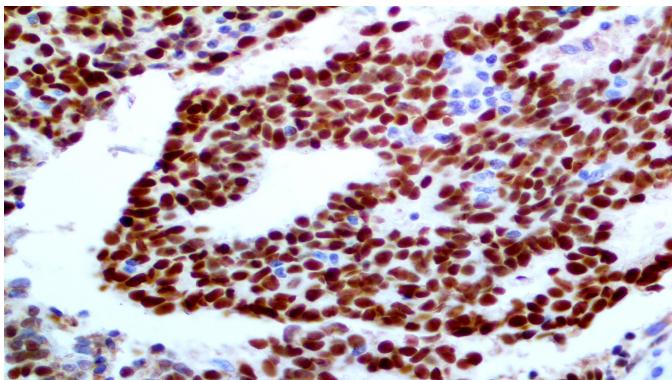


GATA3

Clone: L50-823
Mouse Monoclonal



Inset: IHC of GATA3 on a FFPE Breast Carcinoma Tissue

Intended Use

For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical applications on formalin-fixed paraffin-embedded tissues (FFPE), frozen tissue sections and cell preparations. Interpretation of results should be performed by a qualified medical professional.

Immunogen

Peptide between trans-activation and DNA-binding domains of GATA-3.

Summary and Explanation

Trans-acting T-cell-specific transcription factor, GATA-3 is a protein that in humans is encoded by the GATA3 gene. GATA-3 b regulates luminal epithelial cell differentiation in the mammary gland, is an important regulator of T cell development and plays an important role in endothelial cell biology.

GATA-3 is one of the three genes mutated in >10% of breast cancers. Nuclear expression of GATA-3 in breast cancer is considered a marker of luminal cancer in ER+ cancer and luminal androgen responsive cancer in ER-/AR+ tumors. It is highly coexpressed with FOXA1 and serves as a negative predictor of basal subtype and HER-2 and is also considered a strong predictor of taxane and platinum salts insensitivity.

GATA3 expression is found in urothelial carcinoma, especially in invasive and high grade tumors. Therefore, anti-GATA3 can be used in a panel of antibodies for diagnosis of unknown primary carcinoma, when carcinomas of the breast or bladder are a possibility. Studies have also shown the utility of GATA-3 in differentiating urothelial carcinoma from prostate adenocarcinoma and squamous cell carcinomas of the uterine, cervix, anus and lung.

| | | | |
|---------------|---|------------|-----------------------|
| Antibody Type | Mouse Monoclonal | Clone | L50-823 |
| Isotype | IgG1/K | Reactivity | Paraffin, Frozen |
| Localization | Nuclear | Species | Human, Predicted: Rat |
| Control | Breast Carcinoma | | |
| Application | Breast Cancer, Carcinomas of Unknown Primary Site | | |

Presentation

Anti-GATA3 is a Mouse Monoclonal antibody derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

| Catalog No. | Presentation | Dilution | Volume |
|--------------|-------------------|--------------|---------|
| BSB 2670 | Predilute | Ready-to-Use | 3.0 mL |
| BSB 2671 | Predilute | Ready-to-Use | 7.0 mL |
| BSB 2672 | Predilute | Ready-to-Use | 15.0 mL |
| BSB 2673 | Concentrate | 1:50-1:200 | 0.1 mL |
| BSB 2674 | Concentrate | 1:50-1:200 | 0.5 mL |
| BSB 2675 | Concentrate | 1:50-1:200 | 1.0 mL |
| BSB-2675-T7 | TintoStainer Plus | Ready-to-Use | 7.0 mL |
| BSB-2675-T30 | TintoStainer Plus | Ready-to-Use | 30.0 mL |

Control Slides Available

| Catalog No. | Quantity |
|-------------|----------|
| BSB-9192-CS | 5 slides |

Storage Store at 2-8°C (Control Slides: Store at 20-25°C)

Precautions

1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN₃) as a preservative. Ensure proper handling procedures are used with this reagent.
3. Always wear personal protective equipment such as a laboratory coat, goggles, and gloves when handling reagents.
4. Dispose of unused solution with copious amounts of water.
5. Do not ingest reagent. If reagent is ingested, seek medical advice immediately.
6. Avoid contact with eyes. If contact occurs, flush with large quantities of water.
7. Follow safety precautions of the heating device used for epitope retrieval (TintoRetriever Pressure Cooker or similar).
8. For additional safety information refer to Safety Data Sheet for this product.
9. For complete recommendations for handling biological specimens, please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (see References in this document).

Stability

This product is stable up to the expiration date on the product label.

Do not use after expiration date listed on package label. Temperature fluctuations should be avoided. Store appropriately when not in use and avoid prolonged exposure to room temperature conditions.

