SANTA CRUZ BIOTECHNOLOGY, INC.

CIP29 siRNA (h): sc-96155

BACKGROUND

CIP29 (cytokine-induced protein of 29 kDa), also known as SARNP (SAP domain-containing ribonucleoprotein) and HCC1 (nuclear protein Hcc-1), is a 210 amino acid nuclear protein whose expression is upregulated by erythropoietin. Induction of CIP2 expression is associated with cell cycle progression and apoptosis. This transcription factor binds both single stranded (ss) and double stranded (ds) DNA, though it has higher affinity for ssDNA. CIP29 is expressed at low levels in pancreas, spleen, testis, liver, kidney, heart and thymus, and is found to be expressed at higher levels in pancreatic adenocarcinoma and hepatocellular carcinoma. A translocation t(11;12)(q23;q13) in acute myelomonocytic leukemia results in the coding region of CIP29 gene fused to exon 9 of the MLL gene, which encodes for a protein with the N-terminal SAP domain and two C-terminal nuclear localization signals of CIP29 and N-termial AT hooks and central DNA methyltransferase homology region of MLL.

REFERENCES

1. Choong, M.L., et al. 2001. An integrated approach in the discovery and characterization of a novel nuclear protein over-expressed in liver and pancreatic tumors. FEBS Lett. 496: 109-116.
2. Fukuda, S., et al. 2002. Cloning and characterization of a proliferation-associated cytokine-inducible protein, CIP29. Biochem. Biophys. Res. Commun. 292: 593-600.
3. Leaw, C.L., et al. 2004. Hcc-1 is a novel component of the nuclear matrix with growth inhibitory function. Cell. Mol. Life Sci. 61: 2264-2273.
4. Hashii, Y., et al. 2004. A novel partner gene CIP29 containing a SAP domain with MLL identified in infantile myelomonocytic leukemia. Leukemia 18: 1546-1548.
5. Fukuda, S., et al. 2005. Growth inhibitory effect of Hcc-1/CIP29 is associated with induction of apoptosis, not just with G_2/M arrest. Cell. Mol. Life Sci. 62: 1526-1527.
6. Sugiura, T., et al. 2007. Intracellular characterization of DDX39, a novel growth-associated RNA helicase. Exp. Cell Res. 313: 782-790.

CHROMOSOMAL LOCATION

Genetic locus: SARNP (human) mapping to 12q13.2.

PRODUCT

CIP29 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 CIP29 shRNA Plasmid (h): sc-96155-SH and CIP29 shRNA (h) Lentiviral Particles: sc-96155-V as alternate gene silencing products.

For independent verification of CIP29 (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-96155A, sc-96155B and sc-96155C.

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

CIP29 siRNA (h) is recommended for the inhibition of CIP29 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

CIP29 (F-4): sc-514567 is recommended as a control antibody for monitoring of CIP29 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 CIP29 gene expression knockdown using RT-PCR Primer: CIP29 (h)-PR: sc-96155-PR (20 µl). 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 for detailed protocols and support products.