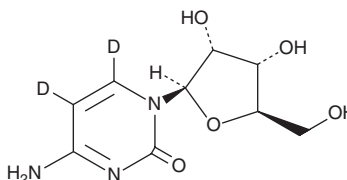


PRODUCT INFORMATION



Cytidine-d₂ Item No. 36320

CAS Registry No.: 40632-25-5
Formal Name: cytidine-5,6-d₂
Synonym: β-D-Cytidine-d₂
MF: C₉H₁₁D₂N₃O₅
FW: 245.2
Chemical Purity: ≥95% (Cytidine)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₂); ≤1% d₀
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

Cytidine-d₂ is intended for use as an internal standard for the quantification of cytidine (Item No. 29602) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Cytidine-d₂ is supplied as a solid. A stock solution may be made by dissolving the cytidine-d₂ in the solvent of choice, which should be purged with an inert gas. Cytidine-d₂ is soluble in DMSO and dimethyl formamide.

Description

Cytidine is a pyrimidine nucleoside composed of ribose and a cytosine base.¹ It forms complementary base pairs with the purine nucleoside guanosine (Item No. 27702) in DNA and RNA. Cytidine is a precursor of uridine (Item No. 20300) and can also be phosphorylated by uridine-cytidine kinase to form cytidine 5'-monophosphate (CMP; Item No. 35116).^{1,2} It rescues inhibition of proliferation induced by knockdown of CTP synthase 1 in T cells when used at a concentration of 200 μM.³

References

1. Berg, J.M., Tymoczko, J.L., and Stryer, L. Nucleotide biosynthesis. *Biochemistry*. 5thed., W.H. Freeman (2002).
2. Chabner, B.A., Johns, D.G., Coleman, C.N., et al. Purification and properties of cytidine deaminase from normal and leukemic granulocytes. *J. Clin. Invest.* **53**(3), 922-931 (1974).
3. Martin, E., Palmic, N., Sanquer, S., et al. CTP synthase 1 deficiency in humans reveals its central role in lymphocyte proliferation. *Nature* **510**(7504), 288-292 (2014).

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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