SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF279 (F-4): sc-515438

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. 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 C_2H_2-type zinc-finger protein family, ZNF279 (zinc finger protein 279), also known as ZNF280B, SUHW2 and ZNF632, is a 543 amino acid nuclear protein that contains four C_2H_2-type zinc fingers and may function as a transcription factor. ZNF279 is encoded by a gene located on human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

1. Thiesen, H.J. 1990. Multiple genes encoding zinc finger domains are expressed in human T cells. New Biol. 2: 363-374.
2. Rosenfeld, R. and Margalit, H. 1993. Zinc fingers: conserved properties that can distinguish between spurious and actual DNA-binding motifs. J. Biomol. Struct. Dyn. 11: 557-570.
3. Schwab, S.G. and Wildenauer, D.B. 1999. Chromosome 22 workshop report. Am. J. Med. Genet. 88: 276-278.
4. Nishioka, M., et al. 2000. Identification of a 428-kb homozygously deleted region disrupting the SEZ6L gene at 22q12.1 in a lung cancer cell line. Oncogene 19: 6251-6260.
5. Edelstein, L.C. and Collins, T. 2005. The SCAN domain family of zinc finger transcription factors. Gene 359: 1-17.
6. Hay, B.N. 2007. Deletion 22q11: spectrum of associated disorders. Semin. Pediatr. Neurol. 14: 136-139.
7. Liu, J. and Stormo, G.D. 2008. Context-dependent DNA recognition code for C_2H_2 zinc-finger transcription factors. Bioinformatics 24: 1850-1857.

CHROMOSOMAL LOCATION

Genetic locus: ZNF280B (human) mapping to 22q11.22; Zfp280b (mouse) mapping to 10 C1.

SOURCE

ZNF279 (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 521-535 near the C-terminus of ZNF279 of human origin.

PRODUCT

Each vial contains 200 µg IgA kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515438 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ZNF279 (F-4) is recommended for detection of ZNF279 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 ZNF279 siRNA (h): sc-76976, ZNF279 siRNA (m): sc-155675, ZNF279 shRNA Plasmid (h): sc-76976-SH, ZNF279 shRNA Plasmid (m): sc-155675-SH, ZNF279 shRNA (h) Lentiviral Particles: sc-76976-V and ZNF279 shRNA (m) Lentiviral Particles: sc-155675-V.

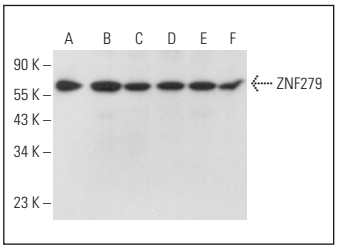
Molecular Weight of ZNF279: 62 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 nuclear extract: sc-2138 or PC-12 cell lysate: sc-2250.

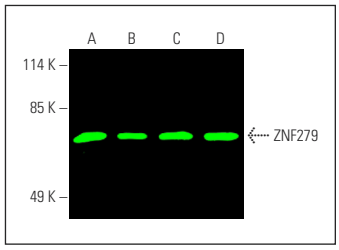
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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



ZNF279 (F-4): sc-515438. Western blot analysis of ZNF279 expression in HeLa (**A**), HEL 92.1.7 (**B**), F9 (**C**) and PC-12 (**D**) whole cell lysates and NIH/3T3 (**E**) and KNRK (**F**) nuclear extracts.



ZNF279 (F-4): sc-515438. Near-infrared western blot analysis of ZNF279 expression in HEL 92.1.7 (**A**), F9 (**B**) and PC-12 (**C**) whole cell lysates and NIH/3T3 nuclear extract (**D**). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

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.