SANTA CRUZ BIOTECHNOLOGY, INC.

CSTL1 siRNA (m): sc-142611

BACKGROUND

The cystatin superfamily is a well-established family of cysteine protease inhibitors. All true cystatins inhibit cysteine peptidases of the papain family, such as cathepsins, while some also inhibit legumain family enzymes. The CRES (cystatin-related epididymal spermatogenic) protein defines a new subgroup in the family 2 cystatins of the cystatin superfamily. CRES proteins lack two of the three consensus sites necessary for the cystatin inhibition of C1 cysteine proteases. They are also preferentially expressed in postmeiotic germ cells, the proximal caput epididymidis, and anterior pituitary gonadotrophs. Therefore, CRES proteins may perform unique and tissue-specific functions in the reproductive and neuroendocrine systems. As a member of the CRES subfamily, Cystatin-like 1 (CSTL1) is a 145 amino acid protein and is expressed in testis.

REFERENCES

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2. Cornwall, G.A., et al. 2002. Cres (cystatin-related epididymal spermatogenic) gene regulation and function. Zhonghua Nan Ke Xue 8: 313-318.
3. Cornwall, G.A., et al. 2003. A new subgroup of the family 2 cystatins. Mol. Cell. Endocrinol. 200: 1-8.
4. Xue, X., et al. 2006. Effects of experimental varicocele on CRES protein in the testis and epididymis of adolescent rats. Zhonghua Nan Ke Xue 12: 974-978.
5. Yuan, Q., et al. 2007. Age-dependent expression of the cystatin-related epididymal spermatogenic (Cres) gene in mouse testis and epididymis. Asian J. Androl. 9: 305-311.
6. Cornwall, G.A., et al. 2007. Extracellular quality control in the epididymis. Asian J. Androl. 9: 500-507.
7. von Horsten, H.H., et al. 2007. Oligomerization and transglutaminase cross-linking of the cystatin CRES in the mouse epididymal lumen: potential mechanism of extracellular quality control. J. Biol. Chem. 282: 32912-32923.

CHROMOSOMAL LOCATION

Genetic locus: Cstl1 (mouse) mapping to 2 G3.

PRODUCT

CSTL1 siRNA (m) is a pool of 2 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 CSTL1 shRNA Plasmid (m): sc-142611-SH and CSTL1 shRNA (m) Lentiviral Particles: sc-142611-V as alternate gene silencing products.

For independent verification of CSTL1 (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-142611A and sc-142611B.

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

CSTL1 siRNA (m) is recommended for the inhibition of CSTL1 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 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 CSTL1 gene expression knockdown using RT-PCR Primer: CSTL1 (m)-PR: sc-142611-PR (20 µl). 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.