

GATA-3 (D-16): sc-22206

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.

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 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GATA-3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG 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-22206 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-515648 P, (100 μ g 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 (D-16) is recommended for detection of GATA-3 of mouse, rat and 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), 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-3 (D-16) is also recommended for detection of GATA-3 in additional species, including canine, bovine, porcine and avian.

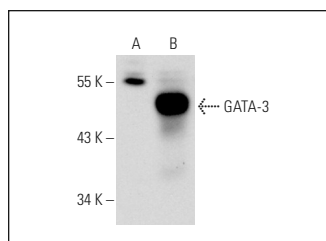
Suitable for use as control antibody for GATA-3 siRNA (h): sc-29331, GATA-3 siRNA (m): sc-35453, GATA-3 siRNA (r): sc-61845, GATA-3 shRNA Plasmid (h): sc-29331-SH, GATA-3 shRNA Plasmid (m): sc-35453-SH, GATA-3 shRNA Plasmid (r): sc-61845-SH, GATA-3 shRNA (h) Lentiviral Particles: sc-29331-V, GATA-3 shRNA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

GATA-3 (D-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

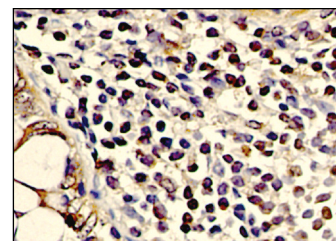
Molecular Weight of GATA-3: 50 kDa.

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

DATA



GATA-3 (D-16): sc-22206. 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 (D-16): sc-22206. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Hossain, M.B., et al. 2008. Lymphoid enhancer factor interacts with GATA-3 and controls its function in T helper type 2 cells. *Immunology* 125: 377-386.
2. Xu, G., et al. 2008. Expression of T-cell immunoglobulin- and mucin-domain-containing molecule-1 (TIM-1) is increased in a mouse model of asthma and relationship to GATA-3. *Life Sci.* 82: 663-669.



Try **GATA-3 (HG3-31): sc-268** or **GATA-3 (C-11): sc-514427**, our highly recommended monoclonal alternatives to GATA-3 (D-16). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **GATA-3 (HG3-31): sc-268**.