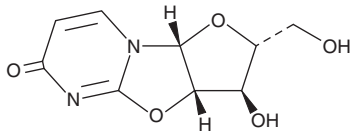
PRODUCT INFORMATION

Cyclouridine

Item No. 35271

CAS Registry No.:	3736-77-4
Formal Name:	2R,3R,3aS,9aR-tetrahydro-3-hydroxy-2-(hydroxymethyl)-6H-furo[2′,3′:4,5]oxazolo[3,2-a]pyrimidin-6-one
Synonyms:	2,2′-Anhydrouridine, NSC 157148
MF:	$C_9H_{10}N_2O_5$
FW:	226.2
Purity:	≥95%
Supplied as:	A 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

Cyclouridine is supplied as a solid. A stock solution may be made by dissolving the cyclouridine in the solvent of choice, which should be purged with an inert gas. Cyclouridine is soluble in the organic solvent DMSO at a concentration of approximately 2 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 cyclouridine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of cyclouridine in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Cyclouridine is an inhibitor of uridine phosphorylase (apparent K_i = 2.268 µM).[1] It is selective for uridine phosphorylase over thymidine phosphorylase at 3.33 mM. Cyclouridine has also been used as a building block in the synthesis of compounds with anticancer or antiviral activities.[2,3]

References

1. Veres, Z., Szabolcs, A., Szinai, I., *et al.* 5-Substituted-2,2'-anhydrouridines, potent inhibitors of uridine phosphorylase. *Biochem. Pharmacol.* **34(10)**, 1737-1740 (1985).
2. Ogawa, A., Tanaka, M., Sasaki, T., *et al.* Nucleosides and nucleotides. 180. Synthesis and antitumor activity of nucleosides that have a hydroxylamino group instead of a hydroxyl group at the 2'- or 3'-position of the sugar moiety. *J. Med. Chem.* **41(25)**, 5094-5107 (1998).
3. Sato, Y., Utsumi, K., Maruyama, T., *et al.* Synthesis and hypnotic and anti-human immunodeficiency virus-1 activities of N^3-substituted 2'-deoxy-2'-fluorouridines. *Chem. Pharm. Bull. (Tokyo)* **42(3)**, 595-598 (1994).

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