

Gfi-1B (D-19): sc-8559

BACKGROUND

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 C₂H₂-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 transcriptional 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

1. 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.
3. Zweidler-McKay, P.A., et al. 1996. Gfi-1 encodes a nuclear zinc finger protein that binds DNA and functions as a transcriptional repressor. *Mol. Cell. Biol.* 16: 4024-4034.
4. 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.

CHROMOSOMAL LOCATION

Genetic locus: Gfi1b (mouse) mapping to 2 A3.

SOURCE

Gfi-1B (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Gfi-1B of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8559 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8559 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Gfi-1B (D-19) is recommended for detection of Gfi-1B of mouse and rat 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).

Suitable for use as control antibody for Gfi-1B siRNA (m): sc-62375, Gfi-1B shRNA Plasmid (m): sc-62375-SH and Gfi-1B shRNA (m) Lentiviral Particles: sc-62375-V.

Gfi-1B (D-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Gfi-1B: 37/47 kDa.

Positive Controls: RBL-1 whole cell lysate: sc-364790.

SELECT PRODUCT CITATIONS

1. Doan, L.L., et al. 2003. Growth factor independence-1B expression leads to defects in T cell activation, IL-7 receptor α expression, and T cell lineage commitment. *J. Immunol.* 170: 2356-2366.
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PROTOCOLS

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