

GATA-4 (C-20): sc-1237



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: GATA4 (human) mapping to 8p23.1; Gata4 (mouse) mapping to 14 D1.

SOURCE

GATA-4 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GATA-4 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1237 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-1237 X, 200 µg/0.1 ml.

APPLICATIONS

GATA-4 (C-20) is recommended for detection of GATA-4 of mouse, rat and human 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). GATA-4 (C-20) is also recommended for detection of GATA-4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GATA-4 siRNA (h): sc-35455, GATA-4 siRNA (m): sc-35454, GATA-4 shRNA Plasmid (h): sc-35455-SH, GATA-4 shRNA Plasmid (m): sc-35454-SH, GATA-4 shRNA (h) Lentiviral Particles: sc-35455-V and GATA-4 shRNA (m) Lentiviral Particles: sc-35454-V.

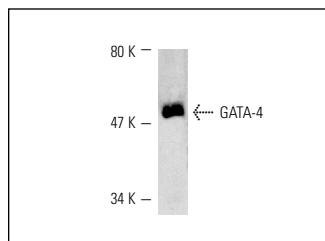
GATA-4 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GATA-4: 45 kDa.

STORAGE

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

DATA



GATA-4 (C-20): sc-1237. Western blot analysis of GATA-4 expression in ATL-16T whole cell lysate.

SELECT PRODUCT CITATIONS

- Durocher, D., et al. 1997. The cardiac transcription factors Nkx2-5 and GATA-4 are mutual cofactors. *EMBO J.* 16: 5687-5696.
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- Li, T., et al. 2012. Involvement of ERK-RSK cascade in phenylephrine-induced phosphorylation of GATA4. *Biochim. Biophys. Acta* 1823: 582-592.
- Broderick, T.L., et al. 2012. Downregulation in GATA4 and downstream structural and contractile genes in the db/db mouse heart. *ISRN Endocrinol.* 2012: 736860.
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- Bennett, J., et al. 2012. Loss of GATA-6 and GATA-4 in granulosa cells blocks folliculogenesis, ovulation, and follicle stimulating hormone receptor expression leading to female infertility. *Endocrinology* 153: 2474-2485.
- Krachulec, J., et al. 2012. GATA4 is a critical regulator of gonadectomy-induced adrenocortical tumorigenesis in mice. *Endocrinology* 153: 2599-2611.
- Southwood, C.M., et al. 2012. Tissue-restricted transcription from a conserved intragenic CpG island in the Klf1 gene in mice. *Biol. Reprod.* 87: 108.
- Oda, M., et al. 2013. DNA methylation restricts lineage-specific functions of transcription factor Gata4 during embryonic stem cell differentiation. *PLoS Genet.* 9: e1003574.
- Hu, Y.C., et al. 2013. Gata4 is required for formation of the genital ridge in mice. *PLoS Genet.* 9: e1003629.

RESEARCH USE

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