SANTA CRUZ BIOTECHNOLOGY, INC.

# CALR3 siRNA (m): sc-141983

## BACKGROUND

Members of the calreticulin (CRT) family are calcium-binding chaperones that are localized to the endoplasmic reticulum or sarcoplasmic reticulum in eukaryotes. Plant CRTs seem to have different properties than their animal counterparts and may be significant during growth and development, as well as biotic and abiotic stress responses. Calreticulin-3, also called CRT2 (calreticulin-2), is a 384 amino acid endoplasmic reticular (ER) protein that contains two calcium binding domains, a P-domain and a C-domain. Calreticulin-3 assists in the calreticulin/calnexin cycle, where it is involved in protein-folding, oligomeric assembly and quality control in the ER. With specific expression in testis, CALR3 has been implicated as a cancer-testis antigen due to its frequent expression in various cancers.

## REFERENCES


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4. Persson, S., et al. 2002. Identification of a novel calreticulin isoform (Crt2) in human and mouse. Gene 297: 151-158.
5. Persson, S., et al. 2003. Phylogenetic analyses and expression studies reveal two distinct groups of calreticulin isoforms in higher plants. Plant Physiol. 133: 1385-1396.
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8. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611414. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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## CHROMOSOMAL LOCATION

Genetic locus: Calr3 (mouse) mapping to 8 B3.3.

## PRODUCT

CALR3 siRNA (m) is a target-specific 19-25 nt siRNA 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 CALR3 shRNA Plasmid (m): sc-141983-SH and CALR3 shRNA (m) Lentiviral Particles: sc-141983-V as alternate gene silencing products.

## 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

CALR3 siRNA (m) is recommended for the inhibition of CALR3 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 CALR3 gene expression knockdown using RT-PCR Primer: CALR3 (m)-PR: sc-141983-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.

## PROTOCOLS

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