

PAI-RBP1 siRNA (h): sc-88846

BACKGROUND

PAI-RBP1 (plasminogen activator inhibitor 1 RNA-binding protein), also known as SERBP1 (SERPINE1 mRNA-binding protein 1), CGI-55, CHD3IP (chromodomain helicase DNA binding protein 3 interacting protein), HAPB4L or PAI-RBP1, is a membrane-associated protein that localizes to the nucleus, the perinuclear region of the cytoplasm and the plasma membrane. PAI-RBP1 is believed to play a role in the regulation of mRNA stability, as it specifically binds to the CRS (cyclic nucleotide-responsive sequence) motif of the PAI-1 mRNA and acts to stabilize the mRNA and regulate its expression. In addition, PAI-RBP1 interacts with Mi2- α and may be involved in chromatin remodeling. PAI-RBP1 also interacts with PGRMC1 and participates in the transduction of the antiapoptotic action of progesterone in ovarian cell types. The gene encoding PAI-RBP1 is overexpressed in ovarian cancer, suggesting a possible role for PAI-RBP1 in tumorigenesis and tumor metastasis.

REFERENCES

1. Heaton, J.H., et al. 2001. Identification and cDNA cloning of a novel RNA-binding protein that interacts with the cyclic nucleotide-responsive sequence in the type-1 plasminogen activator inhibitor mRNA. *J. Biol. Chem.* 276: 3341-3347.
2. Lemos, T.A., et al. 2003. Characterization of a new family of proteins that interact with the C-terminal region of the chromatin-remodeling factor CHD3. *FEBS Lett.* 533: 14-20.
3. Peluso, J.J., et al. 2005. Expression and function of PAI-RBP1 within gonadotropin-primed immature rat ovaries: PAI-RBP1 regulation of granulosa and luteal cell viability. *Biol. Reprod.* 73: 261-270.
4. Passos, D.O., et al. 2006. Ki-1/57 interacts with PRMT1 and is a substrate for arginine methylation. *FEBS J.* 273: 3946-3961.
5. Peluso, J.J., et al. 2006. Progesterone membrane receptor component 1 expression in the immature rat ovary and its role in mediating progesterone's antiapoptotic action. *Endocrinology* 147: 3133-3140.
6. Lemos, T.A. and Kobarg, J. 2006. CGI-55 interacts with nuclear proteins and co-localizes to p80-coilin positive-coiled bodies in the nucleus. *Cell Biochem. Biophys.* 44: 463-474.

CHROMOSOMAL LOCATION

Genetic locus: SERBP1 (human) mapping to 1p31.3.

PRODUCT

PAI-RBP1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PAI-RBP1 shRNA Plasmid (h): sc-88846-SH and PAI-RBP1 shRNA (h) Lentiviral Particles: sc-88846-V as alternate gene silencing products.

For independent verification of PAI-RBP1 (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-88846A, sc-88846B and sc-88846C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCL, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PAI-RBP1 siRNA (h) is recommended for the inhibition of PAI-RBP1 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 μ M in 66 μ l. 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

PAI-RBP1 (F-8): sc-376832 is recommended as a control antibody for monitoring of PAI-RBP1 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 PAI-RBP1 gene expression knockdown using RT-PCR Primer: PAI-RBP1 (h)-PR: sc-88846-PR (20 μ l). 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.