SANTA CRUZ BIOTECHNOLOGY, INC.

CHP1 siRNA (h): sc-106753

BACKGROUND

Human CHP1 and the *C. elegans* homolog Chp are CHORD domain-containing proteins that are largely related, and their corresponding genes are evolutionarily conserved among various eukaryotic organisms. The unique CHORD domain is characterized as 60 amino acids in length, and contains six highly conserved cysteine residues, two histidine residues and a distinct Zn^{2+}-binding domain. CHP1 and the other metazoan orthologs have tandem CHORD domains that are located at both the N- and C-termini. These proteins are implicated in germline development and embryogenesis as mutations affecting the CHORD domain of the nematode protein Chp result in semisterility and embryonic lethality.

REFERENCES

1. Freialdenhoven, A., et al. 1994. Nar-1 and Nar-2, two loci required for Mla12-specified race-specific resistance to powdery mildew in barley. Plant Cell 6: 983-994.
2. Doe, C.L., et al. 1998. The fission yeast chromo domain encoding gene $CHP1^+$ is required for chromosome segregation and shows a genetic interaction with α-Tubulin. Nucleic Acids Res. 26: 4222-4229.
3. van der Biezen, E.A., et al. 1998. The NB-ARC domain: a novel signalling motif shared by plant resistance gene products and regulators of cell death in animals. Curr. Biol. 8: 226-227.
4. Vaux, D.L., et al. 1999. Cell death in development. Cell 96: 245-254.
5. Shirasu, K., et al. 1999. A novel class of eukaryotic zinc-binding proteins is required for disease resistance signaling in barley and development in *C. elegans*. Cell 99: 355-366.

CHROMOSOMAL LOCATION

Genetic locus: CHORDC1 (human) mapping to 11q14.3.

PRODUCT

CHP1 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 CHP1 shRNA Plasmid (h): sc-106753-SH and CHP1 shRNA (h) Lentiviral Particles: sc-106753-V as alternate gene silencing products.

For independent verification of CHP1 (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-106753A, sc-106753B and sc-106753C.

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

CHP1 siRNA (h) is recommended for the inhibition of CHP1 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

CHP1 (B-6): sc-390834 is recommended as a control antibody for monitoring of CHP1 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 CHP1 gene expression knockdown using RT-PCR Primer: CHP1 (h)-PR: sc-106753-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.