SANTA CRUZ BIOTECHNOLOGY, INC.

SPINK14 siRNA (h): sc-91879

BACKGROUND

SPINK14 (serine peptidase inhibitor, Kazal type 14), also known as SPINK5L2 (serine protease inhibitor Kazal-type 5-like 2), is a 97 amino acid secreted protein that contains a Kazal-like serine protease inhibitor domain. Kazal-type serine proteinase inhibitors (SPINKs) are a family of protein molecules that contain at least one conserved Kazal domain with six cysteine residues forming three disulfide bonds in a 1-5, 2-4, and 3-6 pattern. The SPINK family has nine gene members in the human genome known as SPINK1, SPINK2, SPINK4, SPINK5, SPINK5L2 (SPINK14), SPINK5L3, SPINK6, SPINK7 and SPINK9. The gene that encodes SPINK14 maps to the 5q32 cytogenetic region of human chromosome 5, which is thought to be associated with hereditary disorders such as Netherton disease and immune system conditions such as type 1 diabetes and atopic dermatitis.

REFERENCES

1. Chavanas, S., et al. 2000. Localization of the Netherton syndrome gene to chromosome 5q32, by linkage analysis and homozygosity mapping. Am. J. Hum. Genet. 66: 914-921.
2. Nishio, Y., et al. 2003. Association between polymorphisms in the SPINK5 gene and atopic dermatitis in the Japanese. Genes Immun. 4: 515-517.
3. Puente, X.S., et al. 2004. A genomic analysis of rat proteases and protease inhibitors. Genome Res. 14: 609-622.
4. Smyth, D.J., et al. 2006. Analysis of polymorphisms in 16 genes in type 1 diabetes that have been associated with other immune-mediated diseases. BMC Med. Genet. 7: 20.
5. Wapenaar, M.C., et al. 2007. The SPINK gene family and celiac disease susceptibility. Immunogenetics 59: 349-357.
6. Chen, T., et al. 2009. Identification of trypsin-inhibitory site and structure determination of human SPINK2 serine proteinase inhibitor. Proteins 77: 209-219.

CHROMOSOMAL LOCATION

Genetic locus: SPINK14 (human) mapping to 5q32.

PRODUCT

SPINK14 siRNA (h) is a target-specific 19-25 nt siRNA 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 SPINK14 shRNA Plasmid (h): sc-91879-SH and SPINK14 shRNA (h) Lentiviral Particles: sc-91879-V as alternate gene silencing products.

RESEARCH USE

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

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

SPINK14 siRNA (h) is recommended for the inhibition of SPINK14 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.