



SEZ6 siRNA (h): sc-94072

BACKGROUND

SEZ6 (seizure related 6) is a 994 amino acid single-pass type I membrane protein that plays a role in cell-to-cell recognition and neuronal membrane signaling. Existing as four alternatively spliced isoforms, SEZ6 contains two CUB domains and five sushi (CCP/SCR) domains, and is involved in the development of excitatory synaptic connectivity. SEZ6 is encoded by a gene that maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Hall, J.M., Friedman, L., Guenther, C., Lee, M.K., Weber, J.L., Black, D.M. and King, M.C. 1992. Closing in on a breast cancer gene on chromosome 17q. *Am. J. Hum. Genet.* 50: 1235-1242.
2. Evans, S.C. and Lozano, G. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. *Mol. Med. Today* 3: 390-395.
3. Kersemaekers, A.M., Hermans, J., Fleuren, G.J. and van de Vijver, M.J. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. *Br. J. Cancer* 77: 192-200.
4. Soussi, T., Dehouche, K. and Beroud, C. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. *Hum. Mutat.* 15: 105-113.
5. Piura, B., Rabinovich, A. and Yanai-Inbar, I. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 97: 241-244.
6. Wang, Y., Du, D., Fang, L., Yang, G., Zhang, C., Zeng, R., Ullrich, A., Lottspeich, F. and Chen, Z. 2006. Tyrosine phosphorylated Par3 regulates epithelial tight junction assembly promoted by EGFR signaling. *EMBO J.* 25: 5058-5070.
7. Yu, Z.L., Jiang, J.M., Wu, D.H., Xie, H.J., Jiang, J.J., Zhou, L., Peng, L. and Bao, G.S. 2007. Febrile seizures are associated with mutation of seizure-related SEZ6, a brain-specific gene. *J. Neurosci. Res.* 85: 166-172.

CHROMOSOMAL LOCATION

Genetic locus: SEZ6 (human) mapping to 17q11.2.

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.

PRODUCT

SEZ6 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SEZ6 shRNA Plasmid (h): sc-94072-SH and SEZ6 shRNA (h) Lentiviral Particles: sc-94072-V as alternate gene silencing products.

For independent verification of SEZ6 (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-94072A, sc-94072B and sc-94072C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SEZ6 siRNA (h) is recommended for the inhibition of SEZ6 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 μ M in 66 μ l. 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 SEZ6 gene expression knockdown using RT-PCR Primer: SEZ6 (h)-PR: sc-94072-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.