SANTA CRUZ BIOTECHNOLOGY, INC.

# GATA-3 (HG3-31): sc-268

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: GATA3 (human) mapping to 10p14; Gata3 (mouse) mapping to 2A1.

## SOURCE

GATA-3 (HG3-31) is a mouse monoclonal antibody raised against human recombinant GATA-3.

## 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 APC-Cy7 (sc-268 APCC7) conjugate for flow cytometry, 100 tests; as agarose conjugate for immunoprecipitation, sc-268 AC, 500 µg/0.25 ml agarose in 1 ml; and as TransCruz reagent for Gel Supershift and ChIP applications, sc-268 X, 200 µg/0.1 ml.

## APPLICATIONS

GATA-3 (HG3-31) is recommended for detection of GATA-3 of mouse, rat, human and avian 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for GATA-3 siRNA (h): sc-29331, GATA-3 siRNA (m): sc-35453, GATA-3 shRNA Plasmid (h): sc-29331-SH, GATA-3 shRNA Plasmid (m): sc-35453-SH, GATA-3 shRNA (h) Lentiviral Particles: sc-29331-V and GATA-3 shRNA (m) Lentiviral Particles: sc-35453-V.

GATA-3 (HG3-31) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

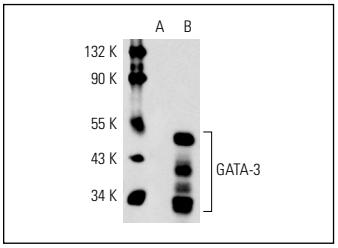
Molecular Weight of GATA-3: 50 kDa.

Positive Controls: GATA-3 (h): 293 Lysate: sc-110481.

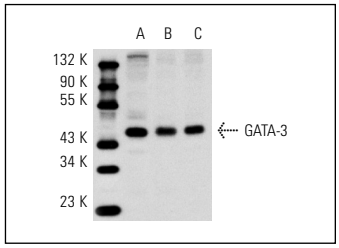
## STORAGE

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

## DATA




GATA-3 (HG3-31): sc-268. Western blot analysis of GATA-3 expression in non-transfected: sc-110760 (**A**) and human GATA-3 transfected: sc-110481 (**B**) 293 whole cell lysates.




GATA-3 (HG3-31): sc-268. Western blot analysis of GATA-3 expression in Jurkat (**A**), CCRF-HSB-2 (**B**) and MOLT-4 (**C**) whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Avni, O., et al. 2002. $T_H$ cell differentiation is accompanied by dynamic changes in histone acetylation of cytokine genes. Nat. Immunol. 3: 643-651.
2. Steenbergen, R.D., et al. 2002. Downregulation of GATA-3 expression during human papillomavirus-mediated immortalization and cervical carcinogenesis. Am. J. Pathol. 160: 1945-1951.
3. Hwang, S.S., et al. 2010. GATA-binding protein-3 regulates T helper type 2 cytokine and ifng loci through interaction with metastasis-associated protein 2. Immunology 131: 50-58.
4. Matsumoto, Y., et al. 2010. Expression of master regulators of helper T-cell differentiation in peripheral T-cell lymphoma, not otherwise specified, by immunohistochemical analysis. Am. J. Clin. Pathol. 133: 281-290.
5. Jacob, E., et al. 2011. Dual function of polycomb group proteins in differentiated murine T helper ($CD4^+$) cells. J. Mol. Signal. 6: 5.
6. Kirmaz, C., et al. 2011. Effects of allergen-specific immunotherapy on functions of helper and regulatory T cells in patients with seasonal allergic rhinitis. Eur. Cytokine Netw. 22: 15-23.
7. Hahn, C.N., et al. 2011. Heritable GATA2 mutations associated with familial myelodysplastic syndrome and acute myeloid leukemia. Nat. Genet. 43: 1012-1017.
8. del Blanco, B., et al. 2012. Tcra enhancer activation by inducible transcription factors downstream of pre-TCR signaling. J. Immunol. 188: 3278-3293.
9. Chen, W., et al. 2012. Restoration of auditory evoked responses by human ES-cell-derived otic progenitors. Nature 490: 278-282.


## RESEARCH USE

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