

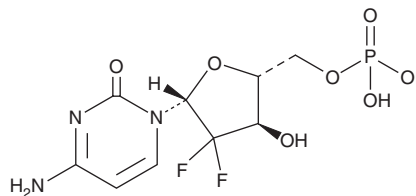
PRODUCT INFORMATION



Gemcitabine monophosphate

Item No. 31726

CAS Registry No.: 116371-67-6
Formal Name: 2'-deoxy-2',2'-difluoro-5'-cytidylic acid
MF: $C_9H_{12}F_2N_3O_7P$
FW: 343.2
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 271 nm
Supplied as: A crystalline solid
Storage: $-20^\circ C$
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Gemcitabine monophosphate is supplied as a crystalline solid. A stock solution may be made by dissolving the gemcitabine monophosphate in the solvent of choice, which should be purged with an inert gas. Gemcitabine monophosphate is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of gemcitabine monophosphate in these solvents is approximately 10 mg/ml.

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 gemcitabine monophosphate can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of gemcitabine monophosphate in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Gemcitabine monophosphate is a monophosphate form of the deoxycytidine analog gemcitabine (Item No. 9003096).¹ It has synergistic effects when used in nanoparticle form in combination with cisplatin nanoparticles *in vitro* at a one-to-one molar ratio ($IC_{50}s = 5.95$ and 34.8 for the nanoparticle combination and gemcitabine monophosphate alone, respectively). In a stroma-rich mouse xenograft model, the nanoparticle combination of gemcitabine and cisplatin inhibits tumor growth and increases apoptosis.

Reference

1. Zhang, J., Miao, L., Guo, S., *et al.* Synergistic anti-tumor effects of combined gemcitabine and cisplatin nanoparticles in a stroma-rich bladder carcinoma model. *J. Control. Release* **182**, 90-96 (2014).

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.

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