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Product Information

Anti-phospho-GATA4 (pSer^{105}) antibody
produced in rabbit, affinity isolated antibody

Catalog Number **G8044**

Product Description

Anti-phospho-GATA4 (pSer^{105}) is produced in rabbit using as immunogen a synthetic phosphorylated peptide derived from the region of human GATA4 that contains Ser^{105}. The sequence is conserved in mouse, chicken, and rat. The antiserum is affinity purified using epitope-specific affinity chromatography. The antibody is preadsorbed to remove any reactivity toward a non-phosphorylated GATA4.

The antibody detects mouse GATA4 [pSer^{105}]. Human, rat, and chicken (100% homology) have not been tested, but are expected to react. It has been used in immunoblotting applications.

GATA4 is a 46 kDa member of the GATA family of zinc finger-containing transcription factors that 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.

Ser^{105} of GATA4 is phosphorylated in response to agonist stimulation through MEK1-ERK1/2, and weakly through JNK or p38 MAPKs.

Reagent

Solution in Dulbecco's PBS, pH 7.3, with 1 mg/mL BSA and 0.05% Sodium Azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –70 °C. Upon initial thawing freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing, or storage in frost-free freezers, to prevent denaturing the antibody. Working dilution samples should be discarded if not used within 12 hours.

The antibody is stable for at least 12 months when stored appropriately.

Product Profile

The supplied reagent is sufficient for 10 blots.

Immunoblotting: a recommended working concentration of 0.1-1.0 μg/mL

Note: In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration test.

Peptide Competition:
Extracts prepared from cardiomyocytes overexpressing mutant GATA4 S105A, or wild-type GATA4 stimulated with phenylephrine (PE), were resolved by SDS-PAGE on a 10% polyacrylamide gel and transferred to PVDF. Membranes were blocked with a 5% BSA-TBST buffer overnight at 4 °C. After blocking, membranes were preincubated with different peptides as follows: no peptide, non-phosphorylated peptide corresponding to the immunogen, a generic phosphoserine containing peptide, and the immunogen.

After preincubation membranes were incubated with 0.35 μg/mL GATA4 (pSer^{105}) antibody for two hours at room temperature in a 3% BSA-TBST buffer. After washing, membranes were incubated with goat F(ab')$_2$ anti-rabbit IgG alkaline phosphatase and signals were detected.

The results show that only the peptide corresponding to GATA4 [pSer^{105}] blocks the antibody signal, and that the S105A mutant does not react, demonstrating the specificity of the antibody.

References

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