SANTA CRUZ BIOTECHNOLOGY, INC.

S-100A2 siRNA (m): sc-144017

BACKGROUND

S-100A2 (S100L), first isolated from bovine lung, belongs to a large family of calcium binding proteins known as S-100 proteins. S-100A2 is expressed in the basal layer of the epidermis and hair follicles of normal skin. S-100A2 associates with tropomyosin in a calcium-dependent manner. In breast cancer, S-100A2 expression is lost during the development of malignant cells. S-100A2 may play a tumor-suppressor role in certain epithelial tissues by intefering with cell migration. S-100A2 exerts an inhibitory influence on cell motility of head and neck squamous cell carnicomas *in vitro*. Neoplastic gastric epithelial cells express S-100A2 as well as S-100A7, S-100A8, S-100A9 and S-100A10 in greater abundance than normal gastric cells.

REFERENCES

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3. Gimona, M., Lando, Z., Dolginov, Y., Vandekerckhove, J., Kobayashi, R., Sobieszek, A. and Helfman, D.M. 1997. Ca^{2+}-dependent interaction of S-100A2 with muscle and nonmuscle tropomyosins. J. Cell Sci. 110: 611-621.
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5. Nagy, N., Brenner, C., Markadieu, N., Chaboteaux, C., Camby, I., Schafer, B.W., Pochet, R., Heizmann, C.W., Salmon, I., Kiss, R. and Decaestecker, C. 2001. S-100A2, a putative tumor suppressor gene, regulates *in vitro* squamous cell carcinoma migration. Lab. Invest. 81: 599-612.
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CHROMOSOMAL LOCATION

Genetic locus: S100a2 (mouse) mapping to 3 F1.

PRODUCT

S-100A2 siRNA (m) is a target-specific 19-25 nt siRNA 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 S-100A2 shRNA Plasmid (m): sc-144017-SH and S-100A2 shRNA (m) Lentiviral Particles: sc-144017-V as alternate gene silencing products.

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

S-100A2 siRNA (m) is recommended for the inhibition of S-100A2 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

S-100A2 (SH-L1): sc-58844 is recommended as a control antibody for monitoring of S-100A2 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor S-100A2 gene expression knockdown using RT-PCR Primer: S-100A2 (m)-PR: sc-144017-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.