SANTA CRUZ BIOTECHNOLOGY, INC.

Sprm-1 siRNA (h): sc-91619

BACKGROUND

Tissue-restricted POU domain transcription factors, which bind octamer or octamer-like gene sequences, play roles in cellular differentiation and the development of several organs. Belonging to the POU transcription factor family, Sprm-1 (sperm 1 POU domain transcription factor), also known as POU5F2 (POU domain, class 5, transcription factor 2), is a 328 amino acid nuclear protein that contains one homeobox DNA-binding domain and one POU-specific domain. Sprm-1 is a transcription factor that preferentially binds to the octamer motif (5'-ATGTTAAT-3'). In the embryo, Sprm-1 expression is restricted to brain, whereas in the adult it is exclusively expressed in brain, skeletal muscle, lung, heart and germ cells. Homozygous null Sprm-1 mice are subfertile, yet exhibit normal testicular morphology and normal numbers of mobile spermatozoa, suggesting that Sprm-1 plays a regulatory role in the haploid spermatid.

REFERENCES

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6. Schonemann, M.D., Ryan, A.K., Erkman, L., McEvilly, R.J., Bermingham, J. and Rosenfeld, M.G. 1998. POU domain factors in neural development. Adv. Exp. Med. Biol. 449: 39-53.
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CHROMOSOMAL LOCATION

Genetic locus: POU5F2 (human) mapping to 5q15.

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.

PRODUCT

Sprm-1 siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Sprm-1 shRNA Plasmid (h): sc-91619-SH and Sprm-1 shRNA (h) Lentiviral Particles: sc-91619-V as alternate gene silencing products.

For independent verification of Sprm-1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-91619A, sc-91619B and sc-91619C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Sprm-1 siRNA (h) is recommended for the inhibition of Sprm-1 expression in human 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 µM in 66 µl. 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 Sprm-1 gene expression knockdown using RT-PCR Primer: Sprm-1 (h)-PR: sc-91619-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.