

**GATA4 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1301a****Specification**

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**GATA4 Antibody - Product Information**

Application	<b>WB, IHC</b>
Primary Accession	<a href="#">P43694</a>
Reactivity	<b>Human, Rat</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG2b</b>
Calculated MW	<b>46kDa KDa</b>

**Description**

GATA binding protein 4, also known as GATA4, it is a 46 kDa member of the GATA family of zinc-finger transcription factors. Members of this family is involved in the development of cardiac hypertrophy and remodeling, and plays a critical role in regulating basal and agonist or stress induced gene expression in cardiac and smooth muscle cell types. These factors recognize the GATA motif which is present in the promoters of many genes. GATA4 contains a conserved MAPK phosphorylation site at serine 105 within the transcriptional activation domain. Serine 105 of GATA4 is phosphorylated in response to agonist stimulation through MEK 1 ERK1 / 2, and weakly through JNK or p38 MAPKs. GATA4 is thought to regulate genes involved in embryogenesis and in myocardial differentiation and function. Mutations in this gene have been associated with cardiac septal defects.

**Immunogen**

Purified recombinant fragment of human GATA4 expressed in E. Coli.

**Formulation**

Ascitic fluid containing 0.03% sodium azide.

**GATA4 Antibody - Additional Information**

**Gene ID** 2626

**Other Names**

Transcription factor GATA-4, GATA-binding factor 4, GATA4

**Dilution**

WB~~1/500 - 1/2000

IHC~~1:200~~1000

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

GATA4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## GATA4 Antibody - Protein Information

**Name** GATA4

### Function

Transcriptional activator that binds to the consensus sequence 5'-AGATAG-3' and plays a key role in cardiac development and function (PubMed:<a href="http://www.uniprot.org/citations/24000169" target="\_blank">24000169</a>, PubMed:<a href="http://www.uniprot.org/citations/27984724" target="\_blank">27984724</a>, PubMed:<a href="http://www.uniprot.org/citations/35182466" target="\_blank">35182466</a>). In cooperation with TBX5, it binds to cardiac super-enhancers and promotes cardiomyocyte gene expression, while it down-regulates endocardial and endothelial gene expression (PubMed:<a href="http://www.uniprot.org/citations/27984724" target="\_blank">27984724</a>). Involved in bone morphogenetic protein (BMP)-mediated induction of cardiac-specific gene expression. 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:<a href="http://www.uniprot.org/citations/20081228" target="\_blank">20081228</a>). Required during testicular development (PubMed:<a href="http://www.uniprot.org/citations/21220346" target="\_blank">21220346</a>). May play a role in sphingolipid signaling by regulating the expression of sphingosine-1- phosphate degrading enzyme, sphingosine-1-phosphate lyase (PubMed:<a href="http://www.uniprot.org/citations/15734735" target="\_blank">15734735</a>).

### Cellular Location

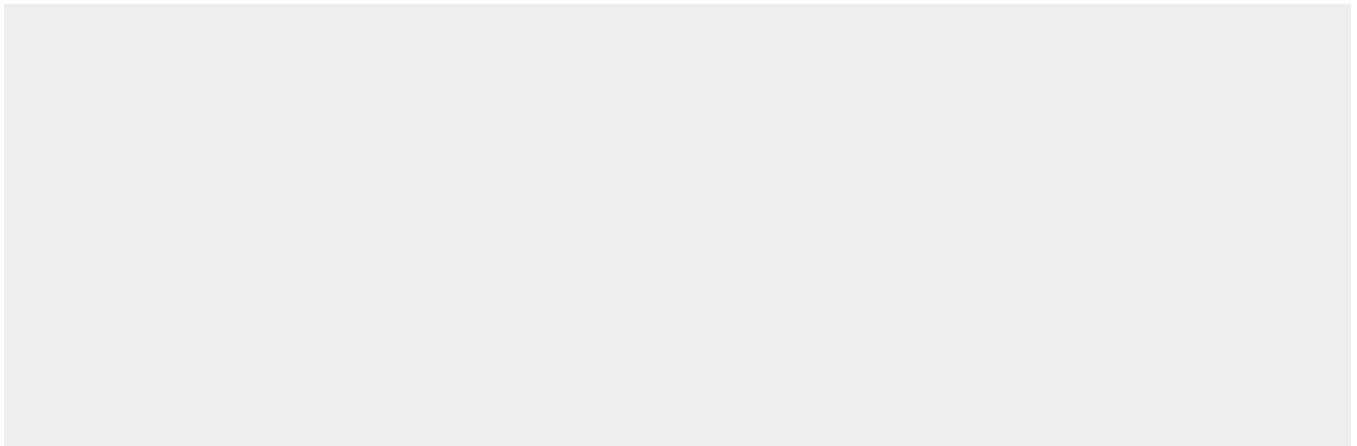
Nucleus

## GATA4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## GATA4 Antibody - Images



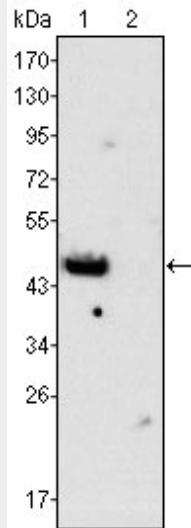


Figure 1: Western blot analysis using GATA4 mouse mAb against rat fetal heart (1) and adult heart (2) tissues lysate.

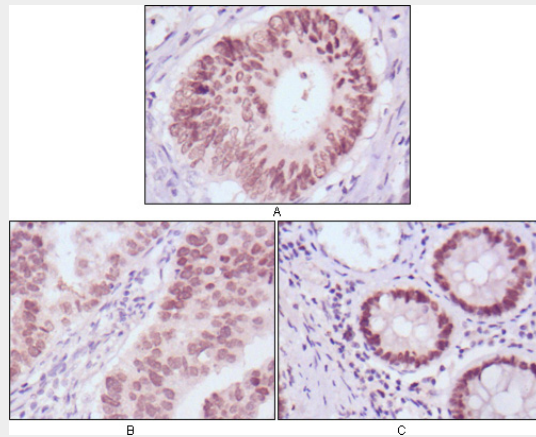


Figure 2: Immunohistochemical analysis of paraffin-embedded human colon cancer (A), gastric cancer (B) and rectal cancer (C) tissues using FOXA2 mouse mAb with DAB staining.

#### **GATA4 Antibody - References**

1. J Mol Cell Cardiol. 2007 Dec;43(6):677-85.2. Mol Cell Biol. 2000 Oct;20(20):7550-8.3. EMBO J. 1997 Sep 15;16(18):5687-96.