SANTA CRUZ BIOTECHNOLOGY, INC.

Gfi-1B (P-20): sc-54810



Growth factor independent 1 (Gfi-1) is a transcriptional repressor that specifically binds to the DNA consensus sequence TAAATCAC(A/T)GCA. The carboxy-terminus of Gfi-1 contains six C_2H_2 -type zinc finger motifs, and zinc fingers 3, 4 and 5 are required for the binding of Gfi-1 to its DNA binding site. Gfi-1 also contains a 20 amino acid SNAG domain which mediates transcriptional repression. It represses Bax at the mRNA and protein levels, resulting in the inhibition of cell death. Gfi-1 is expressed outside the lymphoid system in granulocytes and activated macrophages. Gfi-1B, a related protein, is a transciptional repressor primarily expressed in bone marrow and spleen. Gfi-1B is a direct repressor of the p21 promoter and the SOCS-1 and -3 promoters. The genes encoding human Gfi-1 and Gfi-1B map to chromosome 1p22 and 9q34.13, respectively.

REFERENCES

BACKGROUND

- Gilks, C.B., et al. 1993. Progression of interleukin-2 (IL-2)-dependent rat T cell lymphoma lines to IL-2-independent growth following activation of a gene (Gfi-1) encoding a novel zinc finger protein. Mol. Cell. Biol. 13: 1759-1768.
- 2. Bell, D.W., et al. 1995. Chromosomal localization of a gene, Gfi-1, encoding a novel zinc finger protein reveals a new syntenic region between man and rodents. Cytogenet. Cell Genet. 70: 263-267.
- Grimes, H.L., et al. 1996. The Gfi-1 proto-oncoprotein contains a novel transcriptional repressor domain, SNAG, and inhibits G₁ arrest induced by interleukin-2 withdrawal. Mol. Cell. Biol. 16: 6263-6272.
- Grimes, H.L., et al. 1996. The Gfi-1 protooncoprotein represses Bax expression and inhibits T-cell death. Proc. Natl. Acad. Sci. USA 93: 14569-14573.
- Zweidler-McKay, P.A., et al. 1996. Gfi-1 encodes a nuclear zinc fingerprotein that binds DNA and functions as a transcriptional repressor. Mol. Cell. Biol. 16: 4024-4034.
- Rodel, B., et al. 1998. The human homologue (Gfi-1B) of the chicken Gfi gene maps to chromosome 9q34.13—a locus frequently altered in hemato-poietic diseases. Genomics 54: 580-582.
- Tong, B., et al. 1998. The Gfi-1B proto-oncoprotein represses p21WAF1 and inhibits myeloid cell differentiation. Mol. Cell. Biol. 18: 2462-2473.
- Jegalian, A.G., et al. 2002. Regulation of Socs gene expression by the proto-oncoprotein Gfi-1B: Two routes for Stat5 target gene induction by erythropoietin. J. Biol. Chem. 277: 2345-2352.
- Karsunky, H., et al. 2002. Inflammatory reactions and severe neutropenia in mice lacking the transcriptional repressor Gfi1. Nature Genet. 30: 295-300.

CHROMOSOMAL LOCATION

Genetic locus: GFI1B (human) mapping to 9q34.13.

SOURCE

Gfi-1B (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Gfi-1B of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-54810 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Gfi-1B (P-20) is recommended for detection of Gfi-1B 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).

Gfi-1B (P-20) is also recommended for detection of Gfi-1B in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Gfi-1B siRNA (h): sc-62374, Gfi-1B shRNA Plasmid (h): sc-62374-SH and Gfi-1B shRNA (h) Lentiviral Particles: sc-62374-V.

Molecular Weight of Gfi-1B: 41 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.

MONOS Satisfation Guaranteed

Try **Gfi-1B (B-7): sc-28356**, our highly recommended monoclonal alternative to Gfi-1B (P-20).