SANTA CRUZ BIOTECHNOLOGY, INC.

GATA-2 (h): 293T Lysate: sc-176459

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 delta 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.
3. Ko, L.J., et al. 1993. DNA-binding specificities of the GATA transcription factor family. Mol. Cell. Biol. 13: 4011-4022.
4. Laverriere, A.C., et al. 1994. GATA-4/5/6, a subfamily of three transcription factors transcribed in developing heart and gut. J. Biol. Chem. 269: 23177-23184.
5. Suzuki, E., et al. 1996. The human GATA-6 gene: structure, chromosomal location, and regulation of expression by tissue-specific and mitogen-responsive signals. Genomics 38: 283-290.
6. Wozniak, R.J., et al. 2007. Context-dependent GATA factor function: combinatorial requirements for transcriptional control in hematopoietic and endothelial cells. J. Biol. Chem. 282: 14665-14674.
7. Khandekar, M., et al. 2007. A Gata2 intronic enhancer confers its pan-endothelia-specific regulation. Development 134: 1703-1712.
8. Chan, W.Y., et al. 2007. The paralogous hematopoietic regulators Lyl1 and Scl are coregulated by Ets and GATA factors, but Lyl1 cannot rescue the early $Scl^{-/-}$ phenotype. Blood 109: 1908-1916.

CHROMOSOMAL LOCATION

Genetic locus: GATA2 (human) mapping to 3q21.3.

PRODUCT

GATA-2 (h): 293T Lysate represents a lysate of human GATA-2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

GATA-2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive GATA-2 antibodies. Recommended use: 10-20 µl per lane.

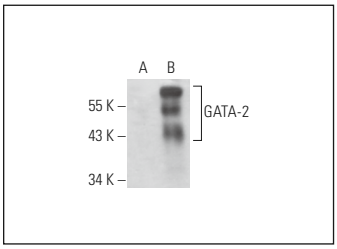
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GATA-2 (H-6): sc-515178 is recommended as a positive control antibody for Western Blot analysis of enhanced human GATA-2 expression in GATA-2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



GATA-2 (H-6): sc-515178. Western blot analysis of GATA-2 expression in non-transfected: sc-117752 (**A**) and human GATA-2 transfected: sc-176459 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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