Datasheet for ABIN967621

anti-GATA3 antibody

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Overview

Quantity:	0.1 mg
Target:	GATA3
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This GATA3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (Formalin-fixed Sections) (IHC (f)), BioImaging (BI)

Product Details

Brand:	BD Pharmingen™
Immunogen:	Conserved peptide between the trans-activation and DNA-binding domains of human, mouse and rat GATA3
Clone:	L50-823
Isotype:	IgG1 kappa
Cross-Reactivity (Details):	Predicted: Rat
Characteristics:	1. Please refer to us for technical protocols. 2. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

Product Details

	4. This antibody has been developed and certified for the bioimaging application. However, a routine bioimaging test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	GATA3
Alternative Name:	GATA3 (GATA3 Products)
Background:	GATA3 (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. GATA3 is involved in the development of T lymphocytes (regulates T cell receptor subunit gene expression) and the differentiation of mature T cells to become Th2 cells. The expressed levels of normal or mutant GATA3 are also associated with the behaviors of various cancer cells including estrogen receptor-positive breast carcinoma cells. The L50-823 monoclonal antibody recognizes human and mouse GATA3.
Molecular Weight:	50 kDa
Pathways:	Hormone Transport, Regulation of Hormone Metabolic Process, Tube Formation

Application Details

Application Notes:	Methanol Procedure for a 96-well plate, with nuclear counterstain: 1. Seed the cells in appropriate culture medium at ~10,000 cells per well in an 96-well Imaging Plate , and culture overnight. 2. Remove the culture medium from the wells, and fix the cells by adding 100 µl of fresh 3.7% Formaldehyde in PBS or fixation buffer to each well and incubating for 10 minutes at room temperature (RT). 3. Remove the fixative from the wells, and permeabilize the cells by adding 100 µl of -20°C 90% methanol to each well and incubating for 5 minutes at RT. 4. Remove the permeabilizer, and wash the wells twice with 100 myl of 1× PBS. 5. Remove the PBS, and block the cells by adding 100 µl of blocking buffer (3% FBS in 1× PBS) or to each well and incubating for 30 minutes at RT. 6. Remove the blocking buffer, dilute the antibody in blocking buffer or Stain Buffer (FBS), and stain the cells by adding 50 µl of the diluted antibody to each well and incubating for 1 hour at

Application Details

	RT. 7. Remove the diluted antibody, and wash the wells three times with 100 myl of 1× PBS. 8. Remove the PBS, dilute the second-step reagent in blocking buffer or Stain Buffer (FBS), and stain the cells by adding 50 µl of the diluted second-step reagent to each well and incubating for 1 hour at RT. 9. Remove the diluted second-step reagent, and wash the wells three times with 100 myl of 1× PBS. 10. Remove the PBS, and counter-stain the nuclei by adding 100 ml of a 2 mg/ml solution of Hoechst 33342 in 1× PBS to each well at least 15 minutes before imaging. 11. View and analyze the cells on an appropriate imaging instrument.
Comment:	Related Products: ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.5 mg/mL
Buffer:	Aqueous buffered solution containing ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4°C.

Publications

Product cited in:	Kouros-Mehr, Slorach, Sternlicht, Werb: "GATA-3 maintains the differentiation of the luminal cell fate in the mammary gland." in: **Cell**, Vol. 127, Issue 5, pp. 1041-55, (2006) (PubMed). Usary, Llaca, Karaca, Presswala, Karaca, He, Langerød, Kåresen, Oh, Dressler, Lønning, Strausberg, Chanock, Børresen-Dale, Perou: "Mutation of GATA3 in human breast tumors." in: **Oncogene**, Vol. 23, Issue 46, pp. 7669-78, (2004) (PubMed). Steenbergen, OudeEngberink, Kramer, Schrijnemakers, Verheijen, Meijer, Snijders: "Down-

Publications

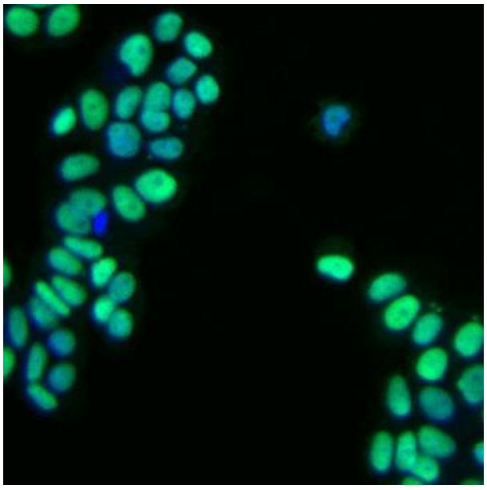
regulation of GATA-3 expression during human papillomavirus-mediated immortalization and cervical carcinogenesis." in: **The American journal of pathology**, Vol. 160, Issue 6, pp. 1945-51, (2002) (PubMed).

