

GZF1 (T-15): sc-86046

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. As a member of the Krüppel C₂H₂-type zinc-finger protein family, GZF1 (GDNF-inducible zinc finger protein 1), also known as NF336 (zinc finger protein 336) or ZBTB23 (zinc finger and BTB domain-containing protein 23), is a 711 amino acid nuclear protein that contains one BTB (POZ) domain and 10 C₂H₂-type zinc fingers. GZF1 functions as a transcription repressor and binds the GZF1 responsive element (GRE). Expressed highly in liver, kidney, brain and muscle, GZF1 is upregulated in response to glial cell line-derived neurotrophic factor (GDNF) stimulation. Knockdown of GZF1 mRNA impairs ureteric bud branching in mouse, suggesting that GZF1 may be necessary for renal branching morphogenesis. GZF1 exists as two alternatively spliced isoforms.

REFERENCES

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2. Rosenfeld, R., et al. 1993. Zinc fingers: conserved properties that can distinguish between spurious and actual DNA-binding motifs. *J. Biomol. Struct. Dyn.* 11: 557-570.
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4. Sariola, H., et al. 1999. GDNF and its receptors in the regulation of the ureteric branching. *Int. J. Dev. Biol.* 43: 413-418.
5. Fukuda, N., et al. 2003. Identification of a novel glial cell line-derived neurotrophic factor-inducible gene required for renal branching morphogenesis. *J. Biol. Chem.* 278: 50386-50392.
6. Morinaga, T., et al. 2005. GDNF-inducible zinc finger protein 1 is a sequence-specific transcriptional repressor that binds to the HOXA10 gene regulatory region. *Nucleic Acids Res.* 33: 4191-4201.
7. Costantini, F., et al. 2006. GDNF/Ret signaling and the development of the kidney. *Bioessays* 28: 117-127.
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CHROMOSOMAL LOCATION

Genetic locus: GZF1 (human) mapping to 20p11.21; Gzf1 (mouse) mapping to 2 G3.

SOURCE

GZF1 (T-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of GZF1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-86046 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-86046 X, 100 µg/0.1 ml.

APPLICATIONS

GZF1 (T-15) is recommended for detection of GZF1 of mouse, rat and 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); non cross-reactive with other ZNF family members.

GZF1 (T-15) is also recommended for detection of GZF1 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for GZF1 siRNA (h): sc-76979, GZF1 siRNA (m): sc-155691, GZF1 shRNA Plasmid (h): sc-76979-SH, GZF1 shRNA Plasmid (m): sc-155691-SH, GZF1 shRNA (h) Lentiviral Particles: sc-76979-V and GZF1 shRNA (m) Lentiviral Particles: sc-155691-V.

GZF1 (T-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GZF1: 80 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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 anti-rabbit IgG-HRP: sc-2030 (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) 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.