SANTA CRUZ BIOTECHNOLOGY, INC.

CIP4 siRNA (m): sc-72911

BACKGROUND

CIP4 (Cdc42-interacting protein 4), also known as TRIP10 (thyroid hormone receptor interactor 10), STOT, STP or HSTP, is a 601 amino acid protein that localizes to the cytoplasm and the cytoskeleton, as well as to the lysosome and the golgi apparatus and contains one FCH domain, one SH3 domain and one REM repeat. Expressed in a variety of tissues, including kidney, brain, liver, lung, heart and pancreas, CIP4 is required for the Insulin-dependent translocation of Glut4 to the plasma membrane and is essential for the coordination of membrane tubulation with Actin cytoskeletal reorganization during endocytosis. CIP4 exists as multiple alternative spliced isoforms and is subject to post-translational tyrosine phosphorylation. Aberrant splicing events during CIP4 transcription are associated with the pathogenesis of renal cell carcinoma, suggesting a role for CIP4 in tumor transformation and metastasis.

REFERENCES

1. Lee, J.W., et al. 1995. Two classes of proteins dependent on either the presence or absence of thyroid hormone for interaction with the thyroid hormone receptor. Mol. Endocrinol. 9: 243-254.
2. Aspenström, P. 1997. A Cdc42 target protein with homology to the non-kinase domain of FER has a potential role in regulating the Actin cytoskeleton. Curr. Biol. 7: 479-487.
3. Wang, L., et al. 2002. Identification and genetic analysis of human and mouse activated Cdc42 interacting protein-4 isoforms. Biochem. Biophys. Res. Commun. 293: 1426-1430.
4. Holbert, S., et al. 2003. Cdc42-interacting protein 4 binds to Huntingtin: neuropathologic and biological evidence for a role in Huntington's disease. Proc. Natl. Acad. Sci. USA 100: 2712-2717.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 604504: World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Larocca, M.C., et al. 2004. AKAP 350 interaction with Cdc42 interacting protein 4 at the Golgi apparatus. Mol. Biol. Cell 15: 2771-2781.

CHROMOSOMAL LOCATION

Genetic locus: Trip10 (mouse) mapping to 17 D.

PRODUCT

CIP4 siRNA (m) 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 CIP4 shRNA Plasmid (m): sc-72911-SH and CIP4 shRNA (m) Lentiviral Particles: sc-72911-V as alternate gene silencing products.

For independent verification of CIP4 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72911A, sc-72911B and sc-72911C.

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

CIP4 siRNA (m) is recommended for the inhibition of CIP4 expression in mouse 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

CIP4 (F-10): sc-166810 is recommended as a control antibody for monitoring of CIP4 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 CIP4 gene expression knockdown using RT-PCR Primer: CIP4 (m)-PR: sc-72911-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.