SANTA CRUZ BIOTECHNOLOGY, INC.

HepaCAM siRNA (m): sc-145940

BACKGROUND

HepaCAM (Hepatocyte cell adhesion molecule), also known as GlialCAM, is a 416 amino acid single-pass type I membrane protein that contains one Ig-like C2-type domain and one Ig-like V-type domain. Localized to the cytoplasmic side of the membrane, HepaCAM exists as a homodimer that is involved in regulating both cell-matrix interactions and cell motility. Additionally, HepaCAM is thought to suppress cellular proliferation, suggesting involvement in cell growth inhibition and tumor suppression, specifically with regard to hepatocellular carcinoma. Deletion of the cytoplasmic domain of HepaCAM results in diminished cell-matrix adhesion, implying that the cytoplasmic domain is a crucial component of HepaCAM function. Two isoforms of HepaCAM exist due to alternative splicing events.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611642. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Moh, M.C., Lee, L.H., Yang, X. and Shen, S. 2003. HEPN1, a novel gene that is frequently down-regulated in hepatocellular carcinoma, suppresses cell growth and induces apoptosis in Hep G2 cells. J. Hepatol. 39: 580-586.
3. Moh, M.C., Zhang, C., Luo, C., Lee, L.H. and Shen, S. 2005. Structural and functional analyses of a novel ig-like cell adhesion molecule, HepaCAM, in the human breast carcinoma MCF7 cells. J. Biol. Chem. 280: 27366-27374.
4. Chung Moh, M., Hoon Lee, L. and Shen, S. 2005. Cloning and characterization of HepaCAM, a novel Ig-like cell adhesion molecule suppressed in human hepatocellular carcinoma. J. Hepatol. 42: 833-841.
5. Moh, M.C., Zhang, T., Lee, L.H. and Shen, S. 2008. Expression of HepaCAM is downregulated in cancers and induces senescence-like growth arrest via a p53/p21-dependent pathway in human breast cancer cells. Carcinogenesis 29: 2298-2305.
6. Favre-Kontula, L., Rolland, A., Bernasconi, L., Karmirantzou, M., Power, C., Antonsson, B. and Boschert, U. 2008. GlialCAM, an immunoglobulin-like cell adhesion molecule is expressed in glial cells of the central nervous system. Glia 56: 633-645.
7. Gaudry, J.P., Arod, C., Sauvage, C., Busso, S., Dupraz, P., Pankiewicz, R. and Antonsson, B. 2008. Purification of the extracellular domain of the membrane protein GlialCAM expressed in HEK and CHO cells and comparison of the glycosylation. Protein Expr. Purif. 58: 94-102.

CHROMOSOMAL LOCATION

Genetic locus: Hepacam (mouse) mapping to 9 A4.

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

HepaCAM 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 HepaCAM shRNA Plasmid (m): sc-145940-SH and HepaCAM shRNA (m) Lentiviral Particles: sc-145940-V as alternate gene silencing products.

For independent verification of HepaCAM (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-145940A, sc-145940B and sc-145940C.

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

HepaCAM siRNA (m) is recommended for the inhibition of HepaCAM 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 HepaCAM gene expression knockdown using RT-PCR Primer: HepaCAM (m)-PR: sc-145940-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.