Pan Cytokeratin [Lu-5]
Concentrated and Prediluted Monoclonal Antibody
901-043-062519

Catalog Number: CM 043 C  PM 043 AA  IP 043 G10  VP 043 G  VLT M 043 G20

Description: 1.0 mL, conc.  6.0 mL, RTU  10 mL, RTU  Ready-to-use  Ready-to-use
Dilution: 1:100  Ready-to-use  N/A  N/A  N/A
Diluent: Da Vinci Green  N/A  N/A  N/A  N/A

Intended Use:
For In Vitro Diagnostic Use
Pan Cytokeratin [Lu-5] is a mouse monoclonal antibody that is intended for laboratory use in the qualitative identification of most cytokeratin proteins of both the acidic (type I) and basic (type II) subfamilies by immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

Summary and Explanation:
Lu-5 is useful in differentiating epithelial and mesothelial cells from mesenchymal cells in normal and tumor tissues. It serves as a first-order pan cytokeratin antibody for both acidic (type I) and basic type (basic type II) cytokeratin subfamilies of all vertebrates tested so far. Lu-5 stains an intracytoplasmic, formaldehyde-resistant epitope on the surface of cytokeratin filaments. Lu-5 has been shown to be superior to AE1/AE3.

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 one-, two- or three-step detection procedure can be employed. The one-step procedure will feature an enzyme-labeled polymer that binds to the primary antibody. A two-step procedure will feature a secondary antibody added to bind to the primary antibody. An enzyme-labeled polymer is then added to bind to the secondary antibody. The three-step detection procedure will feature a secondary antibody added to bind to the primary antibody followed by a linker antibody step for maximum binding. An enzyme-labeled polymer is then added to bind to the linker antibody. These detections of the bound antibodies are evidenced by a colorimetric reaction.

Source: Mouse monoclonal

Species Reactivity: Human, mouse and rat

Clone: Lu-5

Isotype: IgG1

Protein Concentration: Call for lot specific Ig concentration.

Epitope/Antigen: Pan cytokeratin

Cellular Localization: Cytoplasmic

Positive Tissue Control: Skin or adenocarcinoma

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. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

Protocol Recommendations (VALENTh Automated Slide Staining Platform) Cont'd:

Digestion Method: Digest with Pepsin enzyme for 5 minutes at 37°C

Peroxide Block: Block for 5 minutes with Val Peroxidase Block.

Primary Antibody: Incubate for 30 minutes.

Secondary: Incubate for 10 minutes with Val Mouse Secondary.

Linker: Incubate for 10 minutes with Val Universal Linker.

Polymer: Incubate for 10 minutes with Val Universal Polymer.

Chromogen: Incubate for 5 minutes with Val DAB.

Counterstain: Counterstain for 5 minutes with Val Hematoxylin.

Protocol Recommendations (intelliPATH FLX® and manual use):

Peroxide Block: Block for 5 minutes with Peroxidase 1.

Digestion Method: Digest with Pepsin enzyme for 5 minutes at 37°C -or- for 15-20 minutes at RT.

Primary Antibody: Incubate for 5-10 minutes at RT with Background Punisher.

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

Polymer: Incubate for 10-20 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 Warp Red.

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

intelliPATH FLX Automated Slide Stainer:

IP043 is intended for use on the intelliPATH FLX. Refer to the User Manual for specific instructions for use. When using the intelliPATH FLX, peroxide block with intelliPATH FLX Peroxidase Blocking Reagent (1PBS000) may be performed following pretreatment.

Technical Note:
This antibody, for intelliPATH FLX and manual use, has been standardized with MACH 4 detection system. Use TBS for washing steps.

Protocol Recommendations (Ventana BenchMark XT / ULTRA):

VP043 is intended for use with the BenchMark XT / ULTRA. Refer to the User Manual for specific instructions for use. Recommended protocol parameters are as follows:

- Using ultraView on XT / ULTRA:

Protocol Recommendations (VALENTh Automated Slide Staining Platform): VLT M043 is intended for use with the VALENTh. Refer to the User Manual for specific instructions for use. Protocol parameters in the Protocol Manager should be programmed as follows:

Deparaffinization: Deparaffinize for 8 minutes with Val DePar.
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Limitations Cont’d:
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 protocol are based on exclusive use of Biocare
products. Ultimately, it is the responsibility of the investigator to
determine optimal conditions.

Quality Control:
Refer to CLSI Quality Standards for Design and Implementation of
Immunohistochemistry Assays; Approved Guideline-Second edition

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.
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) (3)
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. Neverpipette 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. (4)
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.

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.

References:
1. Schroder S, Wodzynski A, Padberg B. Cytokeratin expression of
benign and malignant epithelial thyroid gland tumors. An
immunohistologic study of 154 neoplasms using 8 different monoclonal
2. Mullhaupt B, et al. The common pattern of cytokeratin alteration in
alcoholic and cholestatic liver disease is different from that of hepatic
liver damage. A study with the panepithelial monoclonal antibody lu-5.
CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory
Sink Drains to Remove Azide Salts."
4. Clinical and Laboratory Standards Institute (CLSI). Protection of
Laboratory Workers from Occupationally Acquired Infections; Approved

VP Echelon Series antibodies are developed solely by Biocare Medical
LLC and do not imply approval or endorsement of Biocare’s antibodies
by Ventana Medical Systems, Inc. Biocare and Ventana are not affiliated,
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