

NCU-G1 siRNA (m): sc-149860

BACKGROUND

Lysosomal membrane possess multiple important functions such as lysosomal matrix acidification, control of lysosomal enzymes, mediation of the interaction between lysosomes and other organelles, and transport of degradation products to the cytoplasm. Lysosomal membrane proteins are normally highly glycosylated and consist of approximately 40 members. Lysosomal protein NCU-G1 is a 404 amino acid single-pass type I membrane protein that is widely expressed, with highest expression in kidney. In humans, NCU-G1 is thought to function as a co-activator for ligand-activated PPAR α , a nuclear hormone receptor. Murine NCU-G1 is encoded by a gene located on mouse chromosome 3 F1.

REFERENCES

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2. Carninci, P., et al. 2005. The transcriptional landscape of the mammalian genome. *Science* 309: 1559-1563.
3. Saftig, P. 2006. Physiology of the lysosome. *Fabry Disease: Perspectives from 5 Years of FOS*. Oxford: Oxford PharmaGenesis: Chapter 3.
4. Steffensen, K.R., et al. 2007. Human NCU-G1 can function as a transcription factor and as a nuclear receptor co-activator. *BMC Mol. Biol.* 8: 106.
5. Schieweck, O., et al. 2009. NCU-G1 is a highly glycosylated integral membrane protein of the lysosome. *Biochem. J.* 422: 83-90.
6. Saftig, P., et al. 2009. Lysosome biogenesis and lysosomal membrane proteins: trafficking meets function. *Nat. Rev. Mol. Cell. Biol.* 10: 623-635.
7. Schröder, B.A., et al. 2010. The proteome of lysosomes. *Proteomics* 10: 4053-4076.

CHROMOSOMAL LOCATION

Genetic locus: 0610031J06Rik (mouse) mapping to 3 F1.

PRODUCT

NCU-G1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NCU-G1 shRNA Plasmid (m): sc-149860-SH and NCU-G1 shRNA (m) Lentiviral Particles: sc-149860-V as alternate gene silencing products.

For independent verification of NCU-G1 (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-149860A, sc-149860B and sc-149860C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

NCU-G1 siRNA (m) is recommended for the inhibition of NCU-G1 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 μ M in 66 μ l. 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 NCU-G1 gene expression knockdown using RT-PCR Primer: NCU-G1 (m)-PR: sc-149860-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.