

# CD56

## Concentrated and Prediluted Monoclonal Antibody

Control Number: 902-164-081617

<b>Catalog Number:</b>	<b>ACR 164 A, B, C</b>	<b>APR 164 AA</b>
<b>Description:</b>	0.1, 0.5, 1.0 ml, concentrated	6.0, ml prediluted
<b>Dilution:</b>	1:50-1:100	Ready-to-use
<b>Diluent:</b>	Da Vinci Green	N/A

### Intended Use:

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

### Summary and Explanation:

CD56 (neural cell adhesion molecule, a natural killer cell marker) is part of a family of cell surface glycoproteins that plays a role in embryogenesis and contact-mediated interactions between neural cells. Studies have shown CD56 is expressed in a variety of normal and abnormal tissues including skin, small cell carcinoma, neuroblastoma, neurons, astrocytes, Schwann cells, NK cells, and a subset of activated T-cell lymphomas.

### 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, a secondary antibody is added to bind to the primary antibody. An enzyme label is then added to bind to the secondary antibody; this detection of the bound antibody is evidenced by a colorimetric reaction.

**Source:** Mouse monoclonal

**Species Reactivity:** Human; others not tested

**Clone:** BC56C04

**Isotype:** IgG1/kappa

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

**Epitope/Antigen:** CD56 neural cell adhesion molecule

**Cellular Localization:** Cell membrane

**Positive Control:** Neuroblastoma, pancreas, normal colon or rhabdomyosarcoma

### 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 Solution:** Reveal

### 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 10 minutes then wash in distilled water.

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

**Primary Antibody:** Incubate for 30 minutes at RT

**Probe:** Incubate for 10 minutes at RT with a secondary probe.

**Polymer:** Incubate for 10 minutes at RT with a tertiary 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 Note:

This antibody has been standardized with Biocare's MACH 4 detection system. It can also be used on an automated staining system and with other Biocare polymer detection kits. Use TBS buffer 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 ( $\text{NaN}_3$ ) 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 in 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. Chang CC, et al. Immunophenotypic profile of myeloid cells in granulocytic sarcoma by immunohistochemistry. Correlation with blast differentiation in bone marrow. Am J Clin Pathol. 2000 Nov;114(5):807-11.
2. Kaufmann O, Georgi T, Dietel M. Utility of 123C3 monoclonal antibody against CD56 (NCAM) for the diagnosis of small cell carcinomas on paraffin sections. Hum Pathol. 1997. Dec;28(12):1373-8.
3. Savoia P, et al. CD56-positive cutaneous lymphoma: a poorly recognized entity in the spectrum of primary cutaneous disease. Br J Dermatol. 1997 Dec;137(6):966-71.
4. Tsang WY, et al. Utility of a paraffin section-reactive CD56 antibody (123C3) for characterization and diagnosis of lymphomas. Am J Surg Pathol. 1996 Feb;20(2):202-10.
5. Natkunam Y, et al. Co-expression of CD56 and CD30 in lymphomas with primary presentation in the skin: clinicopathologic, immunohistochemical and molecular analyses of seven cases. J Cutan Pathol. 2000 Sep;27(8):392-9.
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.