

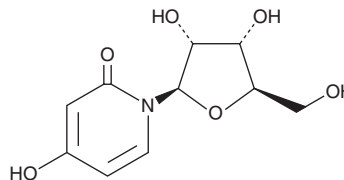
PRODUCT INFORMATION



3-Deazauridine

Item No. 23125

CAS Registry No.: 23205-42-7
Formal Name: 4-hydroxy-1-β-D-ribofuranosyl-2(1H)-pyridinone
Synonym: NSC 126849
MF: C₁₀H₁₃NO₆
FW: 243.2
Purity: ≥98%
UV/Vis.: λ_{max}: 210, 284 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

3-Deazauridine is supplied as a crystalline solid. A stock solution may be made by dissolving the 3-deazauridine in the solvent of choice. 3-Deazauridine is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of 3-deazauridine 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 3-deazauridine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 3-deazauridine in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

3-Deazauridine is a nucleoside analog.¹ It is converted intracellularly to 3-deazauridine triphosphate, which competitively inhibits cytidine triphosphate synthetase thereby inhibiting biosynthesis of the nucleic acid cytidine 5'-triphosphate (CTP). 3-Deazauridine inhibits the growth of L1210 leukemia cells when used at a concentration of 6 μM and dose-dependently reduces mortality in a mouse model of leukemia.² It also enhances the incorporation of decitabine (Item No. 11166) into DNA in HL-60 myeloid and MOLT-3 lymphoid leukemia cells when used at a concentration of 20 μM. 3-Deazauridine (100 or 150 mg/kg), when combined with decitabine, reduces mortality in an L1210 leukemia mouse model.³

References

1. Moriconi, W.J., Slavik, M., and Taylor, S. 3-Deazauridine (NSC 126849): An interesting modulator of biochemical response. *Invest New Drugs* **4(1)**, 67-84 (1986).
2. Bloch, A., Dutschman, G., Currie, B.L., et al. Preparation and biological activity of various 3-deazapyrimidines and related nucleosides. *J. Med. Chem.* **16(3)**, 294-297 (1973).
3. Raynal, N.J.-M., Momparler, L.F., Rivard, G.E., et al. 3-Deazauridine enhances the antileukemic action of 5-aza-2'-deoxycytidine and targets drug-resistance due to deficiency in deoxycytidine kinase. *Leuk. Res.* **35(1)**, 110-118 (2011).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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