MOC-31

Concentrated and Prediluted Monoclonal Antibody
902-403-030625

BIOCARE MEDICAL

Available Product Formats				
Format	Catalog Number	Description	Dilution	Diluent
Concentrate	ACR 403 A, C	0.1, 1.0 mL	1:200	Renoir Red
Predilute	APR 403 AA	6.0 mL	Ready-to-use	N/A
NeoPATH PRO	NPAR 403 T40	40 tests	Ready-to-use	N/A
Q Series	ALR 403 G7	7.0 mL	Ready-to-use	N/A

Intended Use:
For Research Use Only. Not for use in diagnostic procedures.
This mouse antibody is intended to detect Ep-CAM glycoprotein.

Background Information:
MOC-31, also known as Epithelial Specific Antigen/Ep-CAM, consists of two 34 and 39 kDa glycoproteins. These glycoproteins are located on the cell membrane surface and in the cytoplasm of virtually all epithelial cells with the exception of most squamous epithelia, hepatocytes, renal proximal tubular cells, gastric parietal cells and myoepithelial cells. [5-8]

Known Applications:
Immunohistochemistry (Formalin-fixed paraffin-embedded tissues). Other applications have not been tested.

Supplied As:
Buffered saline solution, pH 6.1-7.4, contains a protein carrier and less than 0.1% sodium azide preservative. See Safety Data Sheet for additional details.

Materials and Methods:
Reagents Provided:
Host Source: Mouse monoclonal
Species Reactivity: Human; other species not tested.
Clone: MOC-31
Isotype: IgG1
Protein Concentration: Contact Biocare's Technical Support for lot specific Ig concentration
Specificity: Ep-CAM

Reconstitution, Mixing, Dilution, and Titration:
Prediluted antibody reagent is optimally diluted for use with the above listed staining systems. Further dilution may result in loss of antigen staining. The user must validate any such change. Differences in tissue processing and technical procedures in the user's laboratory may produce significant variability in results necessitating regular performance of in-house controls. Concentrated reagent requires dilution as indicated in table above.

Storage and Stability:
Store at 2ºC to 8ºC. The product is stable to the expiration date printed on the vial label when stored under these conditions. Do not use after expiration date. Storage under any condition other than those specified must be verified. Diluted reagents should be used promptly; store any remaining reagent at 2ºC to 8ºC. The stability of user diluted reagents has not been established by Biocare.

Staining Protocol Recommendations (NeoPATH PRO):
NPAR403 is compatible for use with the NeoPATH PRO. Below are programming and protocol recommendations to assist the user when staining using Biocare's NeoPATH PRO Automated Staining Platform for research applications. The user is responsible for further optimizations of the protocol.
Antibody Protocol: MOC-31, 20 min at RT
Template: HRP_No AR_20MINAB_ENZ_PEP
Dewax: 20 min at 75°C
Antigen Retrieval (HEIR Option): N/A
Enzyme: N/A
Block Option: N/A
Detection: HRP_20AB_STD (Amplifier; 10 min at RT Polymer; 25 min at RT)
Chromogen: 7 min DAB + 2 min DAB Enhancer
Hematoxylin: 7 min at RT

Staining Protocol Recommendations (intelliPATH FLX® and manual use):
Below are programming and protocol recommendations to assist the user when staining manually and/or using Biocare's intelliPATH FLX Automated Staining Platform for research applications. The user is responsible for further optimizations of the protocol.
Peroxide Block: Block for 5 minutes with a peroxide blocking reagent.
Pretreatment: Digest with Pepsin enzyme for 20 minutes at RT or for 5 minutes at 37ºC
Protein Block (Optional): Incubate for 5-10 minutes at RT with a protein blocking reagent.
Primary Antibody: Incubate for 30-45 minutes at RT.
Probe: 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 5-7 minutes at RT with desired chromogen.
Counterstain: Counterstain with hematoxylin. Rinse with deionized water. Apply Bluing Solution for 1 minute. Rinse with deionized water.
Technical Note:
This antibody, for intelliPATH FLX and manual use, has been standardized with MACH 4 detection system. Use TBS for washing steps.

Staining Protocol Recommendations (Q Series):
ALR403 is compatible with the Leica IHC staining platforms for research applications. Refer to the User Manual for specific instructions for use in optimizing protocols.

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 (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)[1]
2. Handle materials of human or animal origin as potentially biohazardous and dispose of such materials with proper precautions. In the event of exposure, follow the health directives of the responsible authorities where used.[2,3]
3. 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 into contact with sensitive areas, wash with copious amounts of water.[4]
4. Microbial contamination of reagents may result in an increase in nonspecific staining.
5. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
6. Do not use reagent after the expiration date printed on the vial.

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Precautions Cont'd:
7. To prevent evaporation and ensure maximum test capacity, promptly cap and remove reagents from automated instruments after each run. Leaving reagents exposed can reduce their effectiveness and the number of tests Precautions:
they can provide. Always store reagents as directed to maintain their integrity.
8. Follow local disposal regulations for your location along with recommendations in the Safety Data Sheet to determine the safe disposal of this product.
9. 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. 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."
2. Occupational Safety and Health Standards: Occupational exposure to hazardous chemicals in laboratories. (29 CFR Part 1910.1450). Fed. Register.
3. Directive 2000/54/EC of the European Parliament and Council of 18 September 2000 on the protection of workers from risks related to exposure to biological agents at work.
4. 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.
5. Morrison C, Marsh W Jr, Frankel WL. A comparison of CD10 to pCEA, MOC-31, and hepatocyte for the distinction of malignant tumors in the liver. Mod Pathol. 2002 Dec;15(12):1279-87.
6. Proca DM, *et al*. MOC31 immunoreactivity in primary and metastatic carcinoma of the liver. Report of findings and review of other utilized markers. Appl Immunohistochem Mol Morphol. 2000 Jun;8(2):120-5.
7. Pai RK, West RB. MOC-31 exhibits superior reactivity compared with Ber-EP4 in invasive lobular and ductal carcinoma of the breast: a tissue microarray study. Appl Immunohistochem Mol Morphol. 2009 May; 17(3):202-6.
8. Nelson G. Ordonez, MD. Value of the MOC-31 monoclonal antibody in differentiating epithelial pleural mesothelioma from lung adenocarcinoma. Human Pathol. 1998 Feb; 29(2):166-9.

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