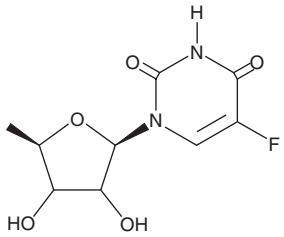
PRODUCT INFORMATION

Doxifluridine

Item No. 10253

CAS Registry No.: 3094-09-5
Formal Name: 5'-deoxy-5-fluoro-uridine
Synonyms: 5-DFUR, Ro 21-9738
MF: $C_9H_{11}FN_2O_5$
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).

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