

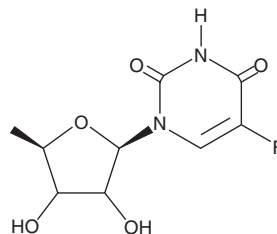
PRODUCT INFORMATION



Doxifluridine

Item No. 10253

CAS Registry No.: 3094-09-5
Formal Name: 5'-deoxy-5-fluoro-uridine
Synonyms: 5-DFUR, Ro 21-9738
MF: C₉H₁₁FN₂O₅
FW: 246.2
Purity: ≥98%
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 269 nm
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Doxifluridine is supplied as a crystalline solid. A stock solution may be made by dissolving the doxifluridine in the solvent of choice. Doxifluridine is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of doxifluridine in these solvents is approximately 10 and 16 mg/ml, respectively.

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 doxifluridine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of doxifluridine in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Doxifluridine is an intermediary prodrug of fluorouracil (Item No. 14416), the pyrimidine analog that inhibits thymidylate synthase selectively in tumor cells, interfering with DNA synthesis.¹⁻⁴ Doxifluridine is one of two intermediary metabolites formed during metabolic conversion of the chemotherapeutic prodrug, capecitabine (Item No. 10487), to fluorouracil.⁴

References

1. Ozawa, S., Hamada, M., Murayama, N., *et al.* Cytosolic and microsomal activation of doxifluridine and tegafur to produce 5-fluorouracil in human liver. *Cancer Chemother. Pharmacol.* **50**, 454-458 (2002).
2. Kato, Y., Onishi, H., and Machida, Y. Contribution of chitosan and its derivatives to cancer chemotherapy. *In Vivo* **19**, 301-310 (2005).
3. Konishi, H., Yoshimoto, T., Morita, K., *et al.* Depression of phenytoin metabolic capacity by 5-fluorouracil and doxifluridine in rats. *J. Pharm. Pharmacol.* **55**, 143-149 (2003).
4. Miwa, M., Ura, M., Nishida, M., *et al.* Design of a novel oral fluoropyrimidine carbamate, capecitabine, which generates 5-fluorouracil selectively in tumours by enzymes concentrated in human liver and cancer tissue. *Eur. J. Cancer* **34(8)**, 1274-1281 (1998).

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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