Van Esch, Groenen, Nesbit, Schuffenhauer, Lichtner, Vanderlinden, Harding, Beetz, Bilous, Holdaway, Shaw, Fryns, Van de Ven, Thakker, Devriendt: "GATA3 haplo-insufficiency causes human HDR syndrome." in: **Nature**, Vol. 406, Issue 6794, pp. 419-22, (2000) (PubMed).

Zheng, Flavell: "The transcription factor GATA-3 is necessary and sufficient for Th2 cytokine gene expression in CD4 T cells." in: **Cell**, Vol. 89, Issue 4, pp. 587-96, (1997) (PubMed).

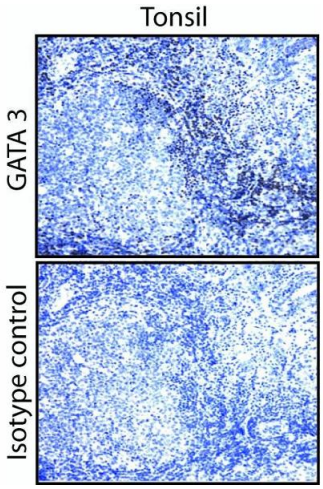
There are more publications referencing this product on: Product page

Images



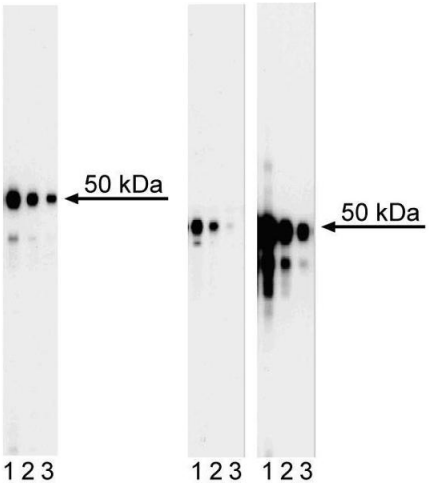
Immunofluorescence

Image 1. Immunofluorescent staining of human breast adenocarcinoma. MCF-7 cells (ATCC HTB-22) were cultured, fixed, permeabilized with cold methanol, stained with Purified Mouse anti-Human GATA3 monoclonal antibody (pseudo-colored green), and counter-stained with Hoechst 33342 (pseudo-colored blue) according to the Recommended Assay Procedure. The second-step reagent was Alexa Fluor® 647 goat anti-mouse Ig (Invitrogen). The images were captured on a BD Pathway™ 435 Bioimager System with a 20x objective and merged using BD Attovision™ software.



Immunohistochemistry (Paraffin-embedded Sections)

Image 2. GATA3 staining on human tonsil and breast. Following antigen retrieval with BD Retrievagen A buffer, the formalin-fixed paraffin-embedded sections were stained with either Purified Mouse anti-GATA3 monoclonal antibody (top panel) or Purified Mouse IgG1 kappa monoclonal isotype control (bottom panel), with Hematoxylin counterstaining. GATA3 is detected in the nuclei of the T lymphocytes between the lymphoid follicles of the tonsil and in the nuclei of the cuboidal epithelium of the mammary secretory tubules. Original magnification: 20X.



Western Blotting

Image 3. Western blot analysis of GATA3 in human T leukemia and mouse T helper cells. First Panel: Jurkat cell lysate (ABIN968537) was probed with Mouse anti-GATA3 monoclonal antibody at concentrations of 0.0156 (lane 1), 0.0078 (lane 2), and 0.0039 µg/ml (lane 3). Middle panel: 2D6 (mouse Th1) cell lysate was probed with Mouse anti-GATA3 monoclonal antibody at concentrations of 0.2500 (lane 1), 0.0625 (lane 2), and 0.0156 µg/ml (lane 3). Right panel: D10.G4.1 (mouse Th2, ATCC TIB -224) cell lysate was probed with Mouse anti-GATA3 monoclonal antibody at concentrations of 0.0625 (lane 1), 0.0156 (lane 2), and 0.0039 µg/ml (lane 3). GATA3 is identified as a band of 50 kDa.

Please check the product details page for more images. Overall 6 images are available for ABIN967621.