SANTA CRUZ BIOTECHNOLOGY, INC.

granzyme G siRNA (m): sc-105414

BACKGROUND

The granzyme family of proteins belong to the larger peptidase S1 family. Granzyme A and granzyme B are serine proteases that facilitate apoptotic signaling in cytotoxic T lymphocytes (CTL) and natural killer (NK) cells. Granzyme H localizes to cytoplasmic granules of CTLs and is important for target cell lysis in cell-mediated immune responses. Granzyme K is a serine protease localizing to the granules of NK cells and CTLs. Granzyme M is a trypsin-fold serine protease that localizes to granules of NK cells and cleaves peptide substrates after leucine, norleucine or methionine. Granzyme D is a tryptase expressed on mature CTLs that cleaves Na-CBZ-L-lysine thiobenzyl ester. Granzyme G, also known as CTL serine protease 1, MCSP-1 or Ctla7, is a serine protease also expressed on mature CTLs. It lies downstream of granzyme C and is up-regulated by IL-5 and IL-2.

REFERENCES

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3. Graham, C.M. and Thomas, D.B. 2004. Differential analysis of CD4+ Th memory clones with identical T-cell receptor (TCR)-alphabeta rearrangement (non-transgenic), but distinct lymphokine phenotype, reveals diverse and novel gene expression. Immunology 113: 194-202.
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5. Salomonis, N., Cotte, N., Zambon, A.C., Pollard, K.S., Vranizan, K., Doniger, S.W., Dolganov, G. and Conklin, B.R. 2005. Identifying genetic networks underlying myometrial transition to labor. Genome Biol. 6: R12.
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CHROMOSOMAL LOCATION

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

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.

PRODUCT

granzyme G 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 G shRNA Plasmid (m): sc-105414-SH and granzyme G shRNA (m) Lentiviral Particles: sc-105414-V as alternate gene silencing products.

For independent verification of granzyme G (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-105414A, sc-105414B and sc-105414C.

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 G siRNA (m) is recommended for the inhibition of granzyme G 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 G gene expression knockdown using RT-PCR Primer: granzyme G (m)-PR: sc-105414-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.