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NPRL3 siRNA (m): sc-149274

BACKGROUND

NPRL3 (nitrogen permease regulator 3-like protein), also known as CGTHBA (conserved gene telomeric to α globin cluster), MARE, NPR3 or RMD11, is a 569 amino acid protein that belongs to the NPR3 family. NPRL3 is widely expressed and forms a heterodimer with NPRL2. The gene that encodes NPRL3 consists of approximately 54,587 bases and maps to human chromosome 16p13.3. Encoding over 900 genes and consisting of approximately 90 million base pairs, chromosome 16 makes up nearly 3% of the human genome and is associated with a variety of genetic disorders. The GAN gene is located on chromosome 16 and, when mutated, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. Alterations in the CREB gene and NOD2 gene, both of which are located on chromosome 16, results in Rubinstein-Taybi syndrome and Crohn's disease, respectively. An association with systemic lupus erythematosus and a number of other autoimmune disorders with the pericentromeric region of chromosome 16 has led to the identification of SLC5A11 as a potential autoimmune modifier.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Nprl3 (mouse) mapping to 11 A4.

PROTOCOLS

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

PRODUCT

NPRL3 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 NPRL3 shRNA Plasmid (m): sc-149274-SH and NPRL3 shRNA (m) Lentiviral Particles: sc-149274-V as alternate gene silencing products.

For independent verification of NPRL3 (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-149274A, sc-149274B and sc-149274C.

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

NPRL3 siRNA (m) is recommended for the inhibition of NPRL3 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 NPRL3 gene expression knockdown using RT-PCR Primer: NPRL3 (m)-PR: sc-149274-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.