



CD15 [MMA]

Prediluted Monoclonal Antibody

Control Number: 901-029-020907

Catalog Number: PM 029 AA
Description: 6.0 ml, prediluted
Dilution: Ready-to-use
Diluent: N/A

Intended Use:
For In Vitro Diagnostic Use

Summary and Explanation:

CD15 recognizes an antigen present on myelomonocytic cells and Lacto-N-fucopentose III (also known as hapten X). It is present on greater than 90% of granulocytes including neutrophils and eosinophils, and to a lesser degree, on monocytes. CD15 is expressed in Reed-Sternberg cells of Hodgkin's disease (of the nodular sclerosis, mixed cellularity and lymphocyte-depleted subtypes), and certain types of epithelial cells. It is generally agreed that the Reed-Sternberg cell variants in lymphocyte-predominant Hodgkin's disease are not reactive with CD15. Positive staining for CD15 combined with a negative reaction for lymphocytic markers may provide support for Hodgkin's disease. Fifty percent or more of adenocarcinomas have been described as showing significant cytoplasmic positivity for CD15. It does not detect most mesotheliomas.

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 universal, affinity-purified, 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: MMA

Isotype: IgM/kappa

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

Epitope/Antigen: CD15

Cellular Localization: Surface membrane and paranuclear staining

Positive Control: Reed-Sternberg cells (Hodgkin's)

Normal Tissue: Small intestine, neutrophils

Abnormal Tissue: Hodgkin's, some colon cancers and some lung adenocarcinomas

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

Peroxide Block:

If using an HRP system, 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.

Pretreatment Protocol cont'd:

Allow solution to cool for 20 minutes then wash in distilled water.

Protein Block:

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

Primary Antibody: Incubate for 30 minutes at RT.

Link: Incubate for 10 minutes at RT with a link.

Label: Incubate for 10 minutes at RT with a label.

Chromogen:

Incubate for 5 minutes at RT when using BIOCARE's DAB. - **OR** - Incubate for 10 minutes at RT when using BIOCARE's Vulcan Fast Red.

Technical Note:

This antibody has been standardized with BIOCARE's 4 plus 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.

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.

Sodium azide (NaN₃) 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 with reagents and specimens. If reagents or specimens come in contact with sensitive areas, wash with copious amounts of water.

Microbial contamination of reagents may result in an increase in nonspecific staining. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change. The MSDS is available upon request.

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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**ISO
9001:2000
CERTIFIED****References:**

1. Von Wasielewski R, Mengel M, Fischer R, Hansmann ML, Hubner K, Franklin J, Tesch H, Paulus U, Werner M, Diehl V, Georgii A. Classical Hodgkin's disease. Clinical impact of the immunophenotype. *Am J Pathol* 1997 Oct;151(4):1123-1130.
2. Dejmek A, Brockstedt U, Hjerpe A. Optimization of a battery using nine immunocytochemical variables for distinguishing between epithelial mesothelioma and adenocarcinoma. *APMIS* 1997 Nov;105(11):889-894.
3. Ohsawa M, Aozasa K, Ikeda H. Immunoreactivities of Reed-Sternberg cells and their variants in the sequential biopsy of Hodgkin's disease. *Mod Pathol* 1993 Jul;6(4):457-462
4. Skubitz K, Balke J, Ball E, et al. Report on the CD15 cluster workshop. In: Knapp W, Dorken B, Gilks WR, et al, eds. *Leucocyte Typing IV: White Cell Differentiation Antigens*. Oxford: Oxford University Press; 1989; 800-805.
5. Pinkus GS, Thomas P, Said JW. Leu-M1: A marker for Reed Sternberg cells in Hodgkin's Disease: An immunoperoxidase study of paraffin-embedded tissues. *Am J Pathol*. 1985; 119:244.
6. Hsu SM, Jaffe ES, Leu-M1 and peanut agglutinin stain the neoplastic cells of Hodgkin's Disease. *Amer J Clin Path*. 1984; 82:29.
7. 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."
8. 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.

