Anti-GATA4 antibody [EPR4768] ab134057

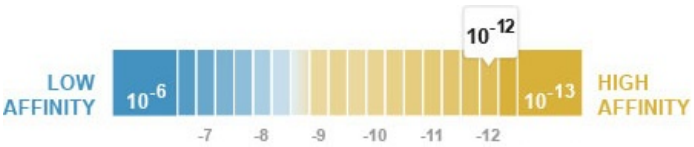
RabMAbs® (5499-1)

4 Images

Overview

Product name	Anti-GATA4 antibody [EPR4768]
Description	Rabbit monoclonal [EPR4768] to GATA4
Tested applications	WB, Flow Cyt, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide (the amino acid sequence is considered to be commercially sensitive) (N terminal)
Positive control	HepG2, Caco-2 and HeLa cell lysates; HepG2 cells.
General notes	This antibody was developed as part of a collaboration between Epitomics, Dartmouth College and the lab of Sergei Tevosian. Produced under U.S. Patent No. 5,675,063.

Properties

Form	Liquid
Storage instructions	Store at -20°C. Stable for 12 months at -20°C
Dissociation constant (K_D)	$K_D = 2.00 \times 10^{-12}$ M  Learn more about K_D
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 49% PBS, 50% Glycerol, 0.05% BSA
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	EPR4768
Isotype	IgG
Research Areas	Epigenetics and Nuclear Signaling → Transcription → Domain Families → Zinc Finger Stem Cells → Lineage Markers → Endoderm Stem Cells → Mesenchymal Stem Cells → Myogenesis Cancer → Oncoproteins/suppressors → Tumor suppressors → Other Cardiovascular → Heart → Hypertrophy → Transcription factors Developmental Biology → Lineage specification → Endoderm Cardiovascular → Cardiovascular Markers → Cell Markers → Cardiomyocytes

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	Notes
WB	WB: 1/1000 - 1/10000. Predicted molecular weight: 54 kDa.
Flow Cyt	Flow Cyt: 1/1200.
ICC/IF	ICC/IF: 1/100 - 1/250.
Application notes	Is unsuitable for ,IHC-P or IP.

Target

Function	Transcriptional activator. Binds to the consensus sequence 5'-AGATAG-3'. Acts as a transcriptional activator of ANF in cooperation with NKX2-5 (By similarity). Promotes cardiac myocyte enlargement.
Involvement in disease	Defects in GATA4 are the cause of atrial septal defect type 2 (ASD2) [MIM:607941]. ASD2 is a congenital heart malformation characterized by incomplete closure of the wall between the atria resulting in blood flow from the left to the right atria. ASD2 patients show other heart abnormalities including ventricular and atrioventricular septal defects, pulmonary valve thickening or insufficiency of the cardiac valves. ASD2 is not associated with defects in the cardiac conduction system or non-cardiac abnormalities. Defects in GATA4 are a cause of ventricular septal defect type 1 (VSD1) [MIM:614429]. VSD1 is a common form of congenital cardiovascular anomaly that may occur alone or in combination with other cardiac malformations. It can affect any portion of the ventricular septum, resulting in abnormal communications between the two lower chambers of the heart. Classification is based on location of the communication, such as perimembranous, inlet, outlet (infundibular), central muscular, marginal muscular, or apical muscular defect. Large defects that go unrepaired may give rise to cardiac enlargement, congestive heart failure, pulmonary hypertension, Eisenmenger's syndrome, delayed fetal brain development, arrhythmias, and even sudden cardiac death. Defects in GATA4 are a cause of tetralogy of Fallot (TOF) [MIM:187500]. TOF is a congenital heart anomaly which consists of pulmonary stenosis, ventricular septal defect, dextroposition of the aorta (aorta is on the right side instead of the left) and hypertrophy of the right ventricle. In this condition, blood from both ventricles (oxygen-rich and oxygen-poor) is pumped into the body often causing cyanosis. Defects in GATA4 are the cause of atrioventricular septal defect type 4 (AVSD4) [MIM:614430]. A congenital heart malformation characterized by a common atrioventricular junction coexisting with deficient atrioventricular septation. The complete form involves underdevelopment of the lower part of the atrial septum and the upper part of the ventricular septum; the valve itself is also shared. A less severe form, known as ostium primum atrial septal defect, is characterized by separate atrioventricular valvar orifices despite a common junction.
Sequence similarities	Contains 2 GATA-type zinc fingers.
Post-translational modifications	Methylation at Lys-300 attenuates transcriptional activity.
Cellular localization	Nucleus.

