SANTA CRUZ BIOTECHNOLOGY, INC.

GATA-3 (B-10): sc-137152

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 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.

REFERENCES

1. Ko, L.J., et al. 1991. Murine and human T lymphocyte GATA-3 factors mediate transcription through a *cis*-regulatory element within the human T cell receptor δ gene enhancer. Mol. Cell. Biol. 11: 2778-2784.
2. Dorfman, D.M., et al. 1992. Human transcription factor GATA-2. Evidence for regulation of preproendothelin-1 gene expression in endothelial cells. J. Biol. Chem. 267: 1279-1285.

CHROMOSOMAL LOCATION

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

SOURCE

GATA-3 (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 371-407 near the C-terminus of GATA-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-137152 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-137152 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

GATA-3 (B-10) is recommended for detection of GATA-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

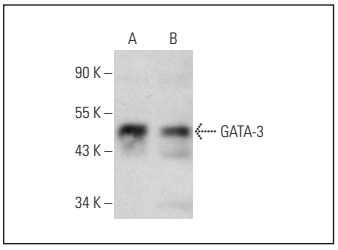
Suitable for use as control antibody for GATA-3 siRNA (h): sc-29331, GATA-3 siRNA (m): sc-35453, GATA-3 siRNA (r): sc-61845, GATA-3 shRNA Plasmid (h): sc-29331-SH, GATA-3 shRNA Plasmid (m): sc-35453-SH, GATA-3 shRNA Plasmid (r): sc-61845-SH, GATA-3 shRNA (h) Lentiviral Particles: sc-29331-V, GATA-3 shRNA (m) Lentiviral Particles: sc-35453-V and GATA-3 shRNA (r) Lentiviral Particles: sc-61845-V.

GATA-3 (B-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

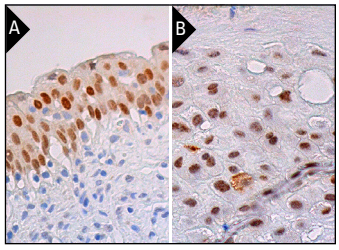
Molecular Weight of GATA-3: 50 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-HSB-2 cell lysate: sc-2265 or MOLT-4 cell lysate: sc-2233.

DATA



GATA-3 (B-10): sc-137152. Western blot analysis of GATA-3 expression in Jurkat (**A**) and MOLT-4 (**B**) whole cell lysates.



GATA-3 (B-10): sc-137152. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear staining of urothelial cells (**A**) and human placenta tissue showing nuclear staining of decidual cells (**B**).

SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2014. H2-Eb1 expression is upregulated in the nasal mucosa of allergic rhinitis. Asian Pac. J. Allergy Immunol. 32: 308-315.
2. Nakatsukasa, H., et al. 2015. The DNA-binding inhibitor Id3 regulates IL-9 production in $CD4^+$ T cells. Nat. Immunol. 16: 1077-1084.
3. Vega-Magaña, N., et al. 2018. Bacterial translocation is linked to increased intestinal IFN-γ, IL-4, IL-17, and mucin-2 in cholestatic rats. Ann. Hepatol. 17: 318-329.

CONJUGATES

See **GATA-3 (HG3-31): sc-268** for GATA-3 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.