

RNF38 siRNA (h): sc-92932

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. RNF38 (RING finger protein 38) is a 515 amino acid protein that contains one RING-type zinc finger through which it may play a role in transcriptional regulation and protein degradation events. Defects in the gene encoding RNF38 are associated with a variety of disorders, including acromesomelic dysplasia (AMDM), arthrogryposis distal multiplex congenita type 1 (AMCD1) and autosomal recessive ataxic cerebral palsy (ACP), as well as various malignancies. Two isoforms of RNF38 are expressed due to alternative splicing events.

REFERENCES

1. Borden, K.L. and Freemont, P.S. 1996. The RING finger domain: a recent example of a sequence-structure family. *Curr. Opin. Struct. Biol.* 6: 395-401.
2. Lorick, K.L., et al. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. *Proc. Natl. Acad. Sci. USA* 96: 11364-11369.
3. Eisenberg, I., et al. 2002. Cloning and characterization of a novel human gene RNF38 encoding a conserved putative protein with a RING finger domain. *Biochem. Biophys. Res. Commun.* 294: 1169-1176.
4. Colland, F., et al. 2004. Functional proteomics mapping of a human signaling pathway. *Genome Res.* 14: 1324-1332.

CHROMOSOMAL LOCATION

Genetic locus: RNF38 (human) mapping to 9p13.2.

PRODUCT

RNF38 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RNF38 shRNA Plasmid (h): sc-92932-SH and RNF38 shRNA (h) Lentiviral Particles: sc-92932-V as alternate gene silencing products.

For independent verification of RNF38 (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-92932A, sc-92932B and sc-92932C.

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

APPLICATIONS

RNF38 siRNA (h) is recommended for the inhibition of RNF38 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 μ M in 66 μ 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.

GENE EXPRESSION MONITORING

RNF38 (E-7): sc-515213 is recommended as a control antibody for monitoring of RNF38 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor RNF38 gene expression knockdown using RT-PCR Primer: RNF38 (h)-PR: sc-92932-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zhang, J., et al. 2018. RING finger protein 38 induces gastric cancer cell growth by decreasing the stability of the protein tyrosine phosphatase SHP-1. *FEBS Lett.* 592: 3092-3100.

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.