SANTA CRUZ BIOTECHNOLOGY, INC.

Glt28d2 siRNA (m): sc-145435

BACKGROUND

Glt28d2 (glycosyltransferase 28 domain containing 2) is a 165 amino acid protein that is encoded by a gene mapping to mouse chromosome X F2. The human homolog of Glt28d2, ALG13, is a subunit of a bipartite UDP-N-acetylglucosamine transferase and plays a role in protein folding regulation and stabilization. ALG13 contains one OTU domain, one TudorSN domain, and exists as four alternatively spliced isoforms. Heterodimerizing with ALG14, ALG13 forms a UDP-GlcNAc glycosyltransferase, which catalyzes the second sugar addition of the oligosaccharide precursor in endoplasmic reticulum (ER) N-linked glycosylation. ALG13 localizes to the ER and may be recruited to the cytosolic face of the membrane by interacting with ALG14.

REFERENCES

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2. Abu-Qarn, M. and Eichler, J. 2006. Protein N-glycosylation in *Archaea:* defining *Haloferax volcanii* genes involved in S-layer glycoprotein glycosylation. Mol. Microbiol. 61: 511-525.
3. Averbeck, N., et al. 2007. Membrane topology of the Alg14 endoplasmic reticulum UDP-GlcNAc transferase subunit. J. Biol. Chem. 282: 29081-29088.
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5. Averbeck, N., et al. 2008. Alg13p, the catalytic subunit of the endoplasmic reticulum UDP-GlcNAc glycosyltransferase, is a target for proteasomal degradation. Mol. Biol. Cell 19: 2169-2178.
6. Wang, X., et al. 2008. Solution structure of Alg13: the sugar donor subunit of a yeast N-acetylglucosamine transferase. Structure 16: 965-975.
7. Chaban, B., et al. 2009. AglC and AglK are involved in biosynthesis and attachment of diacetylated glucuronic acid to the N-glycan in *Methanococcus voltae*. J. Bacteriol. 191: 187-195.
8. Li, B.Z. and Yuan, Y.J. 2010. Transcriptome shifts in response to furfural and acetic acid in *Saccharomyces cerevisiae*. Appl. Microbiol. Biotechnol. 86: 1915-1924.

CHROMOSOMAL LOCATION

Genetic locus: Glt28d2 (mouse) mapping to 3 F1.

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

Glt28d2 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 Glt28d2 shRNA Plasmid (m): sc-145435-SH and Glt28d2 shRNA (m) Lentiviral Particles: sc-145435-V as alternate gene silencing products.

For independent verification of Glt28d2 (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-145435A, sc-145435B and sc-145435C.

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

Glt28d2 siRNA (m) is recommended for the inhibition of Glt28d2 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 Glt28d2 gene expression knockdown using RT-PCR Primer: Glt28d2 (m)-PR: sc-145435-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.