SANTA CRUZ BIOTECHNOLOGY, INC.

Stomatin siRNA (m): sc-61621

BACKGROUND

Stomatin is an integral membrane protein found in lipid/protein-rich microdomains of almost all human tissues. It was named after the rare human disease haemolytic anaemia hereditary stomatocytosis. Stomatin is implicated in signal transduction and cell communication, and it may regulate cation movement through ion channels and transporters. Absence of Stomatin may cause Na^+ and K^+ ions to leak into and from erythrocytes. A second function of Stomatin may be to act as a cytoskeletal anchor. Stomatin is a major lipid-raft component of erythrocytes and epithelial cells, and is also an abundant platelet protein. It contains a single hydrophobic domain, close to the N-terminus, and a phosphorylation site.

REFERENCES

1. Stewart, G.W. 1997. Stomatin. Int. J. Biochem. Cell Biol. 29: 271-274.
2. Snyers, L., et al. 1999. Association of Stomatin with lipid-protein complexes in the plasma membrane and the endocytic compartment. Eur. J. Cell Biol. 78: 802-812.
3. Salzer, U. and Prohaska, R. 2001. Stomatin, Flotillin-1 and Flotillin-2 are major integral proteins of erythrocyte lipid rafts. Blood 97: 1141-1143.
4. Mairhofer, M., et al. 2002. Stomatin is a major lipid-raft component of platelet α granules. Blood 100: 897-904.
5. Umlauf, E., et al. 2004. Association of Stomatin with lipid bodies. J. Biol. Chem. 279: 23699-23709.
6. Price, M.P., et al. 2004. Stomatin modulates gating of acid-sensing ion channels. J. Biol. Chem. 279: 53886-53891.
7. Yu, T.T., et al. 2005. Differentially expressed transcripts from phenotypically identified olfactory sensory neurons. J. Comp. Neurol. 483: 251-262.
8. Umlauf, E., et al. 2006. Characterization of the Stomatin domain involved in homo-oligomerization and lipid raft association. J. Biol. Chem. 281: 23349-23356.

CHROMOSOMAL LOCATION

Genetic locus: Stom (mouse) mapping to 2 B.

PRODUCT

Stomatin 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 Stomatin shRNA Plasmid (m): sc-61621-SH and Stomatin shRNA (m) Lentiviral Particles: sc-61621-V as alternate gene silencing products.

For independent verification of Stomatin (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-61621A, sc-61621B and sc-61621C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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

Stomatin siRNA (m) is recommended for the inhibition of Stomatin 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 Stomatin gene expression knockdown using RT-PCR Primer: Stomatin (m)-PR: sc-61621-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zhan, H., et al. 2012. Stomatin inhibits pannexin-1-mediated whole-cell currents by interacting with its carboxyl terminal. PLoS ONE 7: e39489.

RESEARCH USE

For research use only, not for use in diagnostic procedures.