

## Product datasheet

# Anti-GATA4 antibody [EPR4768] ab134057

Recombinant **RabMAb**

★★★★☆ 2 Abreviews 8 References 8 Images

### Overview

<b>Product name</b>	Anti-GATA4 antibody [EPR4768]
<b>Description</b>	Rabbit monoclonal [EPR4768] to GATA4
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, Flow Cyt, ICC/IF <b>Unsuitable for:</b> IHC-P or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide corresponding to Human GATA4 aa 1-100 (N terminal). Database link: <a href="#">P43694</a>
<b>Positive control</b>	HepG2, Caco-2 and HeLa whole cell lysate ( <a href="#">ab150035</a> ); HepG2 cells.
<b>General notes</b>	This antibody was developed as part of a collaboration between Dartmouth College and the lab of Sergei Tevosian.  A trial size is available to purchase for this antibody.  Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMab<sup>®</sup> patents</a>  <b>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</b>  This product is a recombinant rabbit monoclonal antibody.

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
<b>Dissociation constant (K<sub>D</sub>)</b>	K <sub>D</sub> = 2.00 x 10 <sup>-12</sup> M





[Learn more about  \$K\_D\$](#)

<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR4768
<b>Isotype</b>	IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab134057** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆	1/1000 - 1/10000. Predicted molecular weight: 54 kDa.
Flow Cyt		1/600. For unpurified use at 1/1200.

[ab172730](#) - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

ICC/IF	★★★★☆	1/150. <b>For unpurified use at 1/100 - 1/250.</b>
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**Application notes**                      Is unsuitable for IHC-P or IP.

## Target

**Function**                                      Transcriptional activator that binds to the consensus sequence 5'-AGATAG-3' and plays a key role in cardiac development (PubMed:24000169). Involved in bone morphogenetic protein (BMP)-mediated induction of cardiac-specific gene expression (By similarity). Binds to BMP response element (BMPRE) DNA sequences within cardiac activating regions (By similarity). Acts as a transcriptional activator of ANF in cooperation with NKX2-5 (By similarity). Promotes cardiac myocyte enlargement (PubMed:20081228). Required during testicular development (PubMed:21220346). May play a role in sphingolipid signaling by regulating the expression of sphingosine-1-phosphate degrading enzyme, sphingosine-1-phosphate lyase (PubMed:15734735).

**Involvement in disease**                      Atrial septal defect 2  
Ventricular septal defect 1

Tetralogy of Fallot

Atrioventricular septal defect 4

Testicular anomalies with or without congenital heart disease

GATA4 mutations can predispose to dilated cardiomyopathy (CMD), a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death.

**Sequence similarities**

Contains 2 GATA-type zinc fingers.

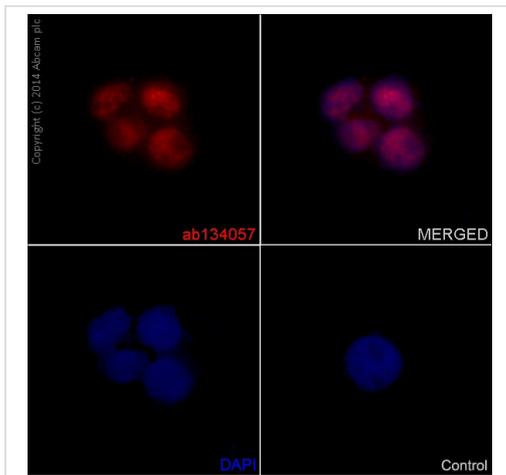
**Post-translational modifications**

Methylation at Lys-300 attenuates transcriptional activity.

**Cellular localization**

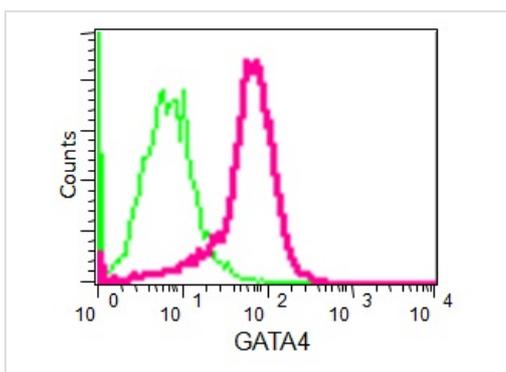
Nucleus.

**Images**



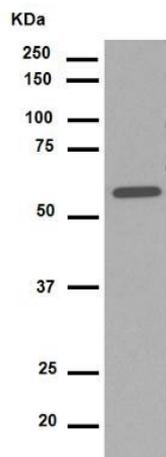
ab134057 staining GATA4 in the PC-3 cell line by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% Paraformaldehyde permeabilized with 0.1% Triton X-100. Samples were incubated with primary antibody (1/150). An Alexa Fluor®555-conjugated Goat anti-rabbit IgG(1/500) was used as the secondary antibody. Nuclei were counterstained with DAPI.

