

PRRT2 siRNA (m): sc-152521

BACKGROUND

PRRT2 (proline-rich transmembrane protein 2) is a 340 amino acid multi-pass membrane protein belonging to the CD225 family. Existing as three alternatively spliced isoforms, the gene encoding PRRT2 maps to human chromosome 16p11.2 and mouse chromosome 7 F3. Chromosome 16 encodes over 900 genes in approximately 90 million base pairs, makes up nearly 3% of human cellular DNA and is associated with a variety of genetic disorders. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome, characterized by mental retardation and predisposition to tumor growth and white blood cell neoplasias, and Crohn's disease, a gastrointestinal inflammatory condition, are also associated with chromosome 16.

REFERENCES

1. Baraitser, M., et al. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. *Clin. Genet.* 23: 318-320.
2. Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. *Am. J. Hum. Genet.* 52: 249-254.
3. Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/kelch repeat family, is mutated in giant axonal neuropathy. *Nat. Genet.* 26: 370-374.
4. Kühlenbäumer, G., et al. 2002. Giant axonal neuropathy (GAN): case report and two novel mutations in the gigaxonin gene. *Neurology* 58: 1273-1276.
5. Cho, J.H. 2004. Advances in the genetics of inflammatory bowel disease. *Curr. Gastroenterol. Rep.* 6: 467-473.
6. Mathew, C.G., et al. 2004. Genetics of inflammatory bowel disease: progress and prospects. *Hum. Mol. Genet.* 13: R161-R168.

CHROMOSOMAL LOCATION

Genetic locus: Prrt2 (mouse) mapping to 7 F3.

PRODUCT

PRRT2 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 PRRT2 shRNA Plasmid (m): sc-152521-SH and PRRT2 shRNA (m) Lentiviral Particles: sc-152521-V as alternate gene silencing products.

For independent verification of PRRT2 (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-152521A, sc-152521B and sc-152521C.

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

PRRT2 siRNA (m) is recommended for the inhibition of PRRT2 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 PRRT2 gene expression knockdown using RT-PCR Primer: PRRT2 (m)-PR: sc-152521-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.