SANTA CRUZ BIOTECHNOLOGY, INC.

FAM84A siRNA (m): sc-75959

BACKGROUND

FAM84A (family with sequence similarity 84, member A), also known as NSE1 (neurologic sensory protein 1), is a 292 amino acid protein that belongs to the FAM84 family of proteins. Predominantly expressed in testis, FAM84A shares 44% amino acid identity with the related protein FAM84B. FAM84A localizes to a subcellular membrane region where there is no contact between neighboring cells and is believed to play a role in cell morphology and motility. More specifically, the expression of FAM84A increases cell motility. Two FAM84A isoforms are expressed due to alternative splicing events. Isoform 2 can be phosphorylated on various serine residues and this phosphorylation is associated with cellular morphology. FAM84A is upregulated in colorectal cancer, lung cancer, pancreatic cancer, cholangiocarcinoma and bladder cancer tissues. Via its ability to increase cell motility, FAM84A may contribute to the invasion and metastasis of cancer cells.

REFERENCES

1. Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc. Natl. Acad. Sci. USA 99: 16899-16903.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611234. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Kobayashi, T., Masaki, T., Sugiyama, M., Atomi, Y., Furukawa, Y. and Nakamura, Y. 2006. A gene encoding a family with sequence similarity 84, member A (FAM84A) enhanced migration of human colon cancer cells. Int. J. Oncol. 29: 341-347.
4. Pebernard, S., Perry, J.J., Tainer, J.A. and Boddy, M.N. 2008. Nse1 RING-like domain supports functions of the Smc5-Smc6 holocomplex in genome stability. Mol. Biol. Cell 19: 4099-4109.
5. Gouyer, V., Fontaine, D., Dumont, P., de Wever, O., Fontayne-Devaud, H., Leteurtre, E., Truant, S., Delacour, D., Drobecq, H., Kerckaert, J.P., de Launoit, Y., Bracke, M., Gespach, C., Desseyn, J.L. and Huet, G. 2008. Autocrine induction of invasion and metastasis by tumor-associated trypsin inhibitor in human colon cancer cells. Oncogene 27: 4024-4033.

CHROMOSOMAL LOCATION

Genetic locus: Fam84a (mouse) mapping to 12 A1.1.

PRODUCT

FAM84A 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 FAM84A shRNA Plasmid (m): sc-75959-SH and FAM84A shRNA (m) Lentiviral Particles: sc-75959-V as alternate gene silencing products.

For independent verification of FAM84A (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-75959A, sc-75959B and sc-75959C.

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

FAM84A siRNA (m) is recommended for the inhibition of FAM84A 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FAM84A gene expression knockdown using RT-PCR Primer: FAM84A (m)-PR: sc-75959-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.