SANTA CRUZ BIOTECHNOLOGY, INC.

# SPINK5L3 siRNA (h): sc-92047

## BACKGROUND

SPINK5L3 (serine protease inhibitor Kazal-type 5-like 3), also known as SPINK13 (serine peptidase inhibitor, Kazal type 13), LiESP6, HESPINTOR and HBVDNAPTP1 (hepatitis B virus DNA polymerase transactivated serine protease inhibitor), is a 94 amino acid secreted protein that contains one Kazal-like domain and exists as two alternatively spliced isoforms. SPINK5L3 may function as a serine protease inhibitor. The gene that encodes SPINK5L3 maps to the human chromosome 5q32, the 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. With 181 million base pairs encoding around 1,000 genes, chromosome 5 is about 6% of human genomic DNA. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome and deletion of 5q or chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

## REFERENCES


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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. Chao, S.C., et al. 2003. A compound heterozygous mutation of the SPINK5 gene in a Taiwanese boy with Netherton syndrome. J. Formos. Med. Assoc. 102: 418-423.
4. South, S.T., et al. 2006. A new genomic mechanism leading to Cri-du-chat syndrome. Am. J. Med. Genet. A 140: 2714-2720.
5. 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.
6. Wapenaar, M.C., et al. 2007. The SPINK gene family and celiac disease susceptibility. Immunogenetics 59: 349-357.
7. Komatsu, N., et al. 2008. Correlation between SPINK5 gene mutations and clinical manifestations in Netherton syndrome patients. J. Invest. Dermatol. 128: 1148-1159.


## CHROMOSOMAL LOCATION

Genetic locus: SPINK13 (human) mapping to 5q32.

## PRODUCT

SPINK5L3 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 SPINK5L3 shRNA Plasmid (h): sc-92047-SH and SPINK5L3 shRNA (h) Lentiviral Particles: sc-92047-V as alternate gene silencing products.

## RESEARCH USE

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

## 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

SPINK5L3 siRNA (h) is recommended for the inhibition of SPINK5L3 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 SPINK5L3 gene expression knockdown using RT-PCR Primer: SPINK5L3 (h)-PR: sc-92047-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

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