SANTA CRUZ BIOTECHNOLOGY, INC.

GATA-2 (CG2-96): sc-267

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the GATA family share a conserved zinc finger DNA-binding domain and are capable of binding the WGATAR consensus sequence. GATA-1 is erythroid-specific and is responsible for the regulated transcription of erythroid genes. It is an essential component in the generation of the erythroid lineage. GATA-2 is expressed in embryonic brain and liver, HeLa and endothelial cells, as well as erythroid cells. Studies with a modified GATA consensus sequence, AGATCTTA, have shown that GATA-2 and GATA-3 recognize this mutated consensus while GATA-1 has poor recognition of this sequence. This indicates broader regulatory capabilities of GATA-2 and GATA-3 than GATA-1. GATA-3 is highly expressed in T-lymphocytes. GATA-4, GATA-5 and GATA-6 comprise a subfamily of transcription factors. GATA-4 and GATA-6 are found in heart, pancreas and ovary; lung and liver tissues exhibit GATA-6, but not GATA-4, expression. GATA-5 expression has been observed in differentiated heart and gut tissues and is present throughout the course of development in the heart. Although expression patterns of the various GATA transcription factors may overlap, it is not yet apparent how the GATA factors are able to discriminate in binding their appropriate target sites.

CHROMOSOMAL LOCATION

Genetic locus: GATA2 (human) mapping to 3q21.3; Gata2 (mouse) mapping to 6 D1.

SOURCE

GATA-2 (CG2-96) is a mouse monoclonal antibody raised against GATA-2.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as agarose conjugate for immunoprecipitation, sc-267 AC, 500 µg/0.25 ml agarose in 1 ml; and as TransCruz reagent for Gel Supershift and ChIP applications, sc-267 X, 200 µg/0.1 ml.

APPLICATIONS

GATA-2 (CG2-96) is recommended for detection of GATA-2 of mouse, rat, human and chicken origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for GATA-2 siRNA (h): sc-37228, GATA-2 siRNA (m): sc-37229, GATA-2 shRNA Plasmid (h): sc-37228-SH, GATA-2 shRNA Plasmid (m): sc-37229-SH, GATA-2 shRNA (h) Lentiviral Particles: sc-37228-V and GATA-2 shRNA (m) Lentiviral Particles: sc-37229-V.

GATA-2 (CG2-96) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of GATA-2: 50 kDa.

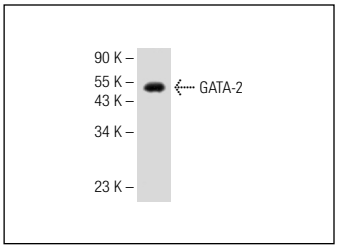
Molecular Weight (observed) of GATA-2: 50/45 kDa.

Positive Controls: P815 whole cell lysate: sc-364789, MCP-5 whole cell lysate or TtT-97 nuclear extract.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



GATA-2 (CG2-96): sc-267. Western blot analysis of GATA-2 expression in TtT-97 nuclear extract.

SELECT PRODUCT CITATIONS

1. Melotti, P., et al. 1996. The transcription factors c-Myb and GATA-2 act independently in the regulation of normal hematopoiesis. Proc. Natl. Acad. Sci. USA 93: 5313-5318.
2. Kakuta, Y., et al. 2009. TNFSF15 transcripts from risk haplotype for Crohn's disease are overexpressed in stimulated T cells. Hum. Mol. Genet. 18: 1089-1098.
3. Glenn, D.J., et al. 2009. Atrial natriuretic peptide suppresses endothelin gene expression and proliferation in cardiac fibroblasts through a GATA4-dependent mechanism. Cardiovasc. Res. 84: 209-217.
4. Yang, Z., et al. 2009. Increased c-Jun expression and reduced GATA2 expression promote aberrant monocytic differentiation induced by activating PTPN11 mutants. Mol. Cell. Biol. 29: 4376-4393.
5. Himeda, C.L., et al. 2010. KLF3 regulates muscle-specific gene expression and synergizes with serum response factor on KLF binding sites. Mol. Cell. Biol. 30: 3430-3443.
6. de Waele, L., et al. 2010. Severe gastrointestinal bleeding and thrombocytopenia in a child with an anti-GATA1 autoantibody. Pediatr. Res. 67: 314-319.
7. Skaggs, K., et al. 2011. Regulation of spinal interneuron development by the Olig-related protein Bhlhb5 and Notch signaling. Development 138: 3199-3211.
8. Ohba, K., et al. 2011. GATA2 mediates thyrotropin-releasing hormone-induced transcriptional activation of the thyrotropin β gene. PLoS ONE 6: e18667.
9. Yang, Y., et al. 2011. The Notch ligand Jagged2 promotes lung adenocarcinoma metastasis through a miR-200-dependent pathway in mice. J. Clin. Invest. 121: 1373-1385.

RESEARCH USE

For research use only, not for use in diagnostic procedures.