SANTA CRUZ BIOTECHNOLOGY, INC.

Headpin siRNA (h): sc-106889

BACKGROUND

Headpin (hurpin, serpinB13) is a skin-specific, UV-repressible serine proteinase inhibitor (serpin) belonging to the ovalbumin serpin family. Headpin is abundant in the human keratinocyte cell line HaCaT, and in lesional keratinocytes from psoriatic skin. Headpin downregulation occurs in squamous cell carcinoma of the oral cavity and in squamous cell carcinoma cell lines of the head and neck.

REFERENCES

1. Abts, H.F., et al. 1999. Cloning and characterization of hurpin (protease inhibitor 13): a new skin-specific, UV-repressible serine proteinase inhibitor of the ovalbumin serpin family. J. Mol. Biol. 293: 29-39.
2. Spring, P., et al. 1999. Identification and cDNA cloning of Headpin, a novel differentially expressed serpin that maps to chromosome 18q. Biochem. Biophys. Res. Commun. 264: 299-304.
3. Nakashima, T., et al. 2000. Genomic cloning, mapping, structure and promoter analysis of Headpin, a serpin which is down-regulated in head and neck cancer cells. Biochim. Biophys. Acta 1492: 441-446.
4. Jayakumar, A., et al. 2003. Inhibition of the cysteine proteinases cathepsins K and L by the serpin Headpin (SERPINB13): a kinetic analysis. Arch. Biochem. Biophys. 409: 367-374.
5. LocusLink Report (LocusID: 5275). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: SERPINB13 (human) mapping to 18q21.33.

PRODUCT

Headpin 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 Headpin shRNA Plasmid (h): sc-106889-SH and Headpin shRNA (h) Lentiviral Particles: sc-106889-V as alternate gene silencing products.

For independent verification of Headpin (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-106889A, sc-106889B and sc-106889C.

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.

PROTOCOLS

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

APPLICATIONS

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

GENE EXPRESSION MONITORING

Headpin (E-1): sc-398857 is recommended as a control antibody for monitoring of Headpin 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Headpin gene expression knockdown using RT-PCR Primer: Headpin (h)-PR: sc-106889-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.