SANTA CRUZ BIOTECHNOLOGY, INC.

SMAGP siRNA (h): sc-96147

BACKGROUND

SMAGP (small transmembrane and glycosylated protein) is a 97 amino acid single-pass type III membrane protein that localizes to the membrane of cytoplasmic vesicles. Existing as a murine-specific protein, SMAGP is thought to play a role in epithelial cell-cell contacts and, via its ability to control cell adhesion, may be involved in tumor formation, as well as overall tumor invasiveness and metastasis. SMAGP is subject to post-translational O-glycosylation which is thought to be modified with sialic acid residues. The gene encoding SMAGP maps to murine chromosome 15.

REFERENCES

1. Ferrantini, M., Benedetto, A., Elia, G., Amici, C. and Belardelli, F. 1988. Membrane changes during tumor progression. Host control of metastatic spread. Ann. Ist. Super. Sanita 24: 159-170.
2. Ponta, H., Sleeman, J. and Herrlich, P. 1994. Tumor metastasis formation: cell-surface proteins confer metastasis-promoting or -suppressing properties. Biochim. Biophys. Acta 1198: 1-10.
3. Tarbe, N.G., Rio, M.C. and Weidle, U.H. 2004. SMAGP, a new small *trans*-membrane glycoprotein altered in cancer. Oncogene 23: 3395-3403.
4. Tarbe, N.G., Rio, M.C., Hummel, S., Weidle, U.H. and Zöller, M. 2005. Overexpression of the small transmembrane and glycosylated protein SMAGP supports metastasis formation of a rat pancreatic adenocarcinoma line. Int. J. Cancer 117: 913-922.
5. Stafford, L.J., Vaidya, K.S. and Welch, D.R. 2008. Metastasis suppressors genes in cancer. Int. J. Biochem. Cell Biol. 40: 874-891.

CHROMOSOMAL LOCATION

Genetic locus: SMAGP (human) mapping to 12q13.13.

PRODUCT

SMAGP 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 SMAGP shRNA Plasmid (h): sc-96147-SH and SMAGP shRNA (h) Lentiviral Particles: sc-96147-V as alternate gene silencing products.

For independent verification of SMAGP (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-96147A, sc-96147B and sc-96147C.

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

SMAGP siRNA (h) is recommended for the inhibition of SMAGP 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 SMAGP gene expression knockdown using RT-PCR Primer: SMAGP (h)-PR: sc-96147-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.