

# NKG7 siRNA (h): sc-97253

## BACKGROUND

NKG7 (natural killer cell group 7 protein), also known as GIG1 (G-CSF-induced gene 1 protein) or GMP-17 (granule membrane protein of 17 kDa), is a 165 amino acid multi-pass membrane protein that belongs to the PMP-22/EMP/MP20 family. While expressed in activated T-cells, kidney, liver, lung and pancreas, NKG7 is not expressed in brain, heart or skeletal muscle. NKG7 is expressed at high levels in TCR  $\gamma/\delta$ -expressing CTL clones and in some TCR  $\alpha/\beta$ -expressing CTL clones (both CD4<sup>+</sup> and CD8<sup>+</sup>), however, it is not expressed in other TCR  $\alpha/\beta$ -expressing CTL clones or in B-cells, monocytes or myeloid cells. The gene that encodes NKG7 consists of more than 1,000 bases and maps to human chromosome 19q13.41. Chromosome 19 consists of over 63 million bases, houses approximately 1,400 genes and is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG families, and Fc receptors (FcRs).

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: NKG7 (human) mapping to 19q13.41.

## PRODUCT

NKG7 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NKG7 shRNA Plasmid (h): sc-97253-SH and NKG7 shRNA (h) Lentiviral Particles: sc-97253-V as alternate gene silencing products.

For independent verification of NKG7 (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-97253A, sc-97253B and sc-97253C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

NKG7 siRNA (h) is recommended for the inhibition of NKG7 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  $\mu$ M in 66  $\mu$ l. 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 NKG7 gene expression knockdown using RT-PCR Primer: NKG7 (h)-PR: sc-97253-PR (20  $\mu$ l). 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.