SANTA CRUZ BIOTECHNOLOGY, INC.

CTSL3 siRNA (h): sc-92907

BACKGROUND

Cathepsins are proteolytic enzymes of lysosomal origin that mediate peptide biosynthesis and protein degradation. According to their catalytic mechanism they can be classified as cysteine, aspartic, or serine proteases. The cysteine protease class includes cathepsins B, C, H, K, L, O, R, S, V (U), W, and Z. The aspartyl protease class consists of cathepsins D, E and F. Cathepsin G belongs to the serine protease class. Other Cathepsins include J, M, P and Q. CTSL3 (cathepsin L family member 3), also known as HCTSL-s, is a 218 amino acid protein that belongs to the peptidase C1 family and is encoded by a gene that maps to human chromosome 9q21.33.

REFERENCES

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3. Xiao, K., Jehle, F., Peters, C., Reinheckel, T., Schirmer, R.H. and Dandekar, T. 2009. CA/C1 peptidases of the malaria parasites *Plasmodium falciparum* and *P. berghei* and their mammalian hosts—a bioinformatical analysis. Biol. Chem. 390: 1185-1197.
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6. Reiser, J., Adair, B. and Reinheckel, T. 2010. Specialized roles for cysteine cathepsins in health and disease. J. Clin. Invest. 120: 3421-3431.
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CHROMOSOMAL LOCATION

Genetic locus: CTSL3 (human) mapping to 9q21.33.

PRODUCT

CTSL3 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 CTSL3 shRNA Plasmid (h): sc-92907-SH and CTSL3 shRNA (h) Lentiviral Particles: sc-92907-V as alternate gene silencing products.

For independent verification of CTSL3 (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-92907A and sc-92907B.

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

CTSL3 siRNA (h) is recommended for the inhibition of CTSL3 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 CTSL3 gene expression knockdown using RT-PCR Primer: CTSL3 (h)-PR: sc-92907-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.