

SPATA25 siRNA (m): sc-141861

BACKGROUND

SPATA25 (spermatogenesis-associated protein 25), also known as TSG23 (testis-specific gene 23 protein), is a 227 amino acid single-pass membrane protein that is thought to play a role in spermatogenesis. Predominantly expressed in testis, SPATA25 is found at 60-fold higher levels in adult testis than fetal testis. The gene encoding SPATA25 maps to human chromosome 20q13.12 and mouse chromosome 2 H3. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome. Additionally, chromosome 20 contains a region with numerous genes which are thought to be important for seminal production and may be potential targets for male contraception.

REFERENCES

1. Ville, D., Kaminska, A., Bahi-Buisson, N., Biraben, A., Plouin, P., Telvi, L., Dulac, O. and Chiron, C. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. *Epilepsia* 47: 543-549.
2. Joó, J.G., Beke, A., Tóth-Pál, E., Hargitai, B., Szigeti, Z., Papp, C. and Papp, Z. 2006. Trisomy 20 mosaicism and nonmosaic trisomy 20: a report of 2 cases. *J Reprod Med.* 51: 209-212.
3. Fulbright, R.K., Kingsley, P.B., Guo, X., Hoffmann, C., Kahana, E., Chapman, J.C. and Prohovnik, I. 2006. The imaging appearance of Creutzfeldt-Jakob disease caused by the E200K mutation. *Magn. Reson. Imaging* 24: 1121-1129.
4. Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. *Asian J. Androl.* 9: 540-544.
5. Robert, M.L., Lopez, T., Crolla, J., Huang, S., Owen, C., Burvill-Holmes, L., Stumper, O. and Turnpenny, P.D. 2007. Alagille syndrome with deletion 20p12.2-p12.3 and hypoplastic left heart. *Clin. Dysmorphol.* 16: 241-246.
6. Elghezal, H., Hannachi, H., Mougou, S., Kammoun, H., Triki, C. and Saad, A. 2007. Ring chromosome 20 syndrome without deletions of the subtelomeric and CHRNA4—KCNQ2 genes loci. *Eur. J. Med. Genet.* 50: 441-445.
7. O'Rand, M.G., Widgren, E.E., Wang, Z. and Richardson, R.T. 2007. Eppin: an epididymal protease inhibitor and a target for male contraception. *Soc. Reprod. Fertil. Suppl.* 63: 445-453.
8. Zhou, Y., Qin, D., Tang, A., Zhou, D., Qin, J., Yan, B., Diao, R., Jiang, Z., Cai, Z. and Gui, Y. 2009. Developmental expression pattern of a novel gene, TSG23/Tsg23, suggests a role in spermatogenesis. *Mol. Hum. Reprod.* 15: 223-230.

CHROMOSOMAL LOCATION

Genetic locus: Spata25 (mouse) mapping to 2 H3.

PROTOCOLS

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

PRODUCT

SPATA25 siRNA (m) is a target-specific 19-25 nt siRNA 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 SPATA25 shRNA Plasmid (m): sc-141861-SH and SPATA25 shRNA (m) Lentiviral Particles: sc-141861-V as alternate gene silencing 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

SPATA25 siRNA (m) is recommended for the inhibition of SPATA25 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 SPATA25 gene expression knockdown using RT-PCR Primer: SPATA25 (m)-PR: sc-141861-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.