SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF217 siRNA (h): sc-63249

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. ZNF217, also known as ZABC1, is a zinc finger protein belonging to the Krüppel C_2H_2-type zinc-finger protein family. It localizes to the nucleus and may play a role in transcriptional repression of a variety of genes through the recruitment of co-repressor complexes containing proteins such as CtBP, HDAC1 and HDAC2. In addition, ZNF217 participates in cell differentiation and appears to function as an oncogene. Expression of ZNF217 is amplified in various tumors and overexpression of the protein can attenuate apoptotic signals and lead to epithelial cell immortalization.

REFERENCES

1. Rooney, P.H., et al. 2004. The candidate oncogene ZNF217 is frequently amplified in colon cancer. J. Pathol. 204: 282-288.
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3. Sarraf, S., et al. 2005. The human ovarian teratocarcinoma cell line PA-1 demonstrates a single translocation: analysis with fluorescence *in situ* hybridization, spectral karyotyping, and bacterial artificial chromosome microarray. Cancer Genet. Cytogenet. 161: 63-69.
4. Shimada, M., et al. 2005. Detection of Her2/neu, c-Myc and ZNF217 gene amplification during breast cancer progression using fluorescence *in situ* hybridization. Oncol. Rep. 13: 633-641.
5. Zhong, M., et al. 2006. ZNF217 gene was detected in ovarian serous cystadenocarcinoma by fluorescence *in situ* hybridization. Zhonghua Yi Xue Yi Chuan Xue Za Zhi 23: 665-667.
6. Quinlan, K.G., et al. 2007. Amplification of zinc finger gene 217 (ZNF217) and cancer: when good fingers go bad. Biochim. Biophys. Acta 1775: 333-340.
7. Li, P., et al. 2007. Multiple roles of the candidate oncogene ZNF217 in ovarian epithelial neoplastic progression. Int. J. Cancer 120: 1863-1873.
8. Krig, S.R., et al. 2007. Identification of genes directly regulated by the oncogene ZNF217 using chromatin immunoprecipitation (ChIP)-chip assays. J. Biol. Chem. 282: 9703-9712.
9. Cowger, J.J., et al. 2007. Biochemical characterization of the zinc-finger protein 217 transcriptional repressor complex: identification of a ZNF217 consensus recognition sequence. Oncogene 26: 3378-3386.

CHROMOSOMAL LOCATION

Genetic locus: ZNF217 (human) mapping to 20q13.2.

PROTOCOLS

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

PRODUCT

ZNF217 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZNF217 shRNA Plasmid (h): sc-63249-SH and ZNF217 shRNA (h) Lentiviral Particles: sc-63249-V as alternate gene silencing products.

For independent verification of ZNF217 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-63249A, sc-63249B and sc-63249C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ZNF217 siRNA (h) is recommended for the inhibition of ZNF217 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZNF217 gene expression knockdown using RT-PCR Primer: ZNF217 (h)-PR: sc-63249-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zhang, Z.C., et al. 2015. ZNF217 is overexpressed and enhances cell migration and invasion in colorectal carcinoma. Asian Pac. J. Cancer Prev. 16: 2459-2463.

RESEARCH USE

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