SANTA CRUZ BIOTECHNOLOGY, INC.

CRP2BP siRNA (m): sc-142581

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The Power to Question

BACKGROUND

CRP2BP (cysteine-rich protein 2-binding protein, CSRP2-binding protein) is a 782 amino acid protein encoded by the human gene CSRP2BP. CRP2BP specifically interacts with the double LIM domain protein CRP2. The LIM domain is a conserved cysteine and histidine-containing structural module of two tandemly arranged zinc fingers. It has been identified in single or multiple copies in a variety of regulatory proteins, either in combination with defined functional domains, like homeodomains, or alone, like in the CRP family of LIM proteins. Members of the cysteine- and glycine-rich protein family (CRP1, CRP2 and CRP3) contain two zinc-binding LIM domains, LIM1 (amino-terminal) and LIM2 (carboxyl-terminal), and are implicated in diverse cellular processes linked to differentiation, growth control and pathogenesis. Although present in cytoplasm, CRP2BP is mainly a ubiquitously expressed nuclear protein, with highest expression in skeletal muscle and heart.

REFERENCES

1. Okano, I., et al. 1993. Cloning of CRP2, a novel member of the cysteine-rich protein family with two repeats of an unusual LIM/double zinc-finger motif. FEBS Lett. 333: 51-55.
2. Karim, M.A., et al. 1997. Human ESP1/CRP2, a member of the LIM domain protein family: characterization of the cDNA and assignment of the gene locus to chromosome 14q32.3. Genomics 31: 167-176.
3. Konrat, R., et al. 1998. Structure of cysteine- and glycine-rich protein CRP2. Backbone dynamics reveal motional freedom and independent spatial orientation of the lim domains. J. Biol. Chem. 273: 23233-23240.
4. Kloiber, K., et al. 999. Mutational analysis and NMR spectroscopy of quail cysteine and glycine-rich protein CRP2 reveal an intrinsic segmental flexibility of LIM domains. J. Mol. Biol. 292: 893-908.
5. Weiskirchen, R. and Gressner, A.M. 2000. The cysteine- and glycine-rich LIM domain protein CRP2 specifically interacts with a novel human protein (CRP2BP). Biochem. Biophys. Res. Commun. 274: 655-663.
6. Weiskirchen, R., et al. 2001. LIM-domain protein cysteine- and glycine-rich protein 2 (CRP2) is a novel marker of hepatic stellate cells and binding partner of the protein inhibitor of activated STAT1. Biochem. J. 359: 485-496.

CHROMOSOMAL LOCATION

Genetic locus: Csrp2bp (mouse) mapping to 2 G1.

PRODUCT

CRP2BP 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 CRP2BP shRNA Plasmid (m): sc-142581-SH and CRP2BP shRNA (m) Lentiviral Particles: sc-142581-V as alternate gene silencing products.

For independent verification of CRP2BP (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-142581A, sc-142581B and sc-142581C.

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

CRP2BP siRNA (m) is recommended for the inhibition of CRP2BP 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

CRP2BP (A-11): sc-398475 is recommended as a control antibody for monitoring of CRP2BP 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 CRP2BP gene expression knockdown using RT-PCR Primer: CRP2BP (m)-PR: sc-142581-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.