Specimen Preparation

Paraffin sections: The antibody can be used on formalin-fixed paraffin-embedded (FFPE) tissue sections. Ensure tissue undergoes appropriate fixation for best results. Pre-treatment of tissues with heat-induced epitope retrieval (HIER) is recommended using Bio SB ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033), or ImmunoDNA Digestor (BSB 0108-0112). See reverse side for complete protocol. Tissue should remain hydrated via use of Bio SB Immuno/DNA Washer solutions (BSB 0029 & BSB 0042).

Frozen sections and cell preparations: The antibody can be used on acetone-fixed frozen sections and acetone-fixed cell preparations.

IHC Protocol

1. Cut and mount 3-5 micron formalin-fixed paraffin-embedded tissues on positively charged slides such as Bio SB Hydrophilic Plus Slides (BSB 7028).
2. Air dry for 2 hours at 58° C.
3. Deparaffinize, dehydrate, and rehydrate tissues.
4. Subject tissues to heat induced epitope retrieval (HIER) using a suitable retrieval solution such as ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023) or EDTA (BSB 0030-BSB 0033).
5. Any of three heating methods may be used:

a. TintoRetriever Pressure Cooker or Equivalent

Place tissues/slides in a staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA and place on trivet in the pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high. Incubate for 15 minutes. Open and immediately transfer slides to room temperature.

b. TintoRetriever PT Module or Water Bath Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA at 95°-99° C. Incubate for 30-60 minutes.

c. Conventional Steamer Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA in a steamer, cover and steam for 30-60 minutes.

6. After heat treatment, transfer slides in ImmunoDNA Retriever with Citrate or EDTA to room temperature and let stand for 15-20 minutes.
7. For manual IHC, perform antibody incubation at ambient temperature. For automated IHC methods, perform antibody incubation according to instrument manufacturer's instructions.
8. Wash slides with ImmunoDNA washer or DI water.
9. Continue IHC protocol. Wash slides between each step with ImmunoDNA washer solution.

Abbreviated Immunohistochemical Protocol

| Step | ImmunoDetector AP/HRP | PolyDetector AP/HRP | PolyDetector Plus HRP |
|--------------------------|-----------------------|---------------------|-----------------------|
| Peroxidase/AP Blocker | 5 min. | 5 min. | 5 min |
| Primary Antibody | 30-60 min. | 30-60 min. | 30-60 min. |
| 1st Step Detection | 10 min. | 30-45 min. | 15 min. |
| 2nd Step Detection | 10 min. | Not Applicable | 15 min. |
| Substrate- Chromogen | 5-10 min. | 5-10 min. | 5-10 min. |
| Counterstain / Coverslip | Varies | Varies | Varies |

Autostainer Protocols

| Autostainer | Retrieval | | IHC Protocol |
|-------------------|-----------|------|-------------------|
| | Solution | Time | |
| TintoStainer Plus | EDTA | 30 | PolyDetector Plus |
| Leica Bond Max | ER2 | 20 | IHC Protocol F |

Mounting Protocols

For detailed instructions using biodegradable permanent mounting media such as XyGreen PermaMounter (BSB 0169-0174) or organic solvent based resin such as PermaMounter (BSB 0094-0097), refer to PI0174 or PI0097.

Product Limitations

Due to inherent variability present in immunohistochemical procedures (including fixation time of tissues, dilution factor of antibody, retrieval method utilized, and incubation time), optimal performance should be established through the use of positive and negative controls. Results should be interpreted by a qualified medical professional.

References

1. Yamashita M, et al. Essential role of GATA3 for the maintenance of type 2 helper T (Th2) cytokine production and chromatin remodeling at the Th2 cytokine gene loci. 2004; J Biol Chem 279 (26): 26983-90.
2. Wilson BJ, Giguere V. Meta-analysis of human cancer microarrays reveals that GATA3 is integral to the estrogen receptor alpha pathway. Mol Cancer 7: 49.
3. Dydensborg AB, et al. GATA3 inhibits breast cancer growth and pulmonary breast cancer metastasis. Oncogene 2009; 28 (29): 2634-42.
4. Sanga S, et al. Gene expression meta-analysis supports existence of molecular apocrine breast cancer with a role for androgen receptor and implies interactions with ErbB family. BMC Medical Genomics 2009; 2: 59.
5. Higgins JP, et al. Placental S100 (S100P) and GATA3: Markers for transitional epithelium and urothelial carcinoma discovered by complementary DNA microarray. Am J Surg Pathol. 2007;31:673-680.
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7. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012.

<https://www.cdc.gov/mmwr/pdf/other/su6101.pdf>

Symbol Key / Légende des symboles/Erläuterung der Symbole

| | | | | | | | | |
|------------|------------|--|---|---|--|--|------------|---|
| EC | REP | QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden |  | Storage Temperature Limites de température Zulässiger Temperaturbereich |  | Manufacturer Fabricant Hersteller | REF | Catalog Number Référence du catalogue Bestellnummer |
| IVD | | In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro In-Vitro-Diagnostikum |  | Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten |  | Expiration Date Utiliser jusque Verwendbar bis | LOT | Lot Number Code du lot Chargenbezeichnung |



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