



# CHP siRNA (h): sc-90201

## BACKGROUND

CHP (calcineurin homologous protein), also known as calcium-binding protein p22 and calcineurin B homolog, is a 195 amino acid protein that shares significant sequence similarity to calmodulin and PP2B-A $\beta$ , a calmodulin-regulated protein phosphatase. Required for constitutive membrane traffic, CHP functions as a monomer and is expressed in fetal eye, muscle, kidney, liver, lung, spleen and thymus. Decreased phosphorylation of CHP is associated with an increase in exchange activity. Overexpression of CHP inhibits GTPase-stimulated NHE-1 activity, impairs nuclear translocation and transcriptional activity of NFAT and inhibits phosphatase activity of calcineurin in a dose-dependent manner.

## REFERENCES

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7. Li, G.D., et al. 2008. CHP2 activates the calcineurin/nuclear factor of activated T cells signaling pathway and enhances the oncogenic potential of HEK293 cells. *J. Biol. Chem.* 283: 32660-32668.
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## CHROMOSOMAL LOCATION

Genetic locus: CHP1 (human) mapping to 15q15.1.

## PRODUCT

CHP 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CHP shRNA Plasmid (h): sc-90201-SH and CHP shRNA (h) Lentiviral Particles: sc-90201-V as alternate gene silencing products.

For independent verification of CHP (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-90201A, sc-90201B and sc-90201C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

CHP siRNA (h) is recommended for the inhibition of CHP 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  $\mu$ M in 66  $\mu$ 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 CHP gene expression knockdown using RT-PCR Primer: CHP (h)-PR: sc-90201-PR (20  $\mu$ l). 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.