

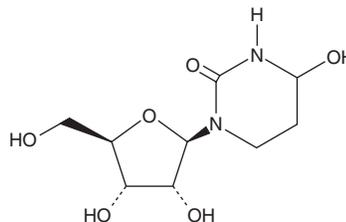
# PRODUCT INFORMATION



## Tetrahydrouridine

Item No. 16402

**CAS Registry No.:** 18771-50-1  
**Formal Name:** 3,4,5,6-tetrahydro-uridine  
**Synonyms:** NSC 112907, THU  
**MF:** C<sub>9</sub>H<sub>16</sub>N<sub>2</sub>O<sub>6</sub>  
**FW:** 248.2  
**Purity:** ≥95%  
**Supplied as:** A crystalline 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

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

### Description

Tetrahydrouridine is an inhibitor of cytidine deaminase ( $K_i$ s = 54 and 240 nM for the human and *E. coli* enzymes, respectively).<sup>1,2</sup> *In vivo*, tetrahydrouridine inhibits the metabolism of decitabine (Item No. 11166) and enhances decitabine-induced inhibition of tumor growth in a B16 murine melanoma model.<sup>3</sup>

### References

1. 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), 922-931 (1974).
2. Cohen, R. M. and Wolfenden, R. Cytidine deaminase from *Escherichia coli*. *J. Biol. Chem.* 246(24), 7561-7565 (1971).
3. Alcazar, O., Achberger, S., Aldrich, W., *et al.* Epigenetic regulation by decitabine of melanoma differentiation *in vitro* and *in vivo*. *Int. J. Cancer* 131(1), 18-29 (2012).

#### 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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