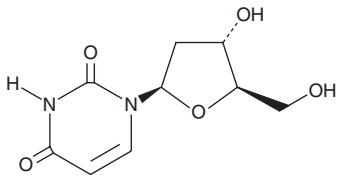
PRODUCT INFORMATION

2'-Deoxyuridine

Item No. 27803

CAS Registry No.:	951-78-0
Formal Name:	2'-deoxy-uridine
Synonyms:	NSC 23615, Uracil deoxyriboside
MF:	$C_9H_{12}N_2O_5$
FW:	228.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 264 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

2'-Deoxyuridine is supplied as a solid. A stock solution may be made by dissolving the 2'-deoxyuridine in the solvent of choice, which should be purged with an inert gas. 2'-Deoxyuridine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 2'-deoxyuridine in these solvents is approximately 10 and 16 mg/ml, respectively. 2'-Deoxyuridine is slightly soluble in ethanol.

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 2'-deoxyuridine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 2'-deoxyuridine in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2'-Deoxyuridine is a pyrimidine nucleoside composed of the pyrimidine base uracil attached to the sugar deoxyribose.[1] It has been used as a precursor in the synthesis of antiviral deoxyuridine derivatives, including idoxuridine (Item No. 20222).[2,3] Formulations containing 2'-deoxyuridine have been used in the deoxyuridine suppression test to identify vitamin B12 and/or folate deficiency and in the diagnosis of megaloblastic anemias.

References

1. Martí, R., López, L.C., and Hirano, M. Assessment of thymidine phosphorylase function: Measurement of plasma thymidine (and deoxyuridine) and thymidine phosphorylase activity. *Methods Mol. Biol.* **837,** 121-133 (2012).
2. Prusoff, W.H. Synthesis and biological activities of iododeoxyuridine, an analog of thymidine. *Biochim. Biophys. Acta.* **32(1),** 295-296 (1959).
3. Bergstrom, D.E. and Ogawa, M.K. C-5 substituted pyrimidine nucleosides. 2. Synthesis via olefin coupling to organopalladium intermediates derived from uridine to 2'-deoxyuridine. *J. Am. Chem. Soc.* **100(26),** 8106-8112 (1978).

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