ZFP14 (E-16): sc-249418



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. ZFP14 (zinc finger protein 14 homolog) is a 533 amino acid protein that localizes to the nucleus and is composed of 13 $\rm C_2H_2$ -type zinc fingers and a KRAB domain. ZFP14 is encoded by a gene located on human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG families, and Fc receptors (FcRs).

REFERENCES

- Rousseau-Merck, M.F., Hillion, J., Jonveaux, P., Couillin, P., Seite, P., Thiesen, H.J. and Berger, R. 1993. Chromosomal localization of 9 KOX zinc finger genes: physical linkages suggest clustering of KOX genes on chromosomes 12. 16. and 19. Hum. Genet. 92: 583-587.
- 2. Teglund, S., Olsen, A., Khan, W.N., Frängsmyr, L. and Hammarström, S. 1994. The pregnancy-specific glycoprotein (PSG) gene cluster on human chromosome 19: fine structure of the 11 PSG genes and identification of 6 new genes forming a third subgroup within the carcinoembryonic antigen (CEA) family. Genomics 23: 669-684.
- 3. Wang, L., Lin, S.H., Wu, W.G., Kemp, B.L., Walsh, G.L., Hong, W.K. and Mao, L. 2000. C-CAM1, a candidate tumor suppressor gene, is abnormally expressed in primary lung cancers. Clin. Cancer Res. 6: 2988-2993.
- Trowsdale, J., Barten, R., Haude, A., Stewart, C.A., Beck, S. and Wilson, M.J. 2001. The genomic context of natural killer receptor extended gene families. Immunol. Rev. 181: 20-38.
- 5. Sun, Y., Gou, D.M., Liu, H., Peng, X. and Li, W.X. 2003. The KRAB domain of zinc finger gene ZNF268: a potential transcriptional repressor. IUBMB Life 55: 127-131.
- Englbrecht, C.C., Schoof, H. and Böhm, S. 2004. Conservation, diversification and expansion of C₂H₂ zinc finger proteins in the *Arabidopsis thaliana* genome. BMC Genomics 5: 39.
- Nakamura, M., Runko, A.P. and Sagerström, C.G. 2004. A novel subfamily of zinc finger genes involved in embryonic development. J. Cell. Biochem. 93: 887-895.
- 8. Grimwood, J., Gordon, L.A., Olsen, A., Terry, A., Schmutz, J., Lamerdin, J., Hellsten, U., Goodstein, D., Couronne, O., Tran-Gyamfi, M., Aerts, A., Altherr, M., Ashworth, L., Bajorek, E., Black, S., Branscomb, E., et al. 2004. The DNA sequence and biology of human chromosome 19. Nature 428: 529-535.
- 9. 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: ZFP14 (human) mapping to 19q13.12.

SOURCE

ZFP14 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ZFP14 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-249418 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZFP14 (E-16) is recommended for detection of ZFP14 of 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).

ZFP14 (E-16) is also recommended for detection of ZFP14 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for ZFP14 siRNA (h): sc-97096, ZFP14 shRNA Plasmid (h): sc-97096-SH and ZFP14 shRNA (h) Lentiviral Particles: sc-97096-V.

Molecular Weight of ZFP14: 63 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat lgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat lgG-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 lgG-FITC: sc-2024 (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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com