SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF317 siRNA (h): sc-97294

BACKGROUND

ZNF317 (zinc finger protein 317) is a 595 amino acid nuclear protein that may function as a transcription factor and play an important role in erythroid maturation and lymphoid proliferation. Existing as 4 alternatively spliced isoforms, ZNF317 contains 13 C_2H_2-type zinc fingers and one KRAB domain, and belongs to the Krüppel C_2H_2-type zinc-finger protein family. The gene that encodes ZNF317 consists of more than 23,000 bases and maps to human chromosome 19p13.2. Chromosome 19 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

1. Olsen, A., Teglund, S., Nelson, D., Gordon, L., Copeland, A., Georgescu, A., Carrano, A. and Hammarström, S. 1994. Gene organization of the pregnancy-specific glycoprotein region on human chromosome 19: assembly and analysis of a 700-kb cosmid contig spanning the region. Genomics 23: 659-668.
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.
4. Takashima, H., Nishio, H., Wakao, H., Nishio, M., Koizumi, K., Oda, A., Koike, T. and Sawada, K. 2001. Molecular cloning and characterization of a KRAB-containing zinc finger protein, ZNF317, and its isoforms. Biochem. Biophys. Res. Commun. 288: 771-779.
5. 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.
6. Le Meur, N., Martin, C., Saugier-Veber, P., Joly, G., Lemoine, F., Moirot, H., Rossi, A., Bachy, B., Cabot, A., Joly, P. and Frébourg, T. 2004. Complete germline deletion of the STK11 gene in a family with Peutz-Jeghers syndrome. Eur. J. Hum. Genet. 12: 415-418.
7. Leeb, T. and Müller, M. 2004. Comparative human-mouse-rat sequence analysis of the ICAM gene cluster on HSA 19p13.2 and a 185-kb porcine region from SSC 2q. Gene 343: 239-244.
8. Barrow, A.D. and Trowsdale, J. 2008. The extended human leukocyte receptor complex: diverse ways of modulating immune responses. Immunol. Rev. 224: 98-123.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: ZNF317 (human) mapping to 19p13.2.

PRODUCT

ZNF317 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 ZNF317 shRNA Plasmid (h): sc-97294-SH and ZNF317 shRNA (h) Lentiviral Particles: sc-97294-V as alternate gene silencing products.

For independent verification of ZNF317 (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-97294A, sc-97294B and sc-97294C.

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

ZNF317 siRNA (h) is recommended for the inhibition of ZNF317 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 ZNF317 gene expression knockdown using RT-PCR Primer: ZNF317 (h)-PR: sc-97294-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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