SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF143 (G-15): sc-241150

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. ZNF143 (zinc-finger protein 143), also known as SBF, STAF or pHZ-1, is a 626 amino acid protein that contains 7 C_2H_2-type zinc fingers and belongs to the GLI (glioma-associated oncogene) C_2H_2-type zinc-finger family. Localized to the nucleus and expressed ubiquitously with highest expression in ovaries, ZNF143 functions as a transcriptional activator that, via its C_2H_2-type zinc domains, binds to the SPH motif found in the promotors of small nuclear RNAs (snRNA). Through its ability to bind the promotors of various snRNA genes, ZNF143 controls the subsequent expression of the corresponding protein products. ZNF143 expression is induced upon DNA damage, suggesting an important role for ZNF143 in DNA repair events.

REFERENCES

1. Myslinski, E., et al. 1998. ZNF76 and ZNF143 are two human homologs of the transcriptional activator STAF. J. Biol. Chem. 273: 21998-22006.
2. Rincon, J.C., et al. 1998. Molecular cloning of a cDNA encoding human SPH-binding factor, a conserved protein that binds to the enhancer-like region of the U6 small nuclear RNA gene promoter. Nucleic Acids Res. 26: 4846-4852.
3. Saur, D., et al. 2002. Complex regulation of human neuronal nitric-oxide synthase exon 1c gene transcription. Essential role of Sp and ZNF family members of transcription factors. J. Biol. Chem. 277: 25798-25814.
4. Ishiguchi, H., et al. 2004. ZNF143 activates gene expression in response to DNA damage and binds to Cisplatin-modified DNA. Int. J. Cancer. 111: 900-909.
5. Grossman, C.E., et al. 2004. ZNF143 mediates basal and tissue-specific expression of human transaldolase. J. Biol. Chem. 279: 12190-12205.
6. Myslinski, E., et al. 2006. A genome scale location analysis of human STAF/ZNF143-binding sites suggests a widespread role for human STAF/ZNF143 in mammalian promoters. J. Biol. Chem. 281: 39953-39962.
7. Gérard, M.A., et al. 2007. Transcription factor hStaf/ZNF143 is required for expression of the human TFAM gene. Gene 401: 145-153.
8. Myslinski, E., et al. 2007. Transcription of the human cell cycle regulated BUB1B gene requires hStaf/ZNF143. Nucleic Acids Res. 35: 3453-3464.

CHROMOSOMAL LOCATION

Genetic locus: ZNF143 (human) mapping to 11p15.4; Zfp143 (mouse) mapping to 7 F1.

SOURCE

ZNF143 (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ZNF143 of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

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

Blocking peptide available for competition studies, sc-241150 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZNF143 (G-15) is recommended for detection of ZNF143 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.

ZNF143 (G-15) is also recommended for detection of ZNF143 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ZNF143 siRNA (h): sc-97004, ZNF143 siRNA (m): sc-155641, ZNF143 shRNA Plasmid (h): sc-97004-SH, ZNF143 shRNA Plasmid (m): sc-155641-SH, ZNF143 shRNA (h) Lentiviral Particles: sc-97004-V and ZNF143 shRNA (m) Lentiviral Particles: sc-155641-V.

Molecular Weight of ZNF143: 68 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

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) Immunofluorescence: 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.

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.