abcam

ab182747

Anti-GATA2 + GATA3 antibody [EPR17874]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR17874
Purification technique	Affinity purification Protein A
Concentration	1.574 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/1000
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information GATA2

Function	Transcriptional activator which regulates endothelin-1 gene expression in endothelial cells. Binds to the consensus sequence 5'-AGATAG-3'.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	GATA2 and GATA3 members of the GATA family of transcription factors play a critical role in gene regulation. GATA2 weighs approximately 50 kDa and is expressed in hematopoietic and endothelial cells among others. On the other hand GATA3 which is slightly larger is expressed mainly in T lymphocytes as well as in various tissues like skin and parathyroid. Collectively these transcription factors bind to the DNA sequence known as the GATA motif where they regulate the transcription of genes involved in development and differentiation processes.
Biological function summary	These transcription factors participate in vital cellular events. GATA2 is integral to the development of hematopoietic stem cells and survival whereas GATA3 is vital for T-cell lineage commitment and function. They do not typically function alone but often form complexes with other proteins to exert their effects. For instance

	GATA3 complexes with other transcription factors to regulate genes important for immune responses.
Pathways	GATA2 and GATA3 molecules find themselves embedded in several important signaling pathways. They play pivotal roles in the Notch signaling pathway and the T-cell receptor signaling pathway. In the context of these pathways GATA2 associates with proteins such as TAL1 and FOG1 which modulate hematopoiesis. GATA3 interacts closely with transcription factors like RUNX1 and T-bet influencing T-cell differentiation and response.
Associated diseases and disorders	GATA2 and GATA3 are linked to several critical conditions. Mutations in GATA2 can lead to immunodeficiency syndromes and hematologic malignancies such as acute myeloid leukemia (AML). These conditions arise through disrupted expression or function of associated proteins like RUNX1. Meanwhile aberrations in GATA3 expression have been implicated in breast cancer and allergic diseases. In breast cancer altered GATA3 levels affect pathways involving estrogen receptors like ESR1 worsening disease progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

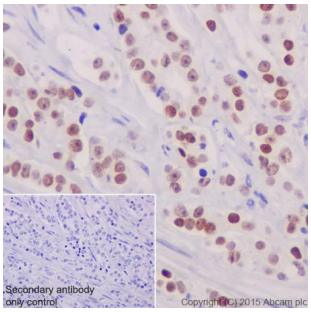
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

14 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

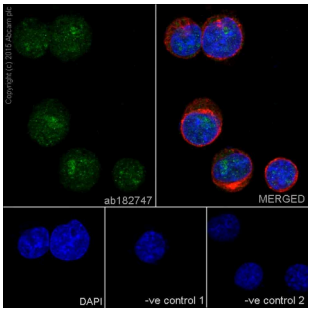
GATA2 + GATA3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GATA2 + GATA3 antibody

Immunohistochemical analysis of paraffin-embedded Human prostate cancer tissue labeling GATA2 + GATA3 with ab182747 at 1/500 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Nucleus staining on cancer cells of Human prostate cancer is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

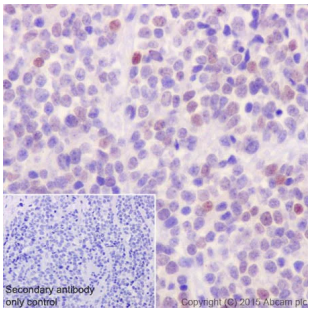
GATA2 + GATA3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GATA2 + GATA3 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized K562 (Human chronic myelogenous leukemia cells from bone marrow) cells labeling GATA2 + GATA3 with ab182747 at 1/1000 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green).
Confocal image showing nuclear and weakly cytoplasmic staining on K562 cells.

The nuclear counterstain is DAPI (blue).

Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).

