SANTA CRUZ BIOTECHNOLOGY, INC.

ZNRF4 siRNA (h): sc-97352

BACKGROUND

The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in protein-protein interactions and protein-DNA interactions. ZNRF4 (zinc and ring finger 4), also known as spzn, RNF204, Ssrzf1 or SPERIZIN, is a 429 amino acid single-pass type I membrane protein that contains one RING-type zinc finger domain and a PA (protease associated) domain. ZNRF4 is encoded by a gene located on human chromosome 19p13.3. 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. Chromosome 19 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 family and Fc receptors (FcRs).

REFERENCES

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2. Trettel, F., et al. 2000. A fine physical map of the CACNA1A gene region on 19p13.1-p13.2 chromosome. Gene 241: 45-50.
3. Bouwmeester, T., et al. 2004. A physical and functional map of the human TNF-α/NFκB signal transduction pathway. Nat. Cell Biol. 6: 9097-9105.
4. Lehner, B., et al. 2004. Analysis of a high-throughput yeast two-hybrid system and its use to predict the function of intracellular proteins encoded within the human MHC class III region. Genomics 83: 153-167.
5. Ishibashi, T., et al. 2005. Oligonucleotide-based microarray analysis of retinoic acid target genes in the protochordate, *Ciona intestinalis*. Dev. Dyn. 233: 1571-1578.
6. Burger, A., et al. 2006. Novel RING E3 ubiquitin ligases in breast cancer. Neoplasia 8: 689-695.

CHROMOSOMAL LOCATION

Genetic locus: ZNRF4 (human) mapping to 19p13.3.

PRODUCT

ZNRF4 siRNA (h) is a pool of 2 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 ZNRF4 shRNA Plasmid (h): sc-97352-SH and ZNRF4 shRNA (h) Lentiviral Particles: sc-97352-V as alternate gene silencing products.

For independent verification of ZNRF4 (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-97352A and sc-97352B.

PROTOCOLS

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

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

ZNRF4 siRNA (h) is recommended for the inhibition of ZNRF4 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 ZNRF4 gene expression knockdown using RT-PCR Primer: ZNRF4 (h)-PR: sc-97352-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.