SANTA CRUZ BIOTECHNOLOGY, INC.

RASSF8 siRNA (m): sc-76358

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The Power to Question

BACKGROUND

RASSF8 (ras association (RalGDS/AF-6 or RA) domain (N-terminal) family member 8), also known as HoJ-1 (carcinoma-associated protein HoJ-1), is an evolutionarily conserved member of the N-terminal RASSF family which is also comprised of RASSF7, PAMCI (or RASSF9) and RASSF10. RASSF8 contains an N-terminal RA domain and is believed to participate in the Ras signaling pathway. A reciprocal chromosomal translocation involving the genes encoding RASSF8 and Fibulin-1 is associated with a complex form of synpolydactyly, a condition in which there are typically more than five digits on a hand or foot and patients exhibit webbing or fusion of fingers and toes. In addition, RASSF8 is capable of acting as a tumor suppressor in lung cancer, as is suggested by the ectopic expression of RASSF8 inhibiting anchorage-independent growth. This implies that the loss of functional RASSF8 may be implicated in the development of lung cancer.

REFERENCES

1. Debeer, P., et al. 2002. The fibulin-1 gene (FBLN1) is disrupted in a t(12;22) associated with a complex type of synpolydactyly. J. Med. Genet. 39: 98-104.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608180. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Falvella, F.S., et al. 2006. Identification of RASSF8 as a candidate lung tumor suppressor gene. Oncogene 25: 3934-3938.
4. Falvella, F.S., et al. 2007. Common polymorphisms in D12S1034 flanking genes RASSF8 and BHLHB3 are not associated with lung adenocarcinoma risk. Lung Cancer 56: 1-7.
5. Sherwood, V., et al. 2008. RASSF7 is a member of a new family of RAS association domain-containing proteins and is required for completing mitosis. Mol. Biol. Cell 19: 1772-1782.

CHROMOSOMAL LOCATION

Genetic locus: Rassf8 (mouse) mapping to 6 G3.

PRODUCT

RASSF8 siRNA (m) 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 RASSF8 shRNA Plasmid (m): sc-76358-SH and RASSF8 shRNA (m) Lentiviral Particles: sc-76358-V as alternate gene silencing products.

For independent verification of RASSF8 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-76358A, sc-76358B and sc-76358C.

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

RASSF8 siRNA (m) is recommended for the inhibition of RASSF8 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.

GENE EXPRESSION MONITORING

RASSF8 (4B1): sc-81934 is recommended as a control antibody for monitoring of RASSF8 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 RASSF8 gene expression knockdown using RT-PCR Primer: RASSF8 (m)-PR: sc-76358-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.