

# C1orf69 siRNA (h): sc-88708

## BACKGROUND

Belonging to the CAF17 subfamily of the gcvT family, C1orf69 is a 356 amino acid mitochondrial protein that is required for normal heme synthesis. Heme synthesis is dependent upon receiving iron through iron sulfur (Fe-S) cluster biogenesis proteins such as C1orf69, which is specifically thought to assemble Fe-S clusters for mitochondrial aconitase and lipoate synthase. In zebrafish, deficiency of C1orf69 causes anemia. The gene encoding C1orf69 maps to human chromosome 1q42.13, the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: IBA57 (human) mapping to 1q42.13.

## PRODUCT

C1orf69 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 C1orf69 shRNA Plasmid (h): sc-88708-SH and C1orf69 shRNA (h) Lentiviral Particles: sc-88708-V as alternate gene silencing products.

For independent verification of C1orf69 (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-88708A, sc-88708B and sc-88708C.

## 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

C1orf69 siRNA (h) is recommended for the inhibition of C1orf69 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 C1orf69 gene expression knockdown using RT-PCR Primer: C1orf69 (h)-PR: sc-88708-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.