SANTA CRUZ BIOTECHNOLOGY, INC.

granzyme N siRNA (m): sc-105415

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 G is a serine protease expressed on mature CTLs. Granzyme N, also known as GrN or Gzmn, is a 248 amino acid secretory and N-glycosylated protein that is expressed in spermatocytes and spermatids. Existing as two isoforms as a result of alternative splicing events, Granzyme N may be involved in spermatogenesis.

REFERENCES

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3. Takano, N., Matusi, H. and Takahashi, T. 2004. Granzyme N, a novel granzyme, is expressed in spermatocytes and spermatids of the mouse testis. Biol. Reprod. 71: 1785-1795.
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5. Sutton, V.R., Waterhouse, N.J., Browne, K.A., Sedelies, K., Ciccone, A., Anthony, D., Koskinen, A., Mullbacher, A. and Trapani, J.A. 2007. Residual active granzyme B in cathepsin C-null lymphocytes is sufficient for perforin-dependent target cell apoptosis. J. Cell Biol. 176: 425-433.
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CHROMOSOMAL LOCATION

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

PROTOCOLS

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

PRODUCT

granzyme N 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 N shRNA Plasmid (m): sc-105415-SH and granzyme N shRNA (m) Lentiviral Particles: sc-105415-V as alternate gene silencing products.

For independent verification of granzyme N (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-105415A, sc-105415B and sc-105415C.

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 N siRNA (m) is recommended for the inhibition of granzyme N 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 N gene expression knockdown using RT-PCR Primer: granzyme N (m)-PR: sc-105415-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.