SANTA CRUZ BIOTECHNOLOGY, INC.

ZFP287 (N-17): sc-244735

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. ZFP287 (zinc finger protein 287) is a 754 amino acid protein that localizes to the nucleus and is composed of fourteen C_2H_2-type zinc fingers, one KRAB domain and one SCAN box domain. The gene encording ZFP287 maps to human chromosome 17. Two key tumor suppressor genes are associated with chromosome 17, namely p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Hall, J.M., Friedman, L., Guenther, C., Lee, M.K., Weber, J.L., Black, D.M. and King, M.C. 1992. Closing in on a breast cancer gene on chromosome 17q. Am. J. Hum. Genet. 50: 1235-1242.
2. Evans, S.C. and Lozano, G. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. Mol. Med. Today 3: 390-395.
3. Varley, J.M., Thorncroft, M., McGown, G., Appleby, J., Kelsey, A.M., Tricker, K.J., Evans, D.G. and Birch, J.M. 1997. A detailed study of loss of heterozygosity on chromosome 17 in tumours from Li-Fraumeni patients carrying a mutation to the TP53 gene. Oncogene 14: 865-871.
4. Kersemaekers, A.M., Hermans, J., Fleuren, G.J. and van de Vijver, M.J. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. Br. J. Cancer 77: 192-200.
5. Soussi, T., Dehouche, K. and Beroud, C. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. Hum. Mutat. 15: 105-113.
6. Piura, B., Rabinovich, A. and Yanai-Inbar, I. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. Eur. J. Obstet. Gynecol. Reprod. Biol. 97: 241-244.
7. Minamoto, T., Buschmann, T., Habelhah, H., Matusevich, E., Tahara, H., Boerresen-Dale, A.L., Harris, C., Sidransky, D. and Ronai, Z. 2001. Distinct pattern of p53 phosphorylation in human tumors. Oncogene 20: 3341-3347.
8. O'Geen, H., Squazzo, S.L., Iyengar, S., Blahnik, K., Rinn, J.L., Chang, H.Y., Green, R. and Farnham, P.J. 2007. Genome-wide analysis of KAP1 binding suggests autoregulation of KRAB-ZNFs. PLoS Genet. 3: e89.

CHROMOSOMAL LOCATION

Genetic locus: ZNF287 (human) mapping to 17p11.2; Zfp287 (mouse) mapping to 11 B2.

SOURCE

ZFP287 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ZFP287 of human origin.

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-244735 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZFP287 (N-17) is recommended for detection of ZFP287 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 ZFP family members.

ZFP287 (N-17) is also recommended for detection of ZFP287 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ZFP287 siRNA (h): sc-93760, ZFP287 siRNA (m): sc-155542, ZFP287 shRNA Plasmid (h): sc-93760-SH, ZFP287 shRNA Plasmid (m): sc-155542-SH, ZFP287 shRNA (h) Lentiviral Particles: sc-93760-V and ZFP287 shRNA (m) Lentiviral Particles: sc-155542-V.

Molecular Weight of ZFP287: 88 kDa.

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.

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.