SANTA CRUZ BIOTECHNOLOGY, INC.

PCBP4 siRNA (h): sc-77949

BACKGROUND

Poly(rC)-binding protein 4 (PCBP4), also known as αCP4, is a 403 amino acid protein belonging to the AlphaCP subfamily. αCP proteins bind to RNA at specific C-rich pyrimidine regions and have various important roles in post-transcriptional activities. PCBP4 binds preferentially to single-stranded nucleic acid oligo-dC. Localized to the cytoplasm, PCBP4 contains four KH domains, which are RNA binding sites. The gene that encodes PCBP4 is induced by the p53 tumor suppressor and PCBP4 has been shown to induce apoptosis and cell cycle arrest in G_2-M. PCBP4 is expressed as two isoforms produced by alternative splicing.

REFERENCES

1. Makeyev, A.V. and Liebhaber, S.A. 2000. Identification of two novel mammalian genes establishes a subfamily of KH-domain RNA-binding proteins. Genomics 67: 301-316.
2. Zhu, J. and Chen, X. 2000. MCG10, a novel p53 target gene that encodes a KH domain RNA-binding protein, is capable of inducing apoptosis and cell cycle arrest in G_2-M. Mol. Cell. Biol. 20: 5602-5618.
3. Taylor, W.R. and Stark, G.R. 2001. Regulation of the G_2/M transition by p53. Oncogene 20: 1803-1815.
4. Makeyev, A.V. and Liebhaber, S.A. 2002. The poly(C)-binding proteins: a multiplicity of functions and a search for mechanisms. RNA 8: 265-278.
5. Chkheidze, A.N. and Liebhaber, S.A. 2003. A novel set of nuclear localization signals determine distributions of the αCP RNA-binding proteins. Mol. Cell. Biol. 23: 8405-8415.
6. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608503. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: PCBP4 (human) mapping to 3p21.2.

PRODUCT

PCBP4 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 PCBP4 shRNA Plasmid (h): sc-77949-SH and PCBP4 shRNA (h) Lentiviral Particles: sc-77949-V as alternate gene silencing products.

For independent verification of PCBP4 (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-77949A, sc-77949B and sc-77949C.

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

PCBP4 siRNA (h) is recommended for the inhibition of PCBP4 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 PCBP4 gene expression knockdown using RT-PCR Primer: PCBP4 (h)-PR: sc-77949-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.