Immunocytochemistry/ Immunofluorescence - Anti-GATA4 antibody [EPR4768] (ab134057)



Overlay histogram showing Caco-2 cells stained with ab134057 (red line) at 1/600 dilution. The cells were fixed with 2% paraformaldehyde. The secondary antibody used was a FITC conjugated goat anti-rabbit IgG at 1/150 dilution. Isotype control antibody (green line) was rabbit monoclonal IgG used under the same conditions.

Flow Cytometry - Anti-GATA4 antibody [EPR4768] (ab134057)



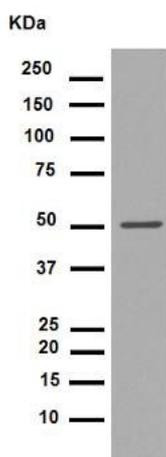
Western blot - Anti-GATA4 antibody [EPR4768]  
(ab134057)

Anti-GATA4 antibody [EPR4768] (ab134057) at 1/2000 dilution +  
Mouse spleen lysate at 10  $\mu$ g

**Secondary**

Goat Anti-Rabbit IgG, (H+L), HRP-conjugated at 1/1000 dilution

**Predicted band size:** 54 kDa



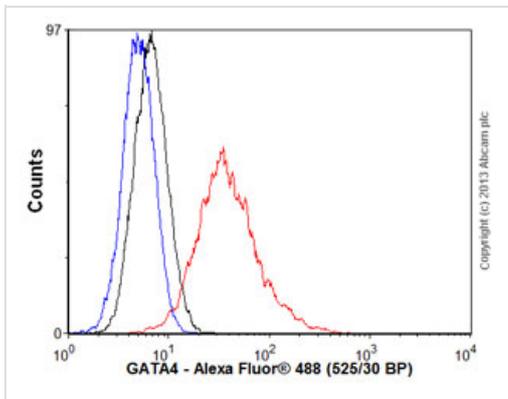
Western blot - Anti-GATA4 antibody [EPR4768]  
(ab134057)

Anti-GATA4 antibody [EPR4768] (ab134057) at 1/2000 dilution +  
HepG2 lysate at 10  $\mu$ g

**Secondary**

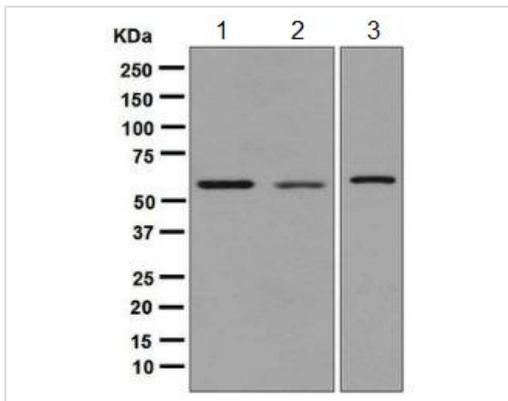
Goat Anti-Rabbit IgG, (H+L), HRP-conjugated

**Predicted band size:** 54 kDa



Flow Cytometry - Anti-GATA4 antibody [EPR4768] (ab134057)

Overlay histogram showing HeLa cells stained with ab134057, unpurified (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab134057, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10<sup>6</sup> cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in HeLa cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Western blot - Anti-GATA4 antibody [EPR4768] (ab134057)

**All lanes :** Anti-GATA4 antibody [EPR4768] (ab134057) at 1/1000 dilution (unpurified)

**Lane 1 :** HepG2 cell lysate

**Lane 2 :** Caco-2 cell lysate

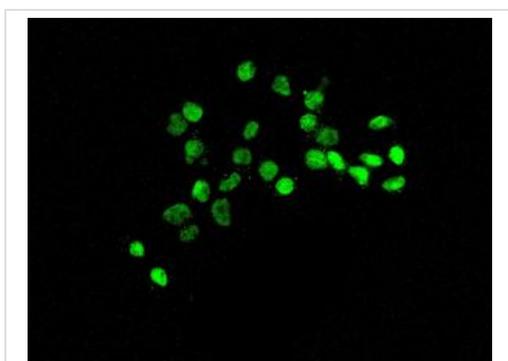
**Lane 3 :** HeLa cell lysate

Lysates/proteins at 10 µg per lane.

#### Secondary

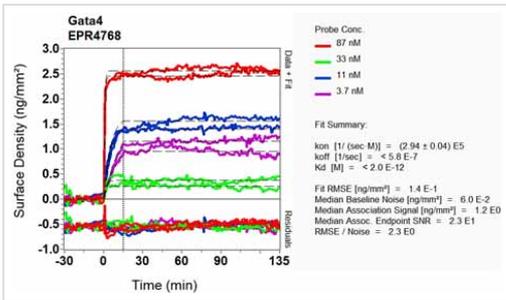
**All lanes :** HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 54 kDa



Immunocytochemistry/ Immunofluorescence - Anti-GATA4 antibody [EPR4768] (ab134057)

Immunofluorescent analysis of HepG2 cells labelling GATA4 with ab134057, unpurified, at 1/100 dilution.



Other - Anti-GATA4 antibody [EPR4768] (ab134057)

Equilibrium dissociation constant ( $K_D$ )

Learn more about  $K_D$

[Click here to learn more about  \$K\_D\$](#)

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