SANTA CRUZ BIOTECHNOLOGY, INC.

p-GATA-6 (Tyr 271): sc-130600



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.
- 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 mitogenresponsive signals. Genomics 38: 283-290.
- 6. Lepore, J.J., et al. 2006. GATA-6 regulates semaphorin 3C and is required in cardiac neural crest for cardiovascular morphogenesis. J. Clin. Invest. 116: 929-939.
- 7. Setogawa, T., et al. 2006. The tumor suppressor LKB1 induces p21 expression in collaboration with LMO4, GATA-6, and Ldb1. Biochem. Biophys. Res. Commun. 343: 1186-1190.
- 8. Shureiqi, I., et al. 2007. The transcription factor GATA-6 is overexpressed in vivo and contributes to silencing 15-LOX-1 in vitro in human colon cancer. FASEB J. 21: 743-753.
- 9. Vuorenoja, S. et al. 2007. Adrenocortical tumorigenesis, luteinizing hormone receptor and transcription factors GATA-4 and GATA-6. Mol. Cell. Endocrinol. 269: 38-45.

CHROMOSOMAL LOCATION

Genetic locus: GATA6 (human) mapping to 18q11.2.

SOURCE

p-GATA-6 (Tyr 271) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 271 phosphorylated GATA-6 of human origin.

PRODUCT

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

APPLICATIONS

p-GATA-6 (Tyr 271) is recommended for detection of Tyr 271 phosphorylated GATA-6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for GATA-6 siRNA (h): sc-37907, GATA-6 shRNA Plasmid (h): sc-37907-SH and GATA-6 shRNA (h) Lentiviral Particles: sc-37907-V.

Molecular Weight of p-GATA-6: 56 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat antirabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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