SANTA CRUZ BIOTECHNOLOGY, INC.

RNF184 siRNA (h): sc-78467

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. RNF184 (male-specific lethal 2 homolog), or male-specific lethal 2-like 1, RING finger protein 184, male-specific lethal-2 homolog 1, MSL-2, MSL2, MSL2L1, KIAA1585, FLJ54913 or FLJ10546 is a member of the MSL2 family and contains 577 amino acids. RNF184 associates with MSL-1, MSL3L1 and MOF, to form a multisubunit histone acetyltransferase complex, which functions to assist in higher-order chromatin structure via acetylation of Histone H4 on lysine 16. RNF184 contains one RING-type zinc finger, and the gene encoding RNF184 maps to human chromosome 3q22.3.

REFERENCES

1. Zhou, S., et al. 1995. Male-specific lethal 2, a dosage compensation gene of *Drosophila,* undergoes sex-specific regulation and encodes a protein with a RING finger and a metallothionein-like cysteine cluster. EMBO J. 14: 2884-2895.
2. 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.
3. Lyman, L.M., et al. 1997. *Drosophila* male-specific lethal-2 protein: structure/function analysis and dependence on MSL-1 for chromosome association. Genetics 147: 1743-1753.
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. Marín, I. 2003. Evolution of chromatin-remodeling complexes: comparative genomics reveals the ancient origin of "novel" compensasome genes. J. Mol. Evol. 56: 527-539.
6. Smith, E.R., et al. 2005. A human protein complex homologous to the *Drosophila* MSL complex is responsible for the majority of Histone H4 acetylation at lysine 16. Mol. Cell. Biol. 25: 9175-9188.

CHROMOSOMAL LOCATION

Genetic locus: MSL2 (human) mapping to 3q22.3.

PRODUCT

RNF184 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 RNF184 shRNA Plasmid (h): sc-78467-SH and RNF184 shRNA (h) Lentiviral Particles: sc-78467-V as alternate gene silencing products.

For independent verification of RNF184 (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-78467A, sc-78467B and sc-78467C.

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

RNF184 siRNA (h) is recommended for the inhibition of RNF184 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 RNF184 gene expression knockdown using RT-PCR Primer: RNF184 (h)-PR: sc-78467-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.