SANTA CRUZ BIOTECHNOLOGY, INC.

CHAMP1 siRNA (h): sc-105150

BACKGROUND

CHAMP1 (chromosome alignment maintaining phosphoprotein 1), also known as ZNF828 or C13orf8, is a 812 amino acid protein containing one C_2H_2-type zinc finger. CHAMP1 is required for the proper alignment of chromosomes during metaphase, undergoing CDK1-dependent phosphorylation at multiple sites during mitosis. The phosphorylation counteracts the negative chromosomal alignment regulation of the zinc-finger domain of CHAMP1. One region of CHAMP1, the FPE region, is responsible for spindle and kinetochore localization, which is essential for proper chromosome alignment. CHAMP1 interacts with MAD2L2, PGOZ, CBX1, CBX3 and CBX5, and may recruit CENPE and CENPF to the kinetochore. The CHAMP1 gene is located on chromosome 13q34 and is conserved in chimpanzee, Rhesus monkey, canine, bovine, mouse, rat and chicken.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CHAMP1 (human) mapping to 13q34.

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.

PRODUCT

CHAMP1 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 CHAMP1 shRNA Plasmid (h): sc-105150-SH and CHAMP1 shRNA (h) Lentiviral Particles: sc-105150-V as alternate gene silencing products.

For independent verification of CHAMP1 (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-105150A, sc-105150B and sc-105150C.

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

CHAMP1 siRNA (h) is recommended for the inhibition of CHAMP1 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 CHAMP1 gene expression knockdown using RT-PCR Primer: CHAMP1 (h)-PR: sc-105150-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.