

Eppin siRNA (h): sc-44415

BACKGROUND

Eppin, an epididymal protease inhibitor, belongs to the WFDC family and to the telomeric cluster. The gene encoding the protein is localized to chromosome 20q13.12 in centromeric and telomeric clusters. It expresses three mRNAs encoding two isoforms of a cysteine-rich protein that contains Kunitz-type and WAP-type (four disulfide core) protease inhibitor consensus sequences. The mouse gene lies in a cluster of putative Eppin-like genes on mouse chromosome 2. Following ejaculation, Eppin is bound to semenogelin in seminal plasma and on human spermatozoa. This complex of Eppin and Semenogelin can provide antimicrobial activity for spermatozoa. It can also provide for the preparation and survival of spermatozoa for fertility in the female reproductive tract. Eppin, which is a secreted protein, is expressed in epididymis and testis.

REFERENCES

1. Richardson, R.T., et al. 2001. Cloning and sequencing of human Eppin: a novel family of protease inhibitors expressed in the epididymis and testis. *Gene* 270: 93-102.
2. Sivashanmugam, P., et al. 2003. Characterization of mouse Eppin and a gene cluster of similar protease inhibitors on mouse chromosome 2. *Gene* 312: 125-134.
3. Karande, A., et al. 2004. Eppin: a candidate male contraceptive vaccine? *J. Biosci.* 29: 373-374.
4. Yenugu, S., et al. 2004. Antimicrobial activity of human Eppin, an androgen-regulated, sperm-bound protein with a whey acidic protein motif. *Biol. Reprod.* 71: 1484-1490.
5. Wang, Z., et al. 2005. Association of Eppin with semenogelin on human spermatozoa. *Biol. Reprod.* 72: 1064-1070.
6. SWISS-PROT/TrEMBL (O95925). World Wide Web URL: <http://www.xpasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: EPPIN (human) mapping to 20q13.12.

PRODUCT

Eppin 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Eppin shRNA Plasmid (h): sc-44415-SH and Eppin shRNA (h) Lentiviral Particles: sc-44415-V as alternate gene silencing products.

For independent verification of Eppin (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-44415A, sc-44415B and sc-44415C.

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

Eppin siRNA (h) is recommended for the inhibition of Eppin 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 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.

GENE EXPRESSION MONITORING

Eppin (YY-23): sc-100726 is recommended as a control antibody for monitoring of Eppin gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Eppin gene expression knockdown using RT-PCR Primer: Eppin (h)-PR: sc-44415-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.