

ZNF281 (G-9): sc-137205

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. ZNF281, also known as GC-box-binding zinc finger protein 1, ZBP-99 or ZNP-99 (zinc finger DNA-binding protein 99), is a zinc finger protein that belongs to the Krüppel C₂H₂-type zinc finger protein family. It is expressed ubiquitously at low levels with predominant expression in kidney, liver, lymphocytes and placenta. ZNF281 localizes to the nucleus and contains four C₂H₂-type zinc fingers. ZNF281 plays a role in repressing the transcription of a variety of genes including Gastrin and ODC (ornithine decarboxylase). In particular, ZNF281 functions by binding to the G-rich box in the enhancer region of the gene. Upon DNA damage, ZNF281 may become phosphorylated by Atm or ATR.

REFERENCES

1. Law, D.J., et al. 1999. ZBP-99 defines a conserved family of transcription factors and regulates ornithine decarboxylase gene expression. *Biochem. Biophys. Res. Commun.* 262: 113-120.
2. Lisowsky, T., et al. 1999. Identification of human GC-box-binding zinc finger protein, a new Krüppel-like zinc finger protein, by the yeast one-hybrid screening with a GC-rich target sequence. *FEBS Lett.* 453: 369-374.
3. Suzuki, M., et al. 2003. Hox proteins functionally cooperate with the GC box-binding protein system through distinct domains. *J. Biol. Chem.* 278: 30148-30156.
4. Zhang, X., et al. 2003. ZBP-89 represses vimentin gene transcription by interacting with the transcriptional activator, Sp1. *Nucleic Acids Res.* 31: 2900-2914.

CHROMOSOMAL LOCATION

Genetic locus: ZNF281 (human) mapping to 1q32.1; Zfp281 (mouse) mapping to 1 E4.

SOURCE

ZNF281 (G-9) is a mouse monoclonal antibody raised against amino acids 679-895 mapping at the C-terminus of ZNF281 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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-137205 X, 200 µg/0.1 ml.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

ZNF281 (G-9) is recommended for detection of ZNF281 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 ZNF281 siRNA (h): sc-88283, ZNF281 siRNA (m): sc-106714, ZNF281 shRNA Plasmid (h): sc-88283-SH, ZNF281 shRNA Plasmid (m): sc-106714-SH, ZNF281 shRNA (h) Lentiviral Particles: sc-88283-V and ZNF281 shRNA (m) Lentiviral Particles: sc-106714-V.

ZNF281 (G-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

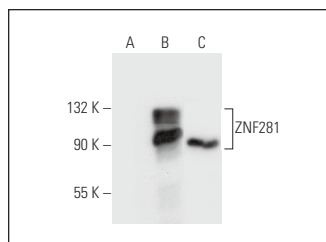
Molecular Weight of ZNF281: 99 kDa.

Positive Controls: ZNF281 (m): 293T Lysate: sc-124785, KNRK nuclear extract: sc-2141 or HeLa nuclear extract: sc-2120.

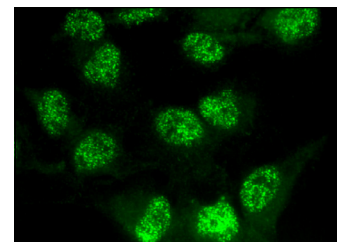
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ZNF281 (G-9): sc-137205. Western blot analysis of ZNF281 expression in non-transfected: sc-117752 (A) and mouse ZNF281 transfected: sc-124785 (B) 293T whole cell lysates and KNRK nuclear extract (C).



ZNF281 (G-9): sc-137205. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Viticchiè, G., et al. 2011. MiR-203 controls proliferation, migration and invasive potential of prostate cancer cell lines. *Cell Cycle* 10: 1121-1131.

RESEARCH USE

For research use only, not for use in diagnostic procedures.