SANTA CRUZ BIOTECHNOLOGY, INC.

SLC37A2 siRNA (m): sc-153547

BACKGROUND

SLC37A2 (solute carrier family 37 (glycerol-3-phosphate transporter), member 2) is a 501 amino acid multi-pass membrane protein belonging to the major facilitator superfamily and SLC37A family (also known as SLC37A sugar transporter family). Members of the SLC37A family (including SLC37A1, SLC37A3 and SLC37A4) function as transmembrane sugar transporters. SLC37A2 is up-regulated by cAMP in macrophages and may play a role in the metabolism of macrophages present in white adipose tissue (WAT) during obesity. Localizing to membrane, SLC37A2 is highly expressed in bone marrow derived macrophages, with weak expression in spleen, and exists as two alternatively spliced isoforms.

REFERENCES

1. Bartoloni, L., et al. 2004. The human sugar-phosphate/phosphate exchanger family SLC37. Pflugers Arch. 447: 780-783.
2. Yue, Y., et al. 2005. *De novo* t(7;10)(q33;q23) translocation and closely juxtaposed microdeletion in a patient with macrocephaly and developmental delay. Hum. Genet. 117: 1-8.
3. Shen, G., et al. 2005. Comparison of (-)-epigallocatechin-3-gallate elicited liver and small intestine gene expression profiles between C57BL/6J mice and C57BL/6J/Nrf2$^{-/-}$ mice. Pharm. Res. 22: 1805-1820.
4. Shen, G., et al. 2006. Modulation of nuclear factor E2-related factor 2-mediated gene expression in mice liver and small intestine by cancer chemopreventive agent curcumin. Mol. Cancer Ther. 5: 39-51.
5. Kim, J.Y., et al. 2007. The major facilitator superfamily member Slc37a2 is a novel macrophage-specific gene selectively expressed in obese white adipose tissue. Am. J. Physiol. Endocrinol. Metab. 293: E110-E120.

CHROMOSOMAL LOCATION

Genetic locus: Slc37a2 (mouse) mapping to 9 A4.

PRODUCT

SLC37A2 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 SLC37A2 shRNA Plasmid (m): sc-153547-SH and SLC37A2 shRNA (m) Lentiviral Particles: sc-153547-V as alternate gene silencing products.

For independent verification of SLC37A2 (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-153547A, sc-153547B and sc-153547C.

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.

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

SLC37A2 siRNA (m) is recommended for the inhibition of SLC37A2 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 SLC37A2 gene expression knockdown using RT-PCR Primer: SLC37A2 (m)-PR: sc-153547-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.