SANTA CRUZ BIOTECHNOLOGY, INC.

STOML2 siRNA (h): sc-76593

BACKGROUND

Stomatin-like protein 2 (STOML2), SLP-2 or EPB72-like 2, is a 356 amino acid member of the mec-2 family of proteins. Expressed ubiquitously at low levels, STOML2 is highly expressed in heart, liver and pancreas. STOML2 is localized to the cytoplasm with some distribution on the membrane. STOML2 was first identified as an overexpressed protein in human endometrial adenocarcinoma. Changes in cell growth in samples with different levels of STOML2 indicate that STOML2 could play a role in endometrial tumorigenesis. STOML2 is also thought to play a role in regulating ion channel conductances or the organization of sphingolipid and cholesterol-rich lipid rafts.

REFERENCES

1. Wang, Y., et al. 2000. Identification and characterization of human SLP-2, a novel homologue of stomatin (band 7.2b) present in erythrocytes and other tissues. J. Biol. Chem. 275: 8062-8071.
2. Owczarek, C.M., et al. 2001. A novel member of the STOMATIN/EPB72/mec-2 family, stomatin-like 2 (STOML2), is ubiquitously expressed and localizes to HSA chromosome 9p13.1. Cytogenet. Cell Genet. 92: 196-203.
3. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 608292. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Zhang, L.Y., et al. 2005. Effect of stomatin-like protein 2 (SLP-2) gene on growth and proliferation of esophageal squamous carcinoma cell line TE12. Ai Zheng 24: 155-159.
5. Zhang, L., et al. 2006. Stomatin-like protein 2 is overexpressed in cancer and involved in regulating cell growth and cell adhesion in human esophageal squamous cell carcinoma. Clin. Cancer Res. 12: 1639-1646.
6. John, J.P., et al. 2006. Mass spectrometrical verification of stomatin-like protein 2 (SLP-2) primary structure. Proteins 64: 543-551.
7. Cao, W.F., et al. 2007. Prognostic significance of stomatin-like protein 2 overexpression in laryngeal squamous cell carcinoma: clinical, histologic, and immunohistochemistry analyses with tissue microarray. Hum. Pathol. 38: 747-752.

CHROMOSOMAL LOCATION

Genetic locus: STOML2 (human) mapping to 9p13.3.

PRODUCT

STOML2 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 STOML2 shRNA Plasmid (h): sc-76593-SH and STOML2 shRNA (h) Lentiviral Particles: sc-76593-V as alternate gene silencing products.

For independent verification of STOML2 (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-76593A, sc-76593B and sc-76593C.

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

STOML2 siRNA (h) is recommended for the inhibition of STOML2 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.

GENE EXPRESSION MONITORING

STOML2 (C-3): sc-376165 is recommended as a control antibody for monitoring of STOML2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor STOML2 gene expression knockdown using RT-PCR Primer: STOML2 (h)-PR: sc-76593-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.