Target information above from: UniProt accession P43694 The UniProt Consortium

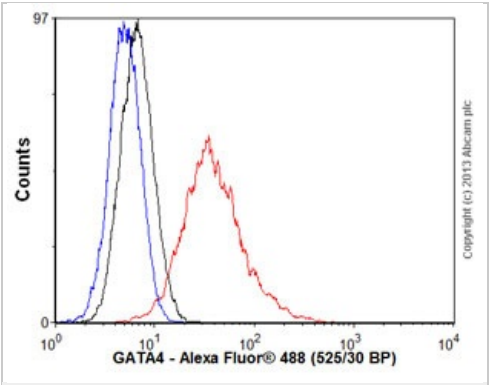
The Universal Protein Resource (UniProt) in 2010

Nucleic Acids Res. 38:D142-D148 (2010) .

Database links	Entrez Gene: 2626 Human Entrez Gene: 14463 Mouse Entrez Gene: 54254 Rat Omim: 600576 Human SwissProt: P43694 Human SwissProt: Q08369 Mouse SwissProt: P46152 Rat Unigene: 243987 Human Unigene: 247669 Mouse Unigene: 26251 Rat
Alternative names	ASD2 antibody GATA 4 antibody GATA binding protein 4 antibody GATA-binding factor 4 antibody gata4 antibody GATA4_HUMAN antibody MGC126629 antibody

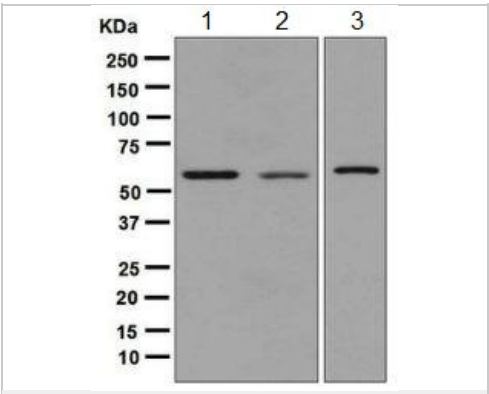
Transcription factor GATA 4 antibody
Transcription factor GATA-4 antibody
Transcription factor GATA4 antibody
VSD1 antibody

Anti-GATA4 antibody [EPR4768] images



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

Overlay histogram showing HeLa cells stained with ab134057 (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/1x10^6 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)

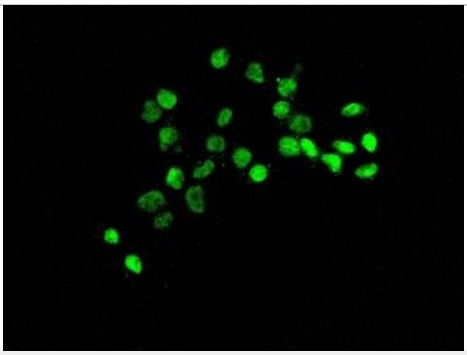
All lanes : Anti-GATA4 antibody [EPR4768] (ab134057) at 1/1000 dilution

Lane 1 : HepG2 cell lysate
Lane 2 : Caco-2 cell lysate
Lane 3 : HeLa cell lysate

Lysates/proteins at 10 µg per lane.

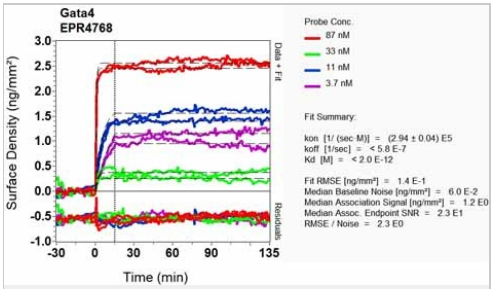
Secondary
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size : 54 kDa



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

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



Equilibrium disassociation constant (K_D)

Learn more about K_D

Click here to learn more about K_D

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

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