

BrdU (MoBU-1): sc-51514

BACKGROUND

The halogenated pyrimidine thymidine analog bromodeoxyuridine (BrdU) is incorporated into newly synthesized DNA strands of S-phase cells and is useful for estimating the fraction of cells in S-phase. Additionally, the analysis of the uptake of BrdU is a reliable method to quantitate the degree of DNA-synthesis. BrdU is also useful for studying sister chromatid exchange and to isolate nascent DNA. UV-induced excision-repair synthesis is one method for incorporating BrdU into cellular DNA. Anti-BrdU antibodies bind to the exposed BrdU in single-stranded DNA after a hydrochloric acid denaturation step or nuclease digestion. Protease antigen recovery is necessary for most tissues or cells fixed with crosslinking agents such as formalin but may decrease the specificity of BrdU immunodetection.

REFERENCES

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3. Magaud, J.P., et al. 1989. Double immunocytochemical labeling of cell and tissue samples with monoclonal anti-bromodeoxyuridine. *J. Histochem. Cytochem.* 37: 1517-1527.
4. Williamson, K., et al. 1994. Hydrochloric acid denaturation of colorectal tumour tissue infiltrated with bromodeoxyuridine. *Cytometry* 15: 162-168.
5. Bak, P.M., et al. 1997. Protease antigen recovery decreases the specificity of bromodeoxyuridine detection in formalin-fixed tissue. *J. Histochem. Cytochem.* 45: 1165-1170.
6. Buckiova, D., et al. 1998. Hyperthermia in the chick embryo: HSP and possible mechanisms of developmental defects. *Int. J. Dev. Biol.* 42: 737-740.

SOURCE

BrdU (MoBU-1) is a mouse monoclonal antibody raised against 5-bromodeoxyuridine (BrdU) conjugated to hemocyanine.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

BrdU (MoBU-1) is recommended for detection of BrdU, a proliferation marker incorporated into newly synthesized DNA during S-phase of a cell cycle, by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells); recognizes BrdU in denatured DNA of cells labeled with BrdU.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

SELECT PRODUCT CITATIONS

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8. Baumgartner, M., et al. 2018. Minor spliceosome inactivation causes microcephaly, owing to cell cycle defects and death of self-amplifying radial glial cells. *Development* 145: dev166322.
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CONJUGATES

See **BrdU (IIB5): sc-32323** for BrdU antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.