MUC-4
Concentrated Monoclonal Antibody
Control Number: 902-326-081717

Catalog Number: ACR 326 C
Description: 1.0 ml, concentrated
Dilution: 1:200-1:300
Diluent: Van Gogh Yellow

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

Summary and Explanation:
MUC-4 (also called sialomucin complex) is a membrane-bound mucin that has been suggested to be implicated in malignant progression in humans and rats. The MUC-4 gene is expressed in various normal epithelial tissues of endodermic origin and carcinomas. In the respiratory tract, over-expression of the membrane mucin has been observed during malignant progression of mammary tumors in both humans and rats, suggesting that deregulation of MUC-4 might facilitate development of these malignancies. Studies have indicated that over-expression of MUC-4 results in suppression of both cell adhesion and immune killing of tumor cells. MUC-4 transcripts have been detected in normal respiratory epithelium and lung. Other studies have shown that MUC-4 is a very specific (100%) and sensitive (91.4%) marker of lung adenocarcinomas and is negative for mesotheliomas. Studies have shown that MUC-4 expression in invasive ductal carcinoma of the pancreas is an independent factor for poor prognosis and predicts outcome in the patient.

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. The detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Mouse Monoclonal
Species Reactivity: Human
Clone: 8G-7
Isotype: IgG1/kappa
Total Protein Concentration: -10 mg/ml. Call for lot specific Ig concentration.

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

Epitope/Antigen: MUC-4
Positive Control: Lung cancer
Cellular Localization: Cell membrane/cytoplasm

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 (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 10 minutes then wash in distilled water.

Protein Block:
Optional: Incubate for 10-15 minutes at RT with Biocare's Background Sniper.

Primary Antibody: Incubate for 30 minutes at RT.

Probe: N/A

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

Staining Protocol Recommendations Cont’d:

Chromogen:
Incubate for 5 minutes at RT when using Biocare's DAB. - OR - Incubate for 10-20 minutes at RT when using Biocare's Vulcan Fast Red.

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

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.

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 (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) (7)
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. (8)
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 MSDS is available upon request and is located at http://biocare.net/support/msds/.

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

References: