

GATA-2 (H-116): sc-9008

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 in 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. Both 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 (H-116) is a rabbit polyclonal antibody raised against amino acids 120-235 of GATA-2 of human origin.

PRODUCT

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

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9008 X, 200 µg/0.1 ml.

APPLICATIONS

GATA-2 (H-116) is recommended for detection of GATA-2 of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). GATA-2 (H-116) is also recommended for detection of GATA-2 in additional species, including equine, canine and porcine.

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.

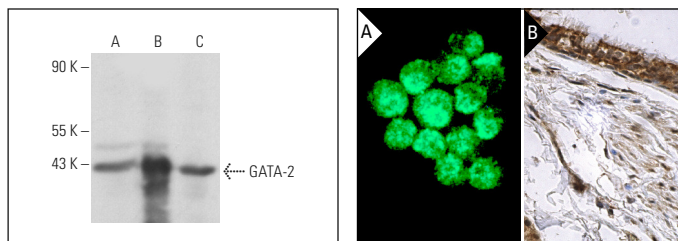
GATA-2 (H-116) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GATA-2: 50 kDa.

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 (H-116): sc-9008. Western blot analysis of GATA-2 expression in non-transfected 293T: sc-117752 (A), human GATA-2 transfected 293T: sc-176459 (B) and P815 (C) whole cell lysates.

GATA-2 (H-116): sc-9008. Immunofluorescence staining of methanol-fixed P815 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing nuclear and cytoplasmic staining of respiratory epithelial cells and glandular cells (B).

SELECT PRODUCT CITATIONS

- Kitajima, K., et al. 2002. GATA-2 and GATA-2/ER display opposing activities in the development and differentiation of blood progenitors. *EMBO J.* 21: 3060-3069.
- Yu, Y.L., et al. 2002. GATA factors are essential for transcription of the survival gene E4bp4 and the viability response of interleukin-3 in Ba/F3 hematopoietic cells. *J. Biol. Chem.* 277: 27144-27153.
- Li, S., et al. 2010. A Cre transgenic line for studying V2 neuronal lineages and functions in the spinal cord. *Genesis* 48: 667-672.
- Gregory, G.D., et al. 2010. FOG1 requires NuRD to promote hematopoiesis and maintain lineage fidelity within the megakaryocytic-erythroid compartment. *Blood* 115: 2156-2166.
- Wu, D.C., et al. 2010. Hypoxia regulates BMP4 expression in the murine spleen during the recovery from acute anemia. *PLoS ONE* 5: e11303.
- Tsoyi, K., et al. 2010. PTEN differentially regulates expressions of ICAM-1 and VCAM-1 through PI3K/Akt/GSK-3 /GATA-6 signaling pathways in TNF-activated human endothelial cells. *Atherosclerosis* 213: 115-121.
- 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. *PLoS Pathog.* 7: e1002088.
- Grigorakaki, C., et al. 2011. Tumor necrosis factor α -mediated inhibition of erythropoiesis involves GATA-1/GATA-2 balance impairment and PU.1 over-expression. *Biochem. Pharmacol.* 82: 156-166.
- Mancini, E., et al. 2011. FOG-1 and GATA-1 act sequentially to specify definitive megakaryocytic and erythroid progenitors. *EMBO J.* 31: 351-365.

RESEARCH USE

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