

# GATA-4 (H-112): sc-9053

## 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 (H-112) is a rabbit polyclonal antibody raised against amino acids 328-439 of GATA-4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

GATA-4 (H-112) 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), 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-4 (H-112) is also recommended for detection of GATA-4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GATA-4 siRNA (h): sc-35455, GATA-4 siRNA (m): sc-35454, GATA-4 siRNA (r): sc-270093, GATA-4 shRNA Plasmid (h): sc-35455-SH, GATA-4 shRNA Plasmid (m): sc-35454-SH, GATA-4 shRNA Plasmid (r): sc-270093-SH, GATA-4 shRNA (h) Lentiviral Particles: sc-35455-V, GATA-4 shRNA (m) Lentiviral Particles: sc-35454-V and GATA-4 shRNA (r) Lentiviral Particles: sc-270093-V.

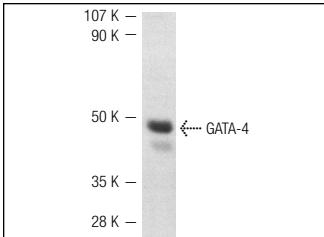
GATA-4 (H-112) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GATA-4: 45 kDa.

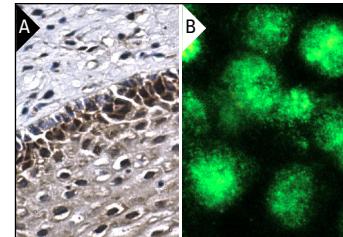
## STORAGE

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

## DATA



GATA-4 (H-112): sc-9053. Western blot analysis of GATA-4 expression in ATL whole cell lysate.



GATA-4 (H-112): sc-9053. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing nuclear and cytoplasmic staining of squamous epithelial cells (A). Immunofluorescence staining of methanol-fixed ATL-16T cells showing nuclear localization (B).

## SELECT PRODUCT CITATIONS

1. Orlic, D., et al. 2001. Bone marrow cells regenerate infarcted myocardium. *Nature* 410: 701-705.
2. Crispino, J.D., et al. 2001. Proper coronary vascular development and heart morphogenesis depend on interaction of GATA-4 with FOG cofactors. *Genes and Dev.* 15: 839-844.
3. Kazumi, K. 2001. Endothelin-1 induces phosphorylation of GATA-4 transcription factor in the HL-1 atrial-muscle cell line. *Biochem. J.* 359: 375-380.
4. Li, L., et al. 2010. Stk40 links the pluripotency factor Oct4 to the Erk/MAPK pathway and controls extraembryonic endoderm differentiation. *Proc. Natl. Acad. Sci. USA* 107: 1402-1407.
5. Grad, I., et al. 2010. The molecular chaperone Hsp90 $\alpha$  is required for meiotic progression of spermatocytes beyond pachytene in the mouse. *PLoS ONE* 5: e15770.
6. Li, J., et al. 2011. Enhancement of proteasome function by PA28 $\alpha$ ; over-expression protects against oxidative stress. *FASEB J.* 25: 883-893.
7. Granier, C., et al. 2011. Nodal *cis*-regulatory elements reveal epiblast and primitive endoderm heterogeneity in the peri-implantation mouse embryo. *Dev. Biol.* 349: 350-362.
8. Witman, N., et al. 2011. Recapitulation of developmental cardiogenesis governs the morphological and functional regeneration of adult newt hearts following injury. *Dev. Biol.* 354: 67-76.
9. Eguizabal, C., et al. 2011. Complete meiosis from human induced pluripotent stem cells. *Stem Cells* 29: 1186-1195.
10. Montserrat, N., et al. 2011. Generation of pig iPS cells: a model for cell therapy. *J. Cardiovasc. Transl. Res.* 4: 121-130.

## RESEARCH USE

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