SANTA CRUZ BIOTECHNOLOGY, INC.

RNF138 siRNA (h): sc-75876

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. RNF138 (RING finger protein 138), also known as HSD4 or NARF, is a 245 amino acid protein that contains one RING-type zinc finger and functions as an E3 ubiquitin-protein ligase, playing an important role in protein ubiquitination. Expressed as multiple alternatively spliced isoforms, RNF138 interacts with Nlk and is thought to act as a negative regulator of the Wnt/β-catenin-mediated signaling pathway. RNF138 may be auto-ubiquitinated and is subject to post-translational phosphorylation, probably by ATM or ATR.

REFERENCES

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3. Saurin, A.J., et al. 1996. Does this have a familiar RING? Trends Biochem. Sci. 21: 208-214.
4. Lorick, K.L., et al. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. Proc. Natl. Acad. Sci. USA 96: 11364-11369.
5. Andersen, K.M., et al. 2005. Ubiquitin-binding proteins: similar, but different. Essays Biochem. 41: 49-67.
6. Hurley, J.H., et al. 2006. Ubiquitin-binding domains. Biochem. J. 399: 361-372.
7. Yamada, M., et al. 2006. NARF, an nemo-like kinase (NLK)-associated ring finger protein regulates the ubiquitylation and degradation of T cell factor/lymphoid enhancer factor (TCF/LEF). J. Biol. Chem. 281: 20749-20760.

CHROMOSOMAL LOCATION

Genetic locus: RNF138 (human) mapping to 18q12.1.

PRODUCT

RNF138 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 RNF138 shRNA Plasmid (h): sc-75876-SH and RNF138 shRNA (h) Lentiviral Particles: sc-75876-V as alternate gene silencing products.

For independent verification of RNF138 (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-75876A, sc-75876B and sc-75876C.

PROTOCOLS

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

RNF138 siRNA (h) is recommended for the inhibition of RNF138 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 RNF138 gene expression knockdown using RT-PCR Primer: RNF138 (h)-PR: sc-75876-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.