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ProductInformation

Uridine

Product Number **U 3750**
Store at Room Temperature

Product Description

Molecular Formula: $C_9H_{12}N_2O_6$
Molecular Weight: 244.2
CAS Number: 58-96-8
Melting Point: 165 °C
λ_{max}: 205 nm, 261 nm (pH 7.3)[1]
Extinction Coefficient: E^{mM} = 9.8 (205 nm), 10.1 (261 nm) (pH 7.3)[1]
Specific Rotation: +4 °(20 mg/ml, H_2O)
Melting Point: 165 °C
pK_a: 9.3; 12.6
Synonyms: 1-β-D-ribofuranosyluracil; uracil-1-β-D-ribofuranoside; uracil riboside

Uridine is the ribonucleoside of the pyrimidine base uracil, which is one of the four bases found in ribonucleic acid (RNA). The monophosphate form of uridine (UMP) is formed from orotate via the intermediate orotidylate.[2] Structural analyses of uridine:cytosine (U:C) RNA base pairs in the solid state and uridine:guanine (U:G) base pairs in the solution state have been discussed.[3] A review of uridine insertion and deletion in RNA editing in trypanosome mitochondria has been published.[4]

The uptake of uridine in adenosine-depleted cells in various *Leishmania* strains has been studied.[5] A study of cultured LLC-PK1 cells to examine *gadd153* mRNA expression has utilized uridine at 25 mM.[6] The identification of uridine in culture supernatants from *Streptomyces citricolor* by high-resolution NMR and by directly coupled HPLC-NMR methods has been described.[7]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (50 mg/ml), yielding a clear, colorless solution.

Storage/Stability

Stock solutions of uridine in water at pH 7 are expected to be stable for several days when stored at 4 °C.

References

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3. Oxford Handbook of Nucleic Acid Structure, Neidle, S., ed., Oxford University Press (Oxford, UK: 1999), pp. 546, 574.
4. Simpson, L., et al., Uridine insertion/deletion RNA editing in trypanosome mitochondria: a complex business. RNA, **9(3)**, 265-276 (2003).
5. Seyfang, A., and Landfear, S. M., Substrate depletion upregulates uptake of myo-inositol, glucose and adenosine in *Leishmania*. Mol. Biochem. Parasitol., **104(1)**, 121-130 (1999).
6. Huang, Q., et al., Induction of gadd153 mRNA by nutrient deprivation is overcome by glutamine. Biochem. J., **341(Pt 1)**, 225-231 (1999).
7. Abel, C. B., et al., Characterization of metabolites in intact *Streptomyces citricolor* culture supernatants using high-resolution nuclear magnetic resonance and directly coupled high-pressure liquid chromatography-nuclear magnetic resonance spectroscopy. Anal. Biochem., **270(2)**, 220-230 (1999).

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