

## Ki-67

Concentrated and Prediluted Rabbit Monoclonal Antibody  
902-325-050218

**BIOCARE**  
M E D I C A L

<b>Catalog Number:</b>	<b>ACR 325 A, B, C</b>	<b>APR 325 AA, H</b>
<b>Description:</b>	0.1, 0.5, 1.0 ml, concentrated	6.0, 25 ml, prediluted
<b>Dilution:</b>	1:50	Ready-to-use
<b>Diluent:</b>	Van Gogh Yellow	N/A

### Intended Use:

For Research Use Only. Not for use in diagnostic procedures.

### Summary and Explanation:

The Ki-67 nuclear antigen is associated with cell proliferation. It is found throughout the cell cycle in the G1, S, G2, and M phases; but not the (G0) phase. It is used to grade proliferation rates of tumors. The high affinity and/or binding capacity of rabbit antibodies provide superior staining results and less chance for technical false negatives.

### Principle of Procedure:

Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, an enzyme labeled polymer is added to bind to the primary antibody. This detection of the bound antibody is evidenced by a colorimetric reaction.

**Source:** Rabbit monoclonal

**Species Reactivity:** Human, cat, cow, dog, mouse, pig, rat and sheep

**Clone:** SP6

**Isotype:** IgG

**Total Protein Concentration:** ~10 mg/ml. Lot specific Ig concentration is not available.

**Epitope/Antigen:** Ki-67

**Cellular Localization:** Nuclear

**Positive Tissue Control:** Tonsil or breast 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.

### Staining Protocol Recommendations:

**Peroxide Block:** Block for 5 minutes with Biocare's Peroxidized 1.

**Pretreatment:** Perform heat retrieval using Biocare's Diva, Reveal or Rodent Decloaker. Refer to the respective retrieval product data sheet for specific instructions.

**Protein Block (Optional):** Incubate for 5-10 minutes at RT with Biocare's Background Punisher.

**Primary Antibody:** Incubate for 30-60 minutes at RT.

**Probe:** N/A

**Polymer:** Incubate for 30 minutes at RT with a secondary-conjugated polymer.

**Chromogen:** Incubate for 5 minutes at RT with Biocare's DAB - OR - Incubate for 5-7 minutes at RT with Biocare's Warp Red.

### Counterstain:

Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Solution for 1 minute. Rinse with deionized water.

### Technical Notes:

1. This antibody has been standardized with Biocare's MACH 2 detection system. Use TBS buffer for washing steps.
2. For mouse and rat tissue, Rodent Block M & R is recommended. If background staining is observed, XM or XR Factor may be added to detection. For details, see product data sheet.

### Technical Notes Cont'd:

3. For mouse and rat tissue, Rabbit-on-Rodent Detection is recommended. For dog and cat tissue, Rabbit-on-Canine detection is recommended. For detection protocol please see detection data sheet.
4. Use TBS for washing steps.

### Limitations:

This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

### Precautions:

1. 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. 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) (6)
2. 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 with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water. (7)
3. Microbial contamination of reagents may result in an increase in nonspecific staining.
4. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
5. Do not use reagent after the expiration date printed on the vial.
6. The SDS is available upon request and is located at <http://biocare.net>.

### Technical Support:

Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

### References:

1. Jansen R, *et al.* MIB-1 labelling index is an independent prognostic marker in primary breast cancer. *Br J Cancer.* 1998 Aug; 78 (4):460-5.
2. Goodson WH, *et al.* The functional relationship between in vivo bromodeoxyuridine labeling index and Ki-67 proliferation index in human breast cancer. *Breast Cancer Res Treat.* 1998 May; 49 (2):155-64.
3. Rossi S, *et al.* A comparative study between a novel category of immunoreagents and the corresponding mouse monoclonal antibodies. *Am J Clin Pathol.* 2005; 124(2):295-302.
4. Pena LL, *et al.* Immunohistochemical detection of Ki-67 and PCNA in canine mammary tumors: relationship to clinical and pathologic variables. *J Vet Diag Invest.* 1998 Jul; 10 (3):237-46.
5. Gibbons D, *et al.* Comparison of topoisomerase II alpha and MIB-1 expression in uterine cervical squamous lesions. *Mod Pathol.* 1997 May; 10 (5):409-13.
6. 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."
7. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.



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