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-20C
#36966**GATA-4 (D3A3M) Rabbit mAb**

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IF-IC, FC-FP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 55	Source/Isotype: Rabbit IgG	UniProt ID: #P43694	Entrez-Gene Id: 2626
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Product Usage Information**Application**

Western Blotting
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:400
1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #46576.

Specificity/Sensitivity

GATA-4 (D3A3M) Rabbit mAb recognizes endogenous levels of total GATA-4 protein.

Species predicted to react based on 100% sequence homology

Mouse, Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human GATA-4 protein.

Background

GATA proteins comprise a group of transcription factors that are related by the presence of conserved zinc finger DNA binding domains, which bind directly to the nucleotide sequence core element GATA (1-3). There are six vertebrate GATA proteins, designated GATA-1 to GATA-6 (3). GATA-4 is crucial for cardiomyocyte differentiation (4), and not surprisingly, mutations in the *GATA-4* gene are implicated in many cardiac diseases, such as tetralogy of Fallot (5), familial and sporadic dilated cardiomyopathy (6,7), and atrial septal defect (8). GATA-4 and GATA-6 together maintain intestinal epithelial structure by regulating enterocyte gene expression (9). They also have overlapping roles in steroidogenesis and genital ridge formation during gonadal development (10). GATA-4 is also a required factor for bone mineralization in osteoblast progenitor cells, where it suppresses TGF-β and activates BMP signaling (11). Research studies have uncovered crosstalk among the transcription factors GATA-4, GATA-6, and KLF5 that promotes gastric cancer development (12). Additional studies describe the role of histone H3K9 hyperacetylation on the GATA-4 promoter in fetal mice that have been exposed to ethanol (13).

Background References

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- Gan, L. et al. (2014) *Gene Expr Patterns* 16, 8-22.
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- Li, R.G. et al. (2013) *Biochem Biophys Res Commun* 439, 591-6.
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- Güemes, M. et al. (2014) *J Bone Miner Res* 29, 2676-87.
- Chia, N.Y. et al. (2015) *Gut* 64, 707-19.
- Peng, C. et al. (2014) *PLoS One* 9, e104135.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human

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