

GATA-1 (M-20): sc-1234

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: Gata1 (mouse) mapping to X A1.1.

SOURCE

GATA-1 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GATA-1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1234 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-1234 X, 200 µg/0.1 ml.

APPLICATIONS

GATA-1 (M-20) is recommended for detection of GATA-1 of mouse and rat 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GATA-1 siRNA (h): sc-29330, GATA-1 siRNA (m): sc-35452, GATA-1 shRNA Plasmid (h): sc-29330-SH, GATA-1 shRNA Plasmid (m): sc-35452-SH, GATA-1 shRNA (h) Lentiviral Particles: sc-29330-V and GATA-1 shRNA (m) Lentiviral Particles: sc-35452-V.

GATA-1 (M-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

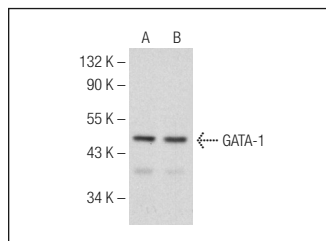
Molecular Weight of GATA-1: 47 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138.

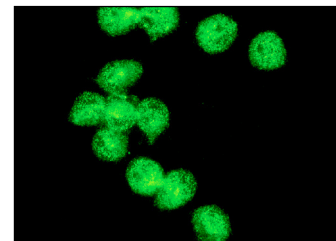
STORAGE

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

DATA



GATA-1 (M-20): sc-1234. Western blot analysis of GATA-1 expression in MEG-01 (A) and TF-1 (B) whole cell lysates.



GATA-1 (M-20): sc-1234. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- German, Z., et al. 2000. Molecular basis of cell-specific endothelial nitric-oxide synthase expression in airway epithelium. *J. Biol. Chem.* 275: 8183-8189.
- Yan, W., et al. 2000. Involvement of Bcl-2 family proteins in germ cell apoptosis during testicular development in the rat and pro-survival effect of stem cell factor on germ cells *in vitro*. *Mol. Cell. Endocrinol.* 165: 115-129.
- Halsey, C., et al. 2010. Role of GATA-1s in early hematopoiesis and differences between alternative splicing in human and murine GATA-1. *Blood* 115: 3415-3416.
- Toribio, R.E., et al. 2010. The midregion, nuclear localization sequence, and C terminus of PTHrP regulate skeletal development, hematopoiesis, and survival in mice. *FASEB J.* 24: 1947-1957.
- Jawaid, K., et al. 2010. Binding patterns of BCL11A in the globin and GATA1 loci and characterization of the BCL11A fetal hemoglobin locus. *Blood Cells Mol. Dis.* 45: 140-146.
- Kim, B.S., et al. 2010. The crucial role of GATA-1 in CCR3 gene transcription: modulated balance by multiple GATA elements in the CCR3 regulatory region. *J. Immunol.* 185: 6866-6875.
- Chen, A.Y., et al. 2011. Productive parvovirus B19 infection of primary human erythroid progenitor cells at hypoxia is regulated by STAT5A and MEK signaling but not HIF α . *PLoS Pathog.* 7: e1002088.

RESEARCH USE

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



Try **GATA-1 (N6): sc-265** or **GATA-1 (N1): sc-266**, our highly recommended monoclonal alternatives to GATA-1 (M-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **GATA-1 (N6): sc-265**.