



## Biotinylated Bromodeoxyuridine (BrdU)

Concentrated Monoclonal Antibody

Control Number: 902-138-012511

ISO  
9001:2000  
CERTIFIED

**Catalog Number:** CM 138 A, C  
**Description:** 0.1, 1.0 ml, concentrated  
**Dilution:** 1:100-1:200  
**Diluent:** Da Vinci Green

**Intended Use:**  
For Research Use Only

### Summary and Explanation:

BrdU is a biotinylated monoclonal antibody that recognizes bromodeoxyuridine (BrdU), which is an analog to thymidine and can be incorporated into living DNA during the S-phase of the cell cycle. The BrdU antibody can be used for DNA labeling index and cell proliferation studies. This antibody is biotinylated, and thus eliminates the need for a biotinylated secondary antibody. Therefore, this universal antibody can be used in all species, as well as mouse, rat and human tissues.

**Source:** Mouse monoclonal

**Species Reactivity:** BrdU localized in all species

**Clone:** ZBU30

**Isotype:** IgG1

**Total Protein Concentration:** ~10 mg/ml. Call for lot specific Ig Concentration.

**Epitope/Antigen:** Bromodeoxyuridine (BrdU)

**Cellular Localization:** Nuclear

**Positive Control:** BrdU localized in tissues

**Normal Tissue:** BrdU injected colon or spleen

**Abnormal Tissue:** BrdU injected tissue such as colon cancer

### Known Applications:

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

**Supplied As:** Buffer with protein carrier and preservative.

### Storage and Stability:

Store at 2°C to 8°C. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

### Protocol Recommendations

#### FORMALIN-FIXED PARAFFIN-EMBEDDED TISSUES

#### Peroxide Block:

Block for 5 minutes with BIOCARE's PEROXIDAZED 1.

**Pretreatment Solution (recommended):** Diva

#### Pretreatment Protocol:

Heat Retrieval Method:  
Retrieve sections under pressure using BIOCARE's Decloaking Chamber, followed by a wash in distilled water. Alternatively, steam tissue sections for 45-60 minutes. Allow solution to cool for 20 minutes then wash in distilled water.

#### Avidin-Biotin (Recommended):

1. Apply Avidin solution for 15 minutes and wash with TBS was buffer.
2. Apply Biotin solution for 15 minutes and wash with TBS was buffer.

#### Protein Block:

**Optional:** Incubate for 10-15 minutes at RT with BIOCARE's Background Sniper.

**Biotinylated Primary Antibody:** Incubate antibody for 1-2 hour at RT.

**Enzyme Labeled Streptavidin:** Incubate for 15 minutes at RT.

#### Chromogen:

Incubate for 5 minutes at RT when using BIOCARE's DAB.

#### CELL CULTURE AND ALCOHOL-BASED FIXATIVES

**Pretreatment (Required):** Denature for 1-2 hours at RT in 2N HCL\*.

#### Peroxide Block (Optional\*\*):

Block for 5 minutes with BIOCARE's PEROXIDAZED 1.

#### Protein Block:

**Optional:** Incubate for 10-15 minutes at RT with BIOCARE's Background Sniper.

**Biotinylated Primary Antibody:** Incubate for 1-2 hours at RT.

**Enzyme Labeled Streptavidin:** Incubate for 15 minutes at RT.

#### Chromogen:

Incubate for 5 minutes at RT when using BIOCARE's DAB.

#### Technical Note:

Use TBS buffer for washing steps. If background occurs dilute concentrate in PD905.

\* For improved morphology, fix cells or tissues in 10% formalin for 10-30 seconds just prior to application of 2N HCL. Wash in deionized water.

\*\*Peroxidase blocking may or not be necessary, depending on the type of tissue.

#### Performance Characteristics:

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to: fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of BIOCARE products. Ultimately, it is the responsibility of the investigator to determine optimal conditions. These products are tools that can be used for interpretation of morphological findings in conjunction with other diagnostic tests and pertinent clinical data by a qualified pathologist.

#### Quality Control:

Refer to NCCLS Quality Assurance for Immunocytochemistry approved guidelines, December 1999 MM4-A Vol.19 No.26 for more information about Tissue Controls.

#### Precautions:

This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC.

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Sodium azide (NaN<sub>3</sub>) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for disease control, 1976, National Institute of Occupational Safety and Health, 1976)

Specimens, before and after fixation and all materials exposed to them, should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes

#### Troubleshooting:

Follow the antibody specific protocol recommendations according to data sheet provided. If atypical results occur, contact BIOCARE's Technical Support at 1-800-542-2002.

#### Limitations and Warranty:

There are no warranties, expressed or implied, which extend beyond this description. BIOCARE is not liable for property damage, personal injury, or economic loss caused by this product.





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### References:

1. McGinley JN, Knott KK, Thompson HJ. Effect of Fixation and Epitope Retrieval on BrdU Indices in Mammary Carcinomas. *J Histochem Cytochem* 2000 Mar;48 (3):355-362.
2. Tacha DE, Bowman PE, McKinney L. High Resolution Light Microscopy and Immunocytochemistry Using Glycol Methacrylate-Embedded Sections and Immuno-Gold-Silver Staining. *J of Histochemistry*; June, 1993.
3. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."
4. National Committee for Clinical Laboratory Standards(NCCLS). Protection of laboratory workers from infectious diseases transmitted by blood and tissue; proposed guideline. Villanova, PA 1991;7(9). Order code M29-P.

