

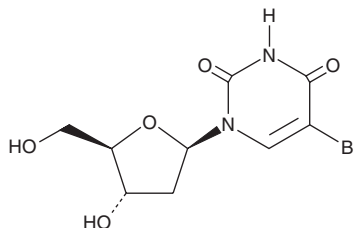
PRODUCT INFORMATION



5-Bromo-2'-deoxyuridine

Item No. 15580

CAS Registry No.: 59-14-3
Formal Name: 5-bromo-2'-deoxy-uridine
Synonyms: BrdU, Bromodeoxyuridine, Broxuridine, NSC 38297
MF: C₉H₁₁BrN₂O₅
FW: 307.1
Purity: ≥98%
UV/Vis.: λ_{max}: 211, 279 nm
Supplied as: A crystalline 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

5-Bromo-2'-deoxyuridine is supplied as a crystalline solid. A stock solution may be made by dissolving the 5-bromo-2'-deoxyuridine in the solvent of choice, which should be purged with an inert gas. 5-Bromo-2'-deoxyuridine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 5-bromo-2'-deoxyuridine in ethanol is approximately 25 mg/ml and approximately 20 mg/ml in DMSO and DMF.

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-bromo-2'-deoxyuridine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 5-bromo-2'-deoxyuridine in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

5-Bromo-2'-deoxyuridine (BrdU) is a thymidine nucleoside derivative that is commonly used to identify proliferating cells.¹ In proliferating cells, BrdU is incorporated in place of thymidine during the S phase of the cell cycle during DNA synthesis. Actively proliferating cells can then be detected by denaturing the DNA and allowing specific antibodies to target the incorporated BrdU. Intraperitoneal injection of BrdU is commonly used in combination with neuronal markers to detect adult neurogenesis in animal models.^{2,3} BrdU is also commonly used as a marker of proliferation of cancer cells *in vitro*.⁴

References

1. Cavanagh, B.L., Walker, T., Norazit, A., *et al.* Thymidine analogues for tracking DNA synthesis. *Molecules* **16**(9), 7980-7993 (2011).
2. Wojtowicz, J.M. and Kee, N. BrdU assay for neurogenesis in rodents. *Nat. Protoc.* **1**(3), 1399-1405 (2006).
3. Kee, N., Sivalingam, S., and Wojtowicz, J.M. The utility of Ki-67 and BrdU as proliferative markers of adult neurogenesis. *J. Neurosci. Methods* **115**(1), 97-105 (2002).
4. Remvikos, Y., Vielh, P., Padoy, E., *et al.* Breast cancer proliferation measured on cytological samples: A study by flow cytometry of S-phase fractions and BrdU incorporation. *Br. J. Cancer* **64**(3), 501-507 (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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