SANTA CRUZ BIOTECHNOLOGY, INC.

granzyme C siRNA (m): sc-105411

BACKGROUND

The granzyme family of proteins belong to the larger peptidase S1 family. Granzymes are serine proteases that are released by cytoplasmic granules of natural killer cells and cytotoxic T-cells. Once released, they enter virus-infected cells to cleave caspases and induce apoptosis. Granzyme C, also known as Cytotoxic cell protease 2, is a 248 amino acid protein that is thought to be involved in the process of target cell lysis in cell-mediated immune responses. It has been suggested that granzyme C attacks nuclear and mitochondrial targets, therefore causing apoptosis in a different manner than granzyme B, which induces classic apoptosis through caspases. In the absence of functional granzyme A or B, Granzyme C can support cytotoxic T lymphocyte-mediated killing by the granule exocytosis pathway.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Gzmc (mouse) mapping to 14 C3.

PROTOCOLS

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

PRODUCT

granzyme C siRNA (m) 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 granzyme C shRNA Plasmid (m): sc-105411-SH and granzyme C shRNA (m) Lentiviral Particles: sc-105411-V as alternate gene silencing products.

For independent verification of granzyme C (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-105411A, sc-105411B and sc-105411C.

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

granzyme C siRNA (m) is recommended for the inhibition of granzyme C expression in mouse 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 granzyme C gene expression knockdown using RT-PCR Primer: granzyme C (m)-PR: sc-105411-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.