The negative controls are as follows:-
-ve control 1: ab182747 at 1/1000 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

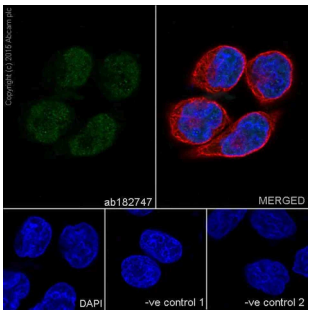
GATA2 + GATA3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GATA2 + GATA3 antibody

Immunohistochemical analysis of paraffin-embedded Human neuroblastoma tissue labeling GATA2 + GATA3 with ab182747 at 1/500 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Nucleus staining on cancer cells of Human neuroblastoma is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

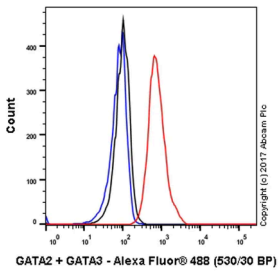
GATA2 + GATA3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GATA2 + GATA3 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling GATA2 + GATA3 with ab182747 at 1/1000 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green).
Confocal image showing nuclear and weakly cytoplasmic staining on HeLa cells.

The nuclear counterstain is DAPI (blue).

Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).

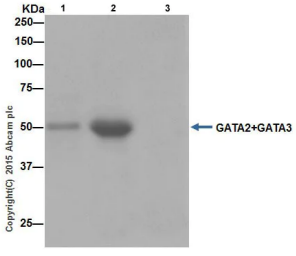
The negative controls are as follows:-
-ve control 1: ab182747 at 1/1000 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Flow Cytometry (Intracellular) - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

GATA2 + GATA3 Flow Cytometry (Intracellular) staining using rabbit Anti-GATA2 + GATA3 antibody

Intracellular Flow Cytometry analysis of K562 (human chronic myelogenous leukemia) cells labeling GATA2 + GATA3 with purified ab182747 at 1/150 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Immunoprecipitation - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

GATA2 + GATA3 was immunoprecipitated from 1mg of K562 (Human chronic myelogenous leukemia cells from bone marrow) whole cell lysate with ab182747 at 1/100 dilution.
Lane 1: K562 whole cell lysate 10ug (Input).

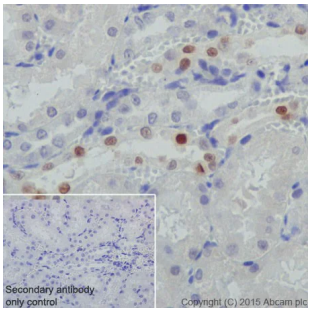
Lane 2: ab182747 IP in K562 whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab182747 in K562 whole cell lysate.

Western blot was performed from the immunoprecipitate using ab182747 at 1/1000 dilution.
VeriBlot for IP secondary antibody (HRP) was used as secondary antibody at 1/1500.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.
All lanes:
Immunoprecipitation - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

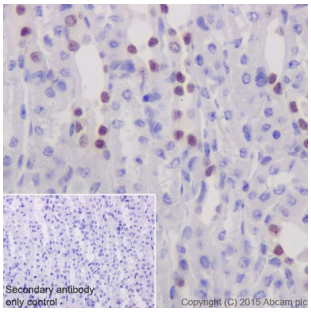
GATA2 + GATA3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GATA2 + GATA3 antibody

Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling GATA2 + GATA3 with ab182747 at 1/500 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Nucleus staining on rat epithelial cells of renal distal tubule is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

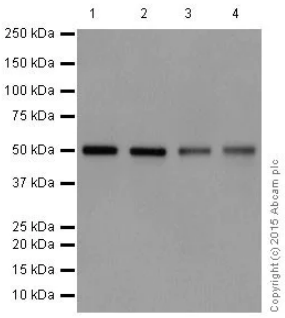
GATA2 + GATA3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GATA2 + GATA3 antibody

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling GATA2 + GATA3 with ab182747 at 1/500 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Nucleus staining on epithelial cells of mouse renal distal tubule is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747) at 1/10000 dilution

Lane 1:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 2:
K562 (Human chronic myelogenous leukemia cells from bone marrow) whole cell lysate at 20 µg

