

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

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 2 A1.

SOURCE

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

PRODUCT

Each vial contains 200 µg IgG₁ 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-268 X, 200 µg/0.1 ml.

GATA-3 (HG3-31) is available conjugated to agarose (sc-268 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-268 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-268 PE), fluorescein (sc-268 FITC), Alexa Fluor[®] 488 (sc-268 AF488), Alexa Fluor[®] 546 (sc-268 AF546), Alexa Fluor[®] 594 (sc-268 AF594) or Alexa Fluor[®] 647 (sc-268 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-268 AF680) or Alexa Fluor[®] 790 (sc-268 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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).

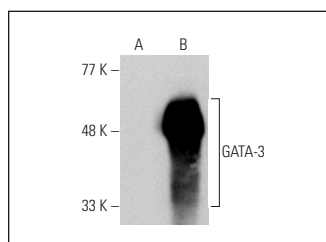
Suitable for use as control antibody for GATA-3 siRNA (h): sc-29331, GATA-3 siRNA (m): sc-35453, GATA-3 siRNA (r): sc-61845, GATA-3 shRNA Plasmid (h): sc-29331-SH, GATA-3 shRNA Plasmid (m): sc-35453-SH, GATA-3 shRNA Plasmid (r): sc-61845-SH, GATA-3 shRNA (h) Lentiviral Particles: sc-29331-V, GATA-3 shRNA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

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

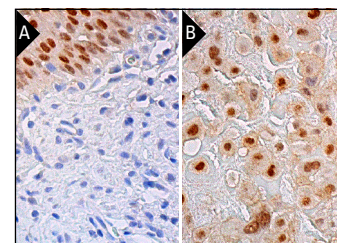
Molecular Weight of GATA-3: 50 kDa.

Positive Controls: GATA-3 (h): 293 Lysate: sc-110481, Jurkat whole cell lysate: sc-2204 or MOLT-4 cell lysate: sc-2233.

DATA



GATA-3 (HG3-31) HRP: sc-268 HRP. Direct 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. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear staining of urothelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of decidual cells (B).

SELECT PRODUCT CITATIONS

- Zheng, W. and Flavell, R.A. 1997. The transcription factor GATA-3 is necessary and sufficient for Th2 cytokine gene expression in CD4 T cells. *Cell* 89: 587-596.
- Blanco, S., et al. 2016. Stem cell function and stress response are controlled by protein synthesis. *Nature* 534: 335-340.
- Wang, A.B., et al. 2017. Gata6 promotes hair follicle progenitor cell renewal by genome maintenance during proliferation. *EMBO J.* 36: 61-78.
- Wu, C., et al. 2017. The transcription factor musculin promotes the unidirectional development of peripheral Treg cells by suppressing the TH2 transcriptional program. *Nat. Immunol.* 18: 344-353.

RESEARCH USE

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