

RNase 9 siRNA (h): sc-92340

BACKGROUND

Ribonucleases are ubiquitous enzymes involved in RNA metabolism and are classified in several families on the basis of their structural, catalytic and biological properties. RNase 9 (ribonuclease, RNase A family, 9 (non-active)), also known as HEL128 or ribonuclease-like protein 9, is a 205 amino acid secreted protein that belongs to the RNase A family. Unlike other RNase A family members, RNase 9 lacks ribonuclease activity. Widely expressed, RNase 9 is found at high levels in epithelium of the epididymal tubule and the post-equatorial region of the sperm head, with greater expression found in men than boys. The gene encoding RNase 9 maps to human chromosome 14q11.2 and mouse chromosome 14 C1.

REFERENCES

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3. Penttinen, J., et al. 2003. Discovery in silico and characterization *in vitro* of novel genes exclusively expressed in the mouse epididymis. *Mol. Endocrinol.* 17: 2138-2151.
4. Devor, E.J., et al. 2004. LOC 390443 (RNase 9) on chromosome 14q11.2 is related to the RNase A superfamily and contains a unique amino-terminal preproteinlike sequence. *Hum. Biol.* 76: 921-935.
5. Cho, S., et al. 2005. The ribonuclease A superfamily of mammals and birds: identifying new members and tracing evolutionary histories. *Genomics* 85: 208-220.
6. Zhu, C.F., et al. 2007. RNase9, an androgen-dependent member of the RNase A family, is specifically expressed in the rat epididymis. *Biol. Reprod.* 76: 63-73.
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CHROMOSOMAL LOCATION

Genetic locus: RNASE9 (human) mapping to 14q11.2.

PRODUCT

RNase 9 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 RNase 9 shRNA Plasmid (h): sc-92340-SH and RNase 9 shRNA (h) Lentiviral Particles: sc-92340-V as alternate gene silencing products.

For independent verification of RNase 9 (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-92340A, sc-92340B and sc-92340C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

RNase 9 siRNA (h) is recommended for the inhibition of RNase 9 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor RNase 9 gene expression knockdown using RT-PCR Primer: RNase 9 (h)-PR: sc-92340-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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