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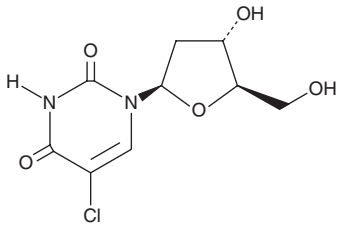
PRODUCT INFORMATION

5-Chloro-2'-deoxyuridine

Item No. 18155

CAS Registry No.: 50-90-8
Formal Name: 5-chloro-2'-deoxy-uridine
Synonyms: Chlorodeoxyuridine, CldU
MF: $C_9H_{11}ClN_2O_5$
FW: 262.6
Purity: ≥98%
UV/Vis.: λ_{max}: 276 nm
Supplied as: A crystalline 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

CldU is supplied as a crystalline solid. A stock solution may be made by dissolving the CldU in the solvent of choice. CldU is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of CldU in these solvents is approximately 10 and 15 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 CldU can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of CldU in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

5-Chloro-2'-deoxyuridine (CldU) is a thymidine analog that is readily incorporated, following phosphorylation, into newly synthesized DNA in place of thymidine.[1] Like 5-bromo-2'-deoxyuridine (Item No. 15580) and 5-iodo-2'-deoxyuridine, CldU can be detected immunologically in cells and tissues.[2,3] CldU can also be added to cells or tissues sequentially with another thymidine analog to label temporally distinct populations.[4,5] The insertion of thymidine analogs, including CldU, can significantly alter DNA processing and replication, so these analogs have also been used as mutagens, clastogens, and antiviral compounds.[1,6]

References

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