

Product datasheet

Anti-GATA4 (phospho S105) antibody ab5245

★★★★☆ 2 Abreviews 10 References 1 Image

Overview

Product name	Anti-GATA4 (phospho S105) antibody
Description	Rabbit polyclonal to GATA4 (phospho S105)
Tested applications	Suitable for: ICC/IF, EMSA, IHC-Fr, WB
Species reactivity	Reacts with: Mouse, Rat, Dog Predicted to work with: Chicken, Human
Immunogen	Synthetic peptide (Human) derived from a region of GATA 4 that contains serine 105.
Positive control	Phenylephrine (PE)-stimulated rat cardiomyocytes, transfected with mouse GATA 4.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: 0.05% Sodium Azide Constituents: PBS, 1mg/ml BSA (IgG, protease free). pH 7.3
Purity	Immunogen affinity purified
Purification notes	Purified from rabbit serum by sequential epitope-specific chromatography. The antibody has been negatively preadsorbed using a non-phosphopeptide corresponding to the site of phosphorylation to remove antibody that is reactive with non-phosphorylated tau. The final product is generated by affinity chromatography using a tau-derived peptide that is phosphorylated at serine 404.
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab5245** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★☆	Use at an assay dependent concentration. PubMed: 19546173
EMSA		Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration. PubMed: 22919071
WB	★★★★☆	Use a concentration of 0.1 - 1 µg/ml. Detects a band of approximately 45 kDa (predicted molecular weight: 46 kDa).

Target

Function

Transcriptional activator that binds to the consensus sequence 5'-AGATAG-3' and plays a key role in cardiac development (PubMed:24000169). Involved in bone morphogenetic protein (BMP)-mediated induction of cardiac-specific gene expression (By similarity). 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).

Involvement in disease

Atrial septal defect 2
 Ventricular septal defect 1
 Tetralogy of Fallot
 Atrioventricular septal defect 4
 Testicular anomalies with or without congenital heart disease
 GATA4 mutations can predispose to dilated cardiomyopathy (CMD), a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death.

Sequence similarities

Contains 2 GATA-type zinc fingers.

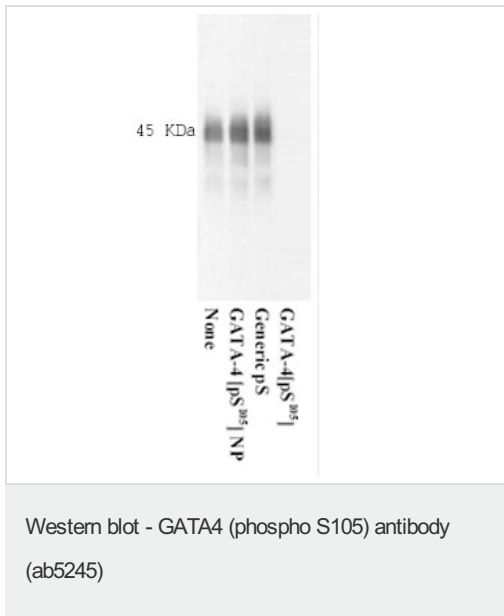
Post-translational modifications

Methylation at Lys-300 attenuates transcriptional activity.

Cellular localization

Nucleus.

Images



Predicted band size : 46 kDa

Extracts prepared from cardiomyocytes overexpressing wild-type GATA-4 (1-4 from left to right) stimulated with phenylephrine (PE) for 24 hours 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, then were incubated with 0.35 µg/mL ab5245 for two hours at room temperature in a 3% BSA-TBST buffer, following prior incubation with: no peptide (1), the non-phosphopeptide corresponding to the immunogen (2), a generic phosphoserine-containing peptide (3), or, the phosphopeptide immunogen (4). After washing, membranes were incubated with goat F(ab')₂ anti-rabbit IgG alkaline phosphatase and signals were detected using the Tropix WesternStar method. The data show that only the peptide corresponding to GATA-4 [pS105] blocks the antibody signal, and that the S105A mutant does not react, thereby demonstrating the specificity of the antibody.

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