Lane 3:
MOLT-4 (Human lymphoblastic leukemia cell line) whole cell lysate at 20 µg

Lane 4:
LNCaP (Human prostate cancer cell line) whole cell lysate at 20 µg

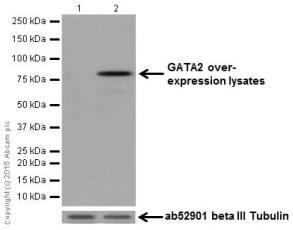
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 48 kDa, 51 kDa, 52 kDa

Observed band size: 51 kDa, 52 kDa

Exposure time: 1min



Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

GATA2 + GATA3 Western blot staining using rabbit Anti-GATA2 + GATA3 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Human GATA2 over-expression lysates (epitomics/abcam) contains aa1-480 with GFP-Tag.

All lanes:
Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747) at 1/50000 dilution

Lane 1:
Empty vector (vector control) transfected HEK-293 (Human epithelial cells from embryonic kidney) whole cell lysate at 10 µg

Lane 2:
GATA2 transfected HEK-293 whole cell lysate at 10 µg

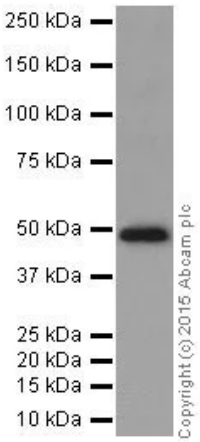
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 48 kDa, 51 kDa

Observed band size: 77 kDa

Exposure time: 3min



Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

GATA2 + GATA3 Western blot staining of Human GATA3 full length protein using rabbit Anti-GATA2 + GATA3 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Human GATA3 full length protein (epitomics/abcam) contains aa1-443 with N-terminal His-Tag®.

All lanes:
Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747) at 1/20000 dilution

All lanes:
Human GATA3 full length protein at 0.01 µg

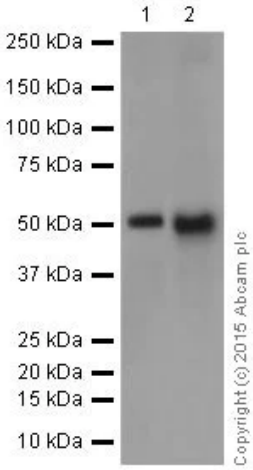
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 48 kDa, 51 kDa

Observed band size: 48 kDa

Exposure time: 1min



Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747) at 1/1000 dilution

Lane 1:
Human uterus lysate at 10 µg

Lane 2:
Human fetal kidney lysate at 10 µg

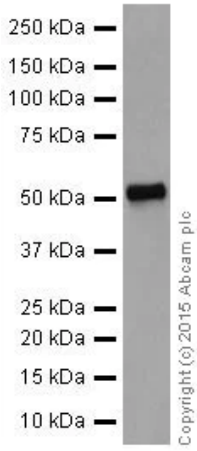
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 48 kDa, 51 kDa

Observed band size: 51 kDa

Exposure time: 3min



Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747) at 1/1000 dilution

All lanes:
NIH/3T3 (Mouse embyro fibroblast cells) whole cell lysate at 20 µg

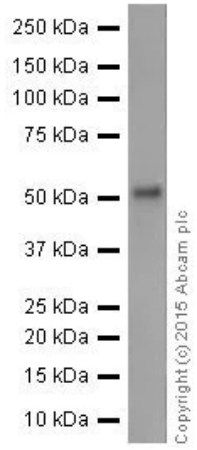
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 48 kDa, 51 kDa

Observed band size: 51 kDa

Exposure time: 15s



Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747)

GATA2 + GATA3 Western blot staining of PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate using rabbit Anti-GATA2 + GATA3 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-GATA2 + GATA3 antibody [EPR17874] (ab182747) at 1/1000 dilution

All lanes:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 48 kDa, 51 kDa

Observed band size: 51 kDa

Exposure time: 30s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.