

GATA-3 (HG3-35): sc-269

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.

REFERENCE

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.

SOURCE

GATA-3 (HG3-35) is a mouse monoclonal antibody raised against amino acids 1-264 of GATA-3 of human origin.

PRODUCT

Each vial contains 200 μ g 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-269 X, 200 μ g/0.1 ml.

GATA-3 (HG3-35) is available conjugated to agarose (sc-269 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-269 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-269 PE), fluorescein (sc-269 FITC), Alexa Fluor[®] 488 (sc-269 AF488), Alexa Fluor[®] 546 (sc-269 AF546), Alexa Fluor[®] 594 (sc-269 AF594) or Alexa Fluor[®] 647 (sc-269 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-269 AF680) or Alexa Fluor[®] 790 (sc-269 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

GATA-3 (HG3-35) is recommended for detection of GATA-3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

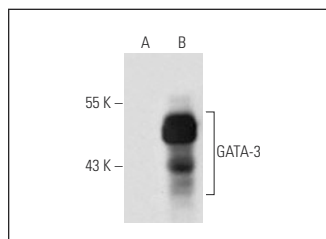
Suitable for use as control antibody for GATA-3 siRNA (h): sc-29331, GATA-3 shRNA Plasmid (h): sc-29331-SH and GATA-3 shRNA (h) Lentiviral Particles: sc-29331-V.

GATA-3 (HG3-35) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

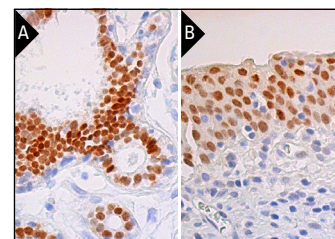
Molecular Weight of GATA-3: 50 kDa.

Positive Controls: GATA-3 (h): 293 Lysate: sc-110481, Jurkat whole cell lysate: sc-2204 or MOLT-4 nuclear extract: sc-2151.

DATA



GATA-3 (HG3-35): sc-269. 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 (HG3-35): sc-269. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing nuclear staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear staining of urothelial cells (B).

SELECT PRODUCT CITATIONS

1. Jin, T., et al. 2000. Characterization of a novel silencer element in the human aromatase gene PII promoter. *Breast Cancer Res. Treat.* 62: 151-159.
2. Damayanti, T., et al. 2010. Serial OX40 engagement on CD4⁺ T cells and natural killer T cells causes allergic airway inflammation. *Am. J. Respir. Crit. Care Med.* 181: 688-698.
3. Tkocz, D., et al. 2012. BRCA1 and GATA3 corepress FOXC1 to inhibit the pathogenesis of basal-like breast cancers. *Oncogene* 31: 3667-3678.
4. Li, X., et al. 2014. Sp8 plays a supplementary role to Pax6 in establishing the pMN/p3 domain boundary in the spinal cord. *Development* 141: 2875-2884.
5. Baraut, J., et al. 2015. Transforming growth factor- β increases interleukin-13 synthesis via GATA-3 transcription factor in T-lymphocytes from patients with systemic sclerosis. *Arthritis Res. Ther.* 17: 196.

STORAGE

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