

BM6048P**Monoclonal Antibody to Bromodeoxyuridine / BrdU - Purified****Quantity:** 0.1 mg**Concentration:** 1.0 mg/ml

Background: The immunocytochemical detection of bromodeoxyuridine (BrdU) incorporated into DNA is a powerful tool to study the cytokinetics of normal and neoplastic cells. In vitro or in vivo labeling of tumor cells with the thymidine analogue BrdU and the subsequent detection of incorporated BrdU with specific anti-BrdU monoclonal antibodies is an accurate and comprehensive method to quantitate the degree of DNA-synthesis. BrdU is incorporated into the newly synthesized DNA of the S-phase cells and can thus provide an estimate for the fraction of cells in S-phase. Also dynamic proliferative information (such as the S-phase transit rate and the potential doubling time) can be obtained, by means of bivariate BrdU/DNA flow cytometric analysis.

Host / Isotype: Mouse / IgG1**Recommended Isotype Controls:** AM03095PU-N**Clone:** IIB5

Immunogen: IIB5 is a mouse monoclonal IgG1 antibody derived by fusion of SP2/0-Ag14 mouse myeloma cells with spleen cells from a BALB/c mouse intraperitoneally immunized with BrdU conjugated to BSA

Format: **State:** Liquid purified IgG fraction
Purification: Affinity Chromatography on Protein G
Buffer System: PBS
Preservatives: 0.09% Sodium Azide

Applications: **Flow Cytometry,**
Immunocytochemistry.
Immunohistochemistry on Frozen Sections.
Immunohistochemistry on Paraffin Embedded tissues.
Recommended Dilutions: 1/100-1/200 for Flow Cytometry, and for Immunohistochemistry with avidin-biotinylated horseradish peroxidase complex (ABC) as detection reagent.
For the specific labeling and staining **Protocols** see References 1-3.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: IIB5 reacts with Bromodeoxyuridine (BrdU) also when incorporated into nuclear DNA. The antibody is known to cross-react with Iododeoxyuridine (IdU). Although we have no specific information concerning Chlorodeoxyuridine (CldU), it is to be expected that also this antigen is recognized by IIB5.

Storage: Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freeze-thaw cycles.
Shelf life: One year from despatch.

General Readings:

1. Schutte B, Reynders MM, van Assche CL, Hupperets PS, Bosman FT, Blijham GH. An improved method for the immunocytochemical detection of bromodeoxyuridine labeled nuclei using flow cytometry. *Cytometry*. 1987 Jul;8(4):372-6. PubMed PMID: 3113895.
2. Tinnemans MM, Schutte B, Lenders MH, Ten Velde GP, Ramaekers FC, Blijham GH. Cytokinetic analysis of lung cancer by in vivo bromodeoxyuridine labelling. *Br J Cancer*. 1993 Jun;67(6):1217-22. PubMed PMID: 8512806.
3. Schutte B, Tinnemans MM, Pijpers GF, Lenders MH, Ramaekers FC. Three parameter flow cytometric analysis for simultaneous detection of cytokeratin, proliferation associated antigens and DNA content. *Cytometry*. 1995 Oct 1;21(2):177-86. PubMed PMID: 8582238.
4. van Engeland M, Kuijpers HJ, Ramaekers FC, Reutelingsperger CP, Schutte B. Plasma membrane alterations and cytoskeletal changes in apoptosis. *Exp Cell Res*. 1997 Sep 15;235(2):421-30. PubMed PMID: 9299167.
5. Schutte B, Nieland L, van Engeland M, Henfling ME, Meijer L, Ramaekers FC. The effect of the cyclin-dependent kinase inhibitor olomoucine on cell cycle kinetics. *Exp Cell Res*. 1997 Oct 10;236(1):4-15. PubMed PMID: 9344580.

Pictures:

Flow Cytometric analysis of the BrdU-labeled fraction in a tissue cell culture.

