ALPHA DIAGNOSTIC INTERNATIONAL

Product Data Sheet

□ Cat # RP-1461 Ganciclovir **Size**: □ 100 mg

Ganciclovir (GCV) is a pro-drug nucleoside analog that is activated by phosphorylation. It is useful in the study of gene therapy in cancer research. Ganciclovir is a synthetic analogue of 2'-deoxy-guanosine. It is initially phosphorylated to a deoxyguanosine triphosphate (dGTP) analogue. This mechanism competitively inhibits the integration of dGTP by viral DNA polymerase, resulting in the termination of elongation of viral DNA. Upon expression of a viral suicide gene encoding thymidine kinase, the non-toxic pro-drug is converted to a phosphorylated active analog and is incorporated into the DNA of replicating eukaryotic cells, causing death of the malignant dividing cell. The cell cycle is irreversibly arrested at the G2-M checkpoint. Gap junction involvement in the ganciclovir bystander effect has been studied. Ganciclovir has been used to study loss of telomeres and to evaluate sensitivity of viruses to antiviral treatments.

SOURCE:

Ganciclovir is a white to off-white crystalline powder with a molecular formula of C9H13N504 and a molecular weight of 255.23. Greater than 99.0% purity.

APPLICATION AND SUGGESTED DILUTIONS:

It is recommended to reconstitute the lyophilized Ganciclovir in sterile 18MΩ-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions. Users must optimize the appropriate concentration and conditions for each assay.

STORAGE & STABILITY:

Lyophilized Ganciclovir although stable at room temperature for 3 weeks, should be stored at 4°C. If supplied in powder then reconstitute it in 100ul water for 1mg/mL stock and store in liquied at 4ºC for ~ 1week or aliquots in suitable size and store at -20ºC for long term storage.

USAGE:

This item is for LABORATORY RESEARCH USE ONLY.

Related items:

Catalog#	ProdDescription
RP-1461	Ganciclovir
ABT-520-001	Ganciclovir (>98% pure)
ABT-520-050	Ganciclovir (>98% pure)

RP-1461 1309010p

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