

## ZKSCAN3 (N-13): sc-132889

### 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. ZKSCAN3 (zinc finger protein with KRAB and SCAN domains 3), also known as ZNF306/309 or ZNF47 homolog, is a 583 amino acid protein that may be involved in the regulation of transcription. Belonging to the Krüppel C<sub>2</sub>H<sub>2</sub>-type zinc-finger protein family, ZKSCAN3 contains seven C<sub>2</sub>H<sub>2</sub>-type zinc fingers, one KRAB domain and one SCAN box domain. Over-expression of ZKSCAN3 has been found in colorectal tumor samples, with higher levels of expression found in invasive tumor types compared with non-invasive tumors. This evidence also coincides with the fact that the chromosomal region of the gene encoding ZKSCAN3 is found to be amplified in colorectal cancer. Knockdown of the mRNA encoding ZKSCAN3 results in impaired anchorage-independent growth and orthotopic tumor growth in two independent colon cancer cell lines.

### REFERENCES

1. Constantinou-Deltas, C.D., Gilbert, J., Bartlett, R.J., Herbstreith, M., Roses, A.D. and Lee, J.E. 1992. The identification and characterization of KRAB-domain-containing zinc finger proteins. *Genomics* 12: 581-589.
2. Margolin, J.F., Friedman, J.R., Meyer, W.K., Vissing, H., Thiesen, H.J. and Rauscher, F.J. 1994. Krüppel-associated boxes are potent transcriptional repression domains. *Proc. Natl. Acad. Sci. USA* 91: 4509-4513.
3. Petroni, D., Bartolini, E., Chiamonte, R., Ottolenghi, S. and Comi, P. 1998. Computer sequence analysis of human highly conserved zinc finger modules. *DNA Seq.* 9: 163-169.
4. Sander, T.L., Stringer, K.F., Maki, J.L., Szauter, P., Stone, J.R. and Collins, T. 2003. The SCAN domain defines a large family of zinc finger transcription factors. *Gene* 310: 29-38.
5. Edelstein, L.C. and Collins, T. 2005. The SCAN domain family of zinc finger transcription factors. *Gene* 359: 1-17.
6. Ma, X., Wang, X., Gao, X., Wang, L., Lu, Y., Gao, P., Deng, W., Yu, P., Ma, J., Guo, J., Cheng, H., Zhang, C., Shi, T. and Ma, D. 2007. Identification of five human novel genes associated with cell proliferation by cell-based screening from an expressed cDNA ORF library. *Life Sci.* 81: 1141-1151.
7. Yang, L., Hamilton, S.R., Sood, A., Kuwai, T., Ellis, L., Sanguino, A., Lopez-Berestein, G. and Boyd, D.D. 2008. The previously undescribed ZKSCAN3 (ZNF306) is a novel "driver" of colorectal cancer progression. *Cancer Res.* 68: 4321-4330.

### CHROMOSOMAL LOCATION

Genetic locus: ZKSCAN3 (human) mapping to 6p22.1.

### SOURCE

ZKSCAN3 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ZKSCAN3 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-132889 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

ZKSCAN3 (N-13) is recommended for detection of ZKSCAN3 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); non cross-reactive with other ZKSCAN family members.

Suitable for use as control antibody for ZKSCAN3 siRNA (h): sc-95093, ZKSCAN3 shRNA Plasmid (h): sc-95093-SH and ZKSCAN3 shRNA (h) Lentiviral Particles: sc-95093-V.

Molecular Weight of ZKSCAN3: 61 kDa.

Positive Controls: fetal kidney tissue extract.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.