SANTA CRUZ BIOTECHNOLOGY, INC.

SASPase siRNA (h): sc-94271

BACKGROUND

SASPase (skin aspartic protease), also known as skin-specific retroviral-like aspartic protease, ASPRV1 (aspartic peptidase, retroviral-like 1), MUNO, SASP or TAPS (TPA-inducible aspartic proteinase-like protein), is a 343 amino acid single-pass membrane protein that resembles certain aspartyl proteases containing retroviral-type signatures. Expressed in the inner root sheath of hair follicles and the granular layer of epidermis, SASPase is suggested to be involved in keratinocyte differentiation and is known to catalyze the hydrolysis of casein and the oxidized B chain of Insulin. SASPase exists as a homodimer that undergoes post-translational autocleavage to become activated. Containing one peptidase A2 domain, SASPase is encoded by a gene that maps to human chromosome 2p13.3.

REFERENCES

1. von der Helm, K. 1996. Retroviral proteases: structure, function and inhibition from a non-anticipated viral enzyme to the target of a most promising HIV therapy. Biol. Chem. 377: 765-774.
2. Dunn, B.M., Goodenow, M.M., Gustchina, A. and Wlodawer, A. 2002. Retroviral proteases. Genome Biol. 3: REVIEWS3006.
3. Bernard, D., Mεhul, B., Thomas-Collignon, A., Delattre, C., Donovan, M. and Schmidt, R. 2005. Identification and characterization of a novel retroviral-like aspartic protease specifically expressed in human epidermis. J. Invest. Dermatol. 125: 278-287.
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5. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611765. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: ASPRV1 (human) mapping to 2p13.3.

PRODUCT

SASPase 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 SASPase shRNA Plasmid (h): sc-94271-SH and SASPase shRNA (h) Lentiviral Particles: sc-94271-V as alternate gene silencing products.

For independent verification of SASPase (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-94271A, sc-94271B and sc-94271C.

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

SASPase siRNA (h) is recommended for the inhibition of SASPase 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 SASPase gene expression knockdown using RT-PCR Primer: SASPase (h)-PR: sc-94271-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.