chan, R.X., et al. *J. Ocul. Pharmacol. Ther.* **38(5)**, 339-347 (2022).
4. Shimamura, M., Seleme, M.C., Guo, L., et al. *Transplantation* **95(1)**, 48-53 (2013).
5. Freeman, S.M., Abboud, C.N., Whartenby, K.A., et al. *Cancer Res.* **53(21)**, 5274-5283 (1993).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/05/2023

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM