

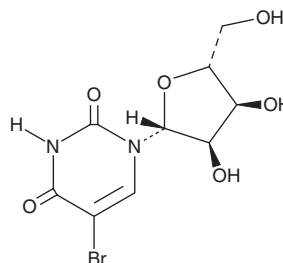
# PRODUCT INFORMATION



## 5-Bromouridine

Item No. 30457

**CAS Registry No.:** 957-75-5  
**Formal Name:** 5-bromo-uridine  
**Synonyms:** (-)-5-Bromouridine, BrU, BrUrd, NSC 38296  
**MF:** C<sub>9</sub>H<sub>11</sub>BrN<sub>2</sub>O<sub>6</sub>  
**FW:** 323.1  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 211, 280 nm  
**Supplied as:** A 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

5-Bromouridine is supplied as a solid. A stock solution may be made by dissolving the 5-bromouridine in the solvent of choice, which should be purged with an inert gas. 5-Bromouridine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 5-bromouridine in these solvents is approximately 15 and 10 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 5-bromouridine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 5-bromouridine in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

5-Bromouridine is a brominated analog of the nucleoside uridine (Item No. 20300).<sup>1</sup> It can be incorporated into RNA and subsequently detected by antibodies against bromodeoxyuridine (Item No. 15580).<sup>2</sup> 5-Bromouridine decreases the viability of HL-60 and MOLT-4 cells (LC<sub>50</sub>s = 10 and 20 μM, respectively). It induces apoptosis and halts the cell cycle at the S phase in HL-60 cells. It is photoreactive, and UV irradiation has been used to cross-link RNA containing 5-bromouridine to proteins in the study of RNA-protein interactions.<sup>1,3</sup> 5-Bromouridine can also be incorporated into RNA using 5-bromouridine 5'-triphosphate (Item No. 18140).

### References

1. Tanner, N.K., Hanna, M.M., and Abelson, J. Binding interactions between yeast tRNA ligase and a precursor transfer ribonucleic acid containing two photoreactive uridine analogues. *Biochemistry* **27**(24), 8852-8861 (1988).
2. Li, X., Patel, R., Melamed, M.R., *et al.* The cell cycle effects and induction of apoptosis by 5-bromouridine in cultures of human leukaemic MOLT-4 and HL-60 cell lines and mitogen-stimulated normal lymphocytes. *Cell Prolif.* **27**(6), 307-319 (1994).
3. Gott, J.M., Willis, M.C., Koch, T.H., *et al.* A specific, UV-induced RNA-protein cross-link using 5-bromouridine-substituted RNA. *Biochemistry* **30**(25), 6290-6295 (1991).

#### 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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