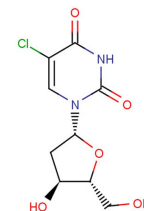


5-Chloro-2'-deoxyuridine

Chemical Properties

| | |
|-------------------|--|
| CAS No.: | 50-90-8 |
| Formula: | C ₉ H ₁₁ ClN ₂ O ₅ |
| Molecular Weight: | 262.65 |
| Appearance: | N/A |
| Storage: | 0-4°C for short term (days to weeks), or -20°C for long term (months). |



Biological Description

| | |
|----------------------------|---|
| Description | 5-Chloro-2'-deoxyuridine is a thymine analog. It can be used to study the potential of hypochlorous acid damage to DNA and DNA precursors. |
| Targets(IC ₅₀) | Others: None |
| In vitro | When 5-Chloro-2'-deoxyuridine (CIDU) is placed into tissue culture medium, mammalian cells incorporate the analog into DNA. It is observed that 10 μ M concentration of 5-Chloro-2'-deoxyuridine in the media does not alter cell division kinetics. Previously it has been shown that 5-Chloro-2'-deoxyuridine is metabolized and incorporated into DNA using antibodies that bind selectively to DNA containing halogenated bases. In the studies reported here, 5-Chloro-2'-deoxyuridine is more similar to BrdU in acting as a T analog. The toxicity of 5-Chloro-2'-deoxyuridine could in part be attributed to inhibition of thymidylate synthase[1]. |

Solubility Information

| | |
|------------|---|
| Solubility | DMSO: 125 mg/mL (475.92 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|---|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|----------|-----------|-----------|
| 1 mM | 3.807 mL | 19.037 mL | 38.073 mL |
| 5 mM | 0.761 mL | 3.807 mL | 7.615 mL |
| 10 mM | 0.381 mL | 1.904 mL | 3.807 mL |
| 50 mM | 0.076 mL | 0.381 mL | 0.761 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

- Kim CH, et al. Polymerase incorporation and miscoding properties of 5-chlorouracil. Chem Res Toxicol. 2010 Apr 19;23(4):740-8.
- Yuan CJ, et al. Extended access methamphetamine decreases immature neurons in the hippocampus which results from loss and altered development of neural progenitors without altered dynamics of the S-phase of the cell cycle. Pharmacol Biochem Behav. 2011 Nov;100(1):98-108.

Inhibitors · Natural Compounds · Compound Libraries

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