SANTA CRUZ BIOTECHNOLOGY, INC.

RISC siRNA (h): sc-62948

BACKGROUND

Serine carboxypeptidases are members of the α/β hydrolase fold superfamily that participate, through three catalytic sites, in the hydrolysis of C-terminal residues in a variety of proteins. RISC (retinoid-inducible serine carboxypeptidase), also known as SCP1 or SCPEP1 (serine carboxypeptidase 1), is a 452 amino acid secreted protein that accumulates around the nuclear periphery and is thought to localize to lysosomes. As one of several members of the peptidase S10 family, RISC may be involved in maintaining both vascular wall and kidney homeostasis by deactivating endothelin (ET), a strong vasoconstrictor and mitogen. Two isoforms of RISC exist due to alternative splicing events.

REFERENCES

1. Holmquist, M. 2000. α/β-hydrolase fold enzymes: structures, functions and mechanisms. Curr. Protein Pept. Sci. 1: 209-235.
2. Chen, J., Streb, J.W., Maltby, K.M., Kitchen, C.M. and Miano, J.M. 2001. Cloning of a novel retinoid-inducible serine carboxypeptidase from vascular smooth muscle cells. J. Biol. Chem. 276: 34175-34181.
3. Mima, J., Suzuki, H., Takahashi, M. and Hayashi, R. 2002. Overexpression and functional characterization of a serine carboxypeptidase inhibitor (I(C)) from *Saccharomyces cerevisiae*. J. Biochem. 132: 967-973.
4. Potokina, E., Prasad, M., Malysheva, L., Röder, M.S. and Graner, A. 2006. Expression genetics and haplotype analysis reveal *cis* regulation of serine carboxypeptidase I (Cxp1), a candidate gene for malting quality in barley *(Hordeum vulgare L.)*. Funct. Integr. Genomics 6: 25-35.
5. Lee, T.H., Streb, J.W., Georger, M.A. and Miano, J.M. 2006. Tissue expression of the novel serine carboxypeptidase Scpep1. J. Histochem. Cytochem. 54: 701-711.

CHROMOSOMAL LOCATION

Genetic locus: SCPEP1 (human) mapping to 17q22.

PRODUCT

RISC 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 RISC shRNA Plasmid (h): sc-62948-SH and RISC shRNA (h) Lentiviral Particles: sc-62948-V as alternate gene silencing products.

For independent verification of RISC (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-62948A, sc-62948B and sc-62948C.

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.

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

RISC siRNA (h) is recommended for the inhibition of RISC 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 RISC gene expression knockdown using RT-PCR Primer: RISC (h)-PR: sc-62948-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.