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GATA4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1301a

Product Information

Application	WB, E
Primary Accession	P43694
Reactivity	Human, Rat
Host	Mouse
Clonality	Monoclonal
Clone Names	6H10
Isotype	IgG2b
Calculated MW	44565
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.

Additional Information

Gene ID	2626
Other Names	Transcription factor GATA-4, GATA-binding factor 4, GATA4
Dilution	WB~~1/500 - 1/2000 E~~N/A
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.

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:24000169, PubMed:27984724, PubMed:35182466). 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:27984724). 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: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).
Cellular Location	Nucleus

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.

Images

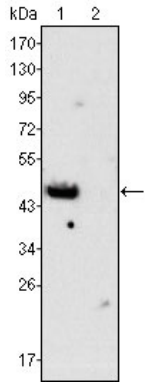


Figure 1: Western blot analysis using GATA4 mouse mAb against rat fetal heart (1) and adult heart (2) tissues lysate.

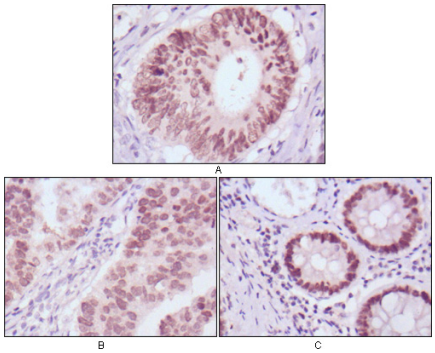


Figure 2: Immunohistochemical analysis of paraffin-embedded human colon cancer (A), gastric cancer (B) and rectal cancer (C) tissues using FOXA2 mouse mAb with DAB staining.

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