SANTA CRUZ BIOTECHNOLOGY, INC.

Embigin siRNA (h): sc-91726

BACKGROUND

Embigin, also known as Emb or teratocarcinoma glycoprotein Gp-70 (Gp70), is a 327 amino acid single-pass type I membrane protein belonging to the immunoglobulin superfamily (IgSF) class of cell adhesion molecules. Embigin is involved in cell growth and development by regulating interactions between cells and extracellular matrix, and plays a role in maintaining homeostasis of normal adult tissues. Found in various adult tissues including brain, heart, liver, and lung, Embigin is also expressed during regression of prostate and mammary gland. Embigin is involved in the modulation of neuromuscular junction formation and plasticity, and is encoded by a gene mapping to human chromosome 5q11.1. An Embigin pseudogene exists on chromosome 1.

REFERENCES

1. Ozawa, M., et al. 1988. A teratocarcinoma glycoprotein carrying a developmentally regulated carbohydrate marker is a member of the immunoglobulin gene superfamily. J. Biol. Chem. 263: 3059-3062.
2. Huang, R.P., et al. 1993. Embigin, a member of the immunoglobulin superfamily expressed in embryonic cells, enhances cell-substratum adhesion. Dev. Biol. 155: 307-314.
3. Ray, M.E., et al. 1996. Isolation and characterization of genes associated with chromosome-6 mediated tumor suppression in human malignant melanoma. Oncogene 12: 2527-2533.
4. Guenette, R.S., et al. 1997. Embigin, a developmentally expressed member of the immunoglobulin super family, is also expressed during regression of prostate and mammary gland. Dev. Genet. 21: 268-278.
5. Fan, Q.W., et al. 1998. Embigin/basigin subgroup of the immunoglobulin superfamily: different modes of expression during mouse embryogenesis and correlated expression with carbohydrate antigenic markers. Dev. Growth Differ. 40: 277-286.
6. Tachikui, H., et al. 1999. Genomic organization and promoter activity of embigin, a member of the immunoglobulin superfamily. Gene 240: 325-332.
7. Lain, E., et al. 2009. A novel role for embigin to promote sprouting of motor nerve terminals at the neuromuscular junction. J. Biol. Chem. 284: 8930-8939.

CHROMOSOMAL LOCATION

Genetic locus: EMB (human) mapping to 5q11.1.

PRODUCT

Embigin 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 Embigin shRNA Plasmid (h): sc-91726-SH and Embigin shRNA (h) Lentiviral Particles: sc-91726-V as alternate gene silencing products.

For independent verification of Embigin (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-91726A, sc-91726B and sc-91726C.

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

Embigin siRNA (h) is recommended for the inhibition of Embigin 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 Embigin gene expression knockdown using RT-PCR Primer: Embigin (h)-PR: sc-91726-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.