GATA-3

Concentrated Monoclonal Antibody

Control Number: 901-405-011012

ISO 9001&13485 CERTIFIED

Catalog Number:	**CM 405 A, C**	**PM 405 AA**
Description:	0.1, 1.0 ml. concentrated	6.0 ml, predilute
Dilution:	1:250-1:500	Ready-to-use
Diluent:	Van Gogh Yellow	N/A

Intended Use:

For In Vitro Diagnostic Use

Summary and Explanation:

GATA-3 (GATA binding protein 3) is a member of the GATA family of transcription factors. This 50 kDa nuclear protein regulates the development and subsequent maintenance of multiple tissues. GATA-3 orchestrates gene expression profiles during embryogenesis of a variety of human tissues, including hematopoietic cells, skin, kidney, mammary gland, and the central nervous system. Among several other roles, GATA-3 has recently been identified as a key player of luminal cell differentiation in the mammary gland. GATA-3 appears to control a set of genes involved in the differentiation and proliferation of breast cancer. The expression of GATA-3 has a strong association with the expression of estrogen receptor-alpha (ER) in breast cancer, and there is mounting evidence that GATA-3 can be used as a clinical marker to determine response to hormonal therapy and to refine the prognosis of breast cancer patients. GATA-3 has also been shown to be a novel marker for bladder cancer. In one study, GATA-3 stained 67% of 308 urothelial carcinomas, but none for prostate or renal carcinomas.

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 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

Clone: L50-823

Isotype: IgG1/Kappa

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

Epitope/Antigen: Conserved peptide between trans-activation and DNA-binding domains

Cellular Localization: Nuclear

Positive Control: Bladder cancer and breast cancer

Normal Tissue: Bladder and breast

Abnormal Tissue: Bladder cancer and breast cancer

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:

Block for 5 minutes with Biocare's Peroxidazed 1.

Pretreatment Solution (recommended): Reveal

Pretreatment Protocol:

Heat Retrieval Method:

For bladder cancer, retrieve sections under pressure at 125°C for 30 seconds 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.

Protocol Recommendations Cont'd:

For breast cancer, preheat the retrieval solution to 95°C for 30 minutes in Biocare's Decloaking Chamber. Then, place slides into the preheated solution and retrieve under pressure at 95°C for 40 minutes. Alternatively, steam tissue sections for 45-60 minutes or use a water bath at 95°C for 40 minutes. Allow solution to cool for 20 minutes then wash in distilled water.

Protein Block (Optional): Incubate for 10 minutes at RT with Biocare's Background Punisher.

Primary Antibody: Incubate for 30 minutes at RT.

Probe: Incubate for 10 minutes at RT with a probe.

Polymer: Incubate for 10 minutes at RT with a polymer.

Chromogen:

Incubate for 5 minutes at RT when using Biocare's DAB - OR - Incubate for 5-7 minutes at RT when using Biocare's Warp Red.

Counterstain:

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

Technical Note:

This antibody has been standardized with Biocare's MACH 4 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 CLSI Quality Standards for Design and Implementation of Immunohistochemistry Assays; Approved Guideline-Second edition (I/LA28-A2) CLSI Wayne, PA USA (www.clsi.org). 2011

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 and is located at http://biocare.net/support/msds/.

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.

tel: 800-799-9499 fax: 925-603-8080 www.biocare.net

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References:

1. Raspollini MR, *et al.* The use of placental S100 (S100P), GATA3 and Napsin A in the differential diagnosis of primary adenocarcinoma of the bladder and bladder metastasis from adenocarcinoma of the lung. Pathologica. 2010 Feb; 102(1):33-5.
2. Esheba GE, *et al.* Expression of the urothelial differentiation markers GATA3 and placental S100 (S100P) in female genital tract transitional cell proliferations. Am J Surg Pathol. 2009 Mar; 33(3):347-53.
3. Albergaria A, *et al.* Expression of FOXA1 and GATA-3 in breast cancer: the prognostic significance in hormone receptor-negative tumours. Breast Cancer Res. 2009; 11(3):R40.
4. Kouros-Mehr H, *et al.* GATA-3 links tumor differentiation and dissemination in a luminal breast cancer model. Cancer Cell. 2008 Feb; 13(2):141-52.
5. Voduc D, *et al.* GATA-3 expression in breast cancer has a strong association with estrogen receptor but lacks independent prognostic value. Cancer Epidemiol Biomarkers Prev. 2008 Feb; 17(2):365-73.
6. Parikh P, *et al.* GATA-3 expression as a predictor of hormone response in breast cancer. J Am Coll Surg. 2005 May; 200(5):705-10.
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. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory workers from occupationally Acquired Infections; Approved guideline-Third Edition CLSI document M29-A3 Wayne, PA 2005.

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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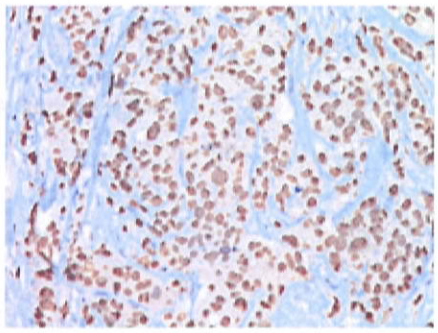

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Specifications

Intended Use	IVD
Source	Mouse Monoclonal
Species Reactivity	Human
Clone	L50-823