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Lieferung & Zahlungsart

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- Mindermengenzuschlag
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- Gefahrgutzuschlag
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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

RSRC2 siRNA (m): sc-153161

BACKGROUND

Esophageal squamous cell carcinoma (ESCC) is cancer of the flat cells lining the esophagus, and is currently the ninth most frequent cancer in the world. While environmental risk factors, such as alcohol drinking and cigarette smoking, increase chances of ESCC, several genes are believed to be involved in the origin and/or progression of ESCC. The proteins encoded by these genes include p53, DCC, DEC1, DLEC1, RSRC2, p16 and TGFβ RII. RSRC2 (arginine/serine-rich coiled-coil protein 2) is a 434 amino acid protein that is believed to function as a transcription factor involved in cell proliferation. Expressed ubiquitously and localized to the nucleus, RSRC2 may serve as a tumor suppressor of esophageal cancer. Overexpression of RSRC2 in an ESCC cell line inhibits cell proliferation, while the loss of RSRC2 is associated with tumor progression. This suggests that RSRC2 is a potential target for esophageal cancer therapy. RSRC2 is expressed as two isoforms produced by alternative splicing.

REFERENCES

1. Jiang, W., et al. 1992. Amplification and expression of the human cyclin D gene in esophageal cancer. Cancer Res. 52: 2980-2983.
2. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. Cell 125: 801-814.
3. Kurehara, H., et al. 2007. A novel gene, RSRC2, inhibits cell proliferation and affects survival in esophageal cancer patients. Int. J. Oncol. 30: 421-428.
4. Hoshino, I., et al. 2008. Role of histone deacetylase inhibitor in adenovirus-mediated p53 gene therapy in esophageal cancer. Anticancer Res. 28: 665-671.
5. Cummings, L.C. and Cooper, G.S. 2008. Descriptive epidemiology of esophageal carcinoma in the Ohio Cancer Registry. Cancer Detect. Prev. 32: 87-92.
6. Lyronis, I.D., et al. 2008. K-ras mutation, HPV infection and smoking or alcohol abuse positively correlate with esophageal squamous carcinoma. Pathol. Oncol. Res. 14: 267-273.

CHROMOSOMAL LOCATION

Genetic locus: Rsrc2 (mouse) mapping to 5 F.

PRODUCT

RSRC2 siRNA (m) is a pool of 2 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 RSRC2 shRNA Plasmid (m): sc-153161-SH and RSRC2 shRNA (m) Lentiviral Particles: sc-153161-V as alternate gene silencing products.

For independent verification of RSRC2 (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-153161A and sc-153161B.

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

RSRC2 siRNA (m) is recommended for the inhibition of RSRC2 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

RSRC2 (D-3): sc-515073 is recommended as a control antibody for monitoring of RSRC2 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 RSRC2 gene expression knockdown using RT-PCR Primer: RSRC2 (m)-PR: sc-153161-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.