



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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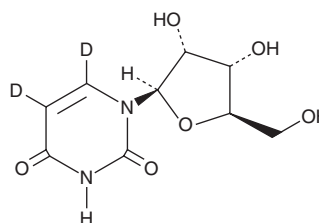
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# PRODUCT INFORMATION



## Uridine-d<sub>2</sub> Item No. 36317

**CAS Registry No.:** 40632-21-1  
**Formal Name:** uridine-5,6-d<sub>2</sub>  
**Synonyms:** 1-β-D-Ribofuranosyluracil-d<sub>2</sub>,  
Uracil-1-β-D-ribofuranoside-d<sub>2</sub>,  
β-Uridine-d<sub>2</sub>  
**MF:** C<sub>9</sub>H<sub>10</sub>D<sub>2</sub>N<sub>2</sub>O<sub>6</sub>  
**FW:** 246.2  
**Chemical Purity:** ≥98% (Uridine)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>2</sub>); ≤1% d<sub>0</sub>  
**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

Uridine-d<sub>2</sub> is intended for use as an internal standard for the quantification of uridine (Item No. 20300) 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).

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

### Description

Uridine is a pyrimidine nucleoside composed of uracil (Item No. 26088) and ribose.<sup>1</sup> It forms complementary base pairs with adenosine (Item No. 21232) in RNA.<sup>2</sup> Uridine can be catabolized to uracil *via* uridine phosphorylase, and it can be phosphorylated to uridine-5'-monophosphate (UMP; Item No. 35382) by uridine-cytidine kinase (UCK).<sup>1,3</sup> It is replaced with thymidine (Item No. 20519) in DNA.<sup>4</sup>

### References

1. Yamamoto, T., Koyama, H., Kurajoh, M., *et al.* Biochemistry of uridine in plasma. *Clin. Chim. Acta* **412(19-20)**, 1712-1724 (2011).
2. Zinshteyn, B. and Nishikura, K. Adenosine-to-inosine RNA editing. *Wiley Interdiscip. Rev. Syst. Biol. Med.* **1(2)**, 202-209 (2009).
3. Van Rompay, A.R., Norda, A., Lindén, K., *et al.* Phosphorylation of uridine and cytidine nucleoside analogs by two human uridine-cytidine kinases. *Mol. Pharmacol.* **59(5)**, 1181-1186 (2001).
4. Knoop, V. When you can't trust the DNA: RNA editing changes transcript sequences. *Cell. Mol. Life Sci.* **68(4)**, 567-586 (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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