SANTA CRUZ BIOTECHNOLOGY, INC.

PPIH siRNA (h): sc-76207

BACKGROUND

PPIH (peptidylprolyl isomerase H (cyclophilin H)), also known as PPIase H, Rotamase H, CypH, CYP20 or USA-CYP (U-snRNP-associated cyclophilin SnuCyp-20), is a 177 amino acid protein that belongs to the cyclophilin-type PPIase family. PPIH may accelerate the folding of proteins and catalyzes the *cis-trans* isomerization of proline imidic peptide bonds in oligopeptides. PPIH is thought to participate in pre-mRNA splicing with processing factors PRPF3, PRPF4, and PRPF18 and may be involved in the assembly of the U4/U5/U6 tri-snRNP complex. Considered a protein chaperone, PPIH possesses PPIase activity and mediates the interactions between different proteins inside the spliceosome. PPIH contains one PPIase cyclophilin-type domain and is inhibited by cyclosporin A.

REFERENCES

1. Chambraud, B., et al. 1993. Overexpression of p59-HBI (FKBP59), full length and domains, and characterization of PPIase activity. Biochem. Biophys. Res. Commun. 196: 160-166.
2. Schmidt, B., et al. 1996. A cyclophilin-like peptidyl-prolyl *cis/trans* isomerase from *Legionella pneumophila*—characterization, molecular cloning and overexpression. Mol. Microbiol. 21: 1147-1160.
3. Horowitz, D.S., et al. 1997. A new cyclophilin and the human homologues of yeast Prp3 and Prp4 form a complex associated with U4/U6 snRNPs. RNA 3: 1374-1387.
4. Teigelkamp, S., et al. 1998. The 20kD protein of human [U4/U6.U5] tri-snRNPs is a novel cyclophilin that forms a complex with the U4/U6-specific 60kD and 90kD proteins. RNA 4: 127-141.
5. Reidt, U., et al. 2003. Crystal structure of a complex between human spliceosomal cyclophilin H and a U4/U6 snRNP-60K peptide. J. Mol. Biol. 331: 45-56.
6. Ingelfinger, D., et al. 2003. Two protein-protein interaction sites on the spliceosome-associated human cyclophilin CypH. Nucleic Acids Res. 31: 4791-4796.

CHROMOSOMAL LOCATION

Genetic locus: PPIH (human) mapping to 1p34.2.

PRODUCT

PPIH 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 PPIH shRNA Plasmid (h): sc-76207-SH and PPIH shRNA (h) Lentiviral Particles: sc-76207-V as alternate gene silencing products.

For independent verification of PPIH (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-76207A, sc-76207B and sc-76207C.

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 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

PPIH siRNA (h) is recommended for the inhibition of PPIH 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

PPIH (C-1): sc-377217 is recommended as a control antibody for monitoring of PPIH 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 PPIH gene expression knockdown using RT-PCR Primer: PPIH (h)-PR: sc-76207-PR (20 µl). 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.