MUC-1

Concentrated and Prediluted Monoclonal Antibody

Control Number: 901-319-030907

ISO 9001:2000 CERTIFIED

Catalog Number:	**CM 319 A,B**	**PM 319 AA**
Description:	0.1, 0.5ml, concentrated	6.0ml, prediluted
Dilution:	1:200-1:300	Ready-to-use
Diluent:	Renoir Red	N/A

Intended Use:
For In Vitro Diagnostic Use

Summary and Explanation:
MUC-1 is a large cell surface mucin glycoprotein expressed by most glandular and ductal epithelial cells and some hematopoietic cell lineages. The MUC-1 mucin (Cancer Antigen 15-3) is secreted from tumor cells. The apoprotein of the MUC-1 mucin contains a transmembrane domain, a cytoplasmic domain, and an extracellular carbohydrate rich domain. Abnormal overexpression of MUC-1 in cancer cells is thought to contribute to their aggressive growth, but molecular mechanisms associated with this effect are still unclear. MUC-1 stains cell membranes, but also the cytoplasm of most epithelial cell types. It is expressed on most secretory epithelium, including mammary gland and some hematopoietic cells. It is expressed abundantly in lactating mammary glands and over-expressed abundantly in >90% breast carcinomas and metastases. As an exception, mucinous carcinomas are significantly less MUC-1 reactive. Aberrant cytoplasmic and membranous localization of MUC-1 expression has been associated with poor patient outcome. Adenocarcinomas are generally positive and squamous carcinomas and nonepithelial malignancies negative. High grade prostate carcinomas were negative, in contrast to low grade ones. Bladder and kidney cancers were either strongly positive or negative. Hepatocellular carcinomas are negative, but cholangiogenic carcinomas are positive.

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: 695

Isotype: IgG1

Epitope/Antigen: MUC-1

Cellular Localization: Cytoplasmic/cell membrane

Positive Control: Lung

Normal Tissue: Lung, kidney, pancreas, stomach, endometrium

Abnormal Tissue: Breast, GI, lung, renal cell, prostate carcinomas

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

Known Applications:
Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative.

Storage and Stability:
Store at 2ºC to 8ºC. 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 2ºC to 8ºC.

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. 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 30-60 minutes at RT.

Probe: N/A

Polymer: Incubate for 30 minutes at RT with a Polymer.

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 MACH 2 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 (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)
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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References:

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