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Grpa siRNA (m): sc-145780

BACKGROUND

Grpa (galectin-related protein A), also known as Lgalsla (lectin galactoside-binding-like protein A), is a 172 amino acid mouse protein that contains one galectin domain. Grpa exists as a monomer and does not bind lactose. The human homolog of Grpa is a 172 amino acid protein known as GRP (galectin-related protein) or LGALS1 (lectin galactoside-binding-like protein) that contains one galectin domain. The genes that encode Grpa and GRP map to mouse chromosome 11 A3.1 and human chromosome 2p14, respectively. Consisting of around 237 million bases, chromosome 2 encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2 including Harlequin ichthyosis, sitosterolemia and Alström syndrome.

REFERENCES

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2. Zumsteg, U., et al. 2000. Alstrom syndrome: confirmation of linkage to chromosome 2p12-13 and phenotypic heterogeneity in three affected sibs. *J. Med. Genet.* 37: E8.
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4. Hearn, T., et al. 2002. Mutation of ALMS1, a large gene with a tandem repeat encoding 47 amino acids, causes Alström syndrome. *Nat. Genet.* 31: 79-83.
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6. Horvath, J.E., et al. 2005. Punctuated duplication seeding events during the evolution of human chromosome 2p11. *Genome Res.* 15: 914-927.
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CHROMOSOMAL LOCATION

Genetic locus: Lgalsl (mouse) mapping to 11 A3.1.

PRODUCT

Grpa 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 Grpa shRNA Plasmid (m): sc-145780-SH and Grpa shRNA (m) Lentiviral Particles: sc-145780-V as alternate gene silencing products.

For independent verification of Grpa (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-145780A, sc-145780B and sc-145780C.

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

Grpa siRNA (m) is recommended for the inhibition of Grpa 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 Grpa gene expression knockdown using RT-PCR Primer: Grpa (m)-PR: sc-145780-PR (20 μ l). 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.

PROTOCOLS

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