SANTA CRUZ BIOTECHNOLOGY, INC.

COG6 siRNA (m): sc-142454

BACKGROUND

The structure and function of the Golgi apparatus is controlled by a number of multi-protein complexes that are involved in glycosylation reactions and vesicular transport. The conserved oligomeric Golgi (COG) complex consists of three subcomplexes, termed LDLC, SEC34 and GTC (Golgi transport complex), all of which contain proteins necessary for proper Golgi operation. COG6 (Conserved oligomeric Golgi complex component 6), also known as COD2, is a 657 amino acid component of the COG complex. Expressed in brain and ovary, COG6 is a peripheral membrane protein that is essential for the proper function of the Golgi, namely maintaining Golgi structure and mediating vesicle docking and fusion. Three isoforms of COG6 exist due to alternative splicing events.

REFERENCES

1. Hirosawa, M., et al. 1999. Characterization of cDNA clones selected by the GeneMark analysis from size-fractionated cDNA libraries from human brain. DNA Res. 6: 329-336.
2. Whyte, J.R., et al. 2001. The Sec34/35 Golgi transport complex is related to the exocyst, defining a family of complexes involved in multiple steps of membrane traffic. Dev. Cell 1: 527-537.
3. Loh, E., et al. 2002. Sec34 is implicated in traffic from the endoplasmic reticulum to the Golgi and exists in a complex with GTC-90 and ldlBp. J. Biol. Chem. 277: 21955-21961.
4. Ungar, D., et al. 2002. Characterization of a mammalian Golgi-localized protein complex, COG, that is required for normal Golgi morphology and function. J. Cell Biol. 157: 405-415.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606977. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Loh, E., et al. 2004. The binary interacting network of the conserved oligomeric Golgi tethering complex. J. Biol. Chem. 279: 24640-24648.

CHROMOSOMAL LOCATION

Genetic locus: Cog6 (mouse) mapping to 3 C.

PRODUCT

COG6 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 COG6 shRNA Plasmid (m): sc-142454-SH and COG6 shRNA (m) Lentiviral Particles: sc-142454-V as alternate gene silencing products.

For independent verification of COG6 (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-142454A, sc-142454B and sc-142454C.

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

COG6 siRNA (m) is recommended for the inhibition of COG6 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 COG6 gene expression knockdown using RT-PCR Primer: COG6 (m)-PR: sc-142454-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.