SANTA CRUZ BIOTECHNOLOGY, INC.

# RNF13 siRNA (h): sc-78079

## BACKGROUND

The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in the ubiquitination pathway of protein degradation. RNF13 (ring finger protein 13), also known as RZF, FLJ93817 or MGC13689, is a novel 381 amino acid E3 ubiquitin ligase that localizes to the nucleus. RNF13 contains one RING-type zinc finger and the C-terminal portion of RNF13 has the ability to mediate ubiquitination. Recent studies suggest that RNF13 may be involved in the development of pancreatic cancer via ubiquitin-mediated modification of proteins. The gene encoding RNF13 maps to human chromsome 3q25.1, and a pseudogene (which is also located on chromosome 3), exists for this gene.

## REFERENCES


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2. Tranque, P., et al. 1996. Identification and characterization of a RING zinc finger gene (C-RZF) expressed in chicken embryo cells. Proc. Natl. Acad. Sci. USA 93: 3105-3109.
3. Lorick, K.L., et al. 1999. RING fingers mediate ubiquitin-conjugating enzyme E2-dependent ubiquitination. Proc. Natl. Acad. Sci. USA 96: 11364-11369.
4. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609247. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Wesselkamper, S.C., et al. 2006. The role of metallothionein in the pathogenesis of acute lung injury. Am. J. Respir. Cell Mol. Biol. 34: 73-82.
6. Zhang, Q., et al. 2009. RNF13: a novel RING-type ubiquitin ligase overexpressed in pancreatic cancer. Cell Res. 19: 348-357.
7. Bocock, J.P., et al. 2009. The PA-TM-RING protein RING finger protein 13 is an endosomal integral membrane E3 ubiquitin ligase whose RING finger domain is released to the cytoplasm by proteolysis. FEBS J. 276: 1860-1877.


## CHROMOSOMAL LOCATION

Genetic locus: RNF13 (human) mapping to 3q25.1.

## PRODUCT

RNF13 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RNF13 shRNA Plasmid (h): sc-78079-SH and RNF13 shRNA (h) Lentiviral Particles: sc-78079-V as alternate gene silencing products.

For independent verification of RNF13 (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-78079A, sc-78079B and sc-78079C.

## 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

RNF13 siRNA (h) is recommended for the inhibition of RNF13 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 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 RNF13 gene expression knockdown using RT-PCR Primer: RNF13 (h)-PR: sc-78079-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.