

# PAI-RBP1 siRNA (m): sc-151994

## 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), HABP4L or PAIRBP1, 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- $\alpha$  and may be involved in chromatin remodeling. PAI-RBP1 also interacts with PGRMC1 and participates in the transduction of the anti-apoptotic 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 CHD-3. *FEBS Lett.* 533: 14-20.
3. Peluso, J.J., et al. 2005. Expression and function of PAIRBP1 within gonadotropin-primed immature rat ovaries: PAIRBP1 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 (mouse) mapping to 6 C1.

## PRODUCT

PAI-RBP1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PAI-RBP1 shRNA Plasmid (m): sc-151994-SH and PAI-RBP1 shRNA (m) Lentiviral Particles: sc-151994-V as alternate gene silencing products.

For independent verification of PAI-RBP1 (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-151994A, sc-151994B and sc-151994C.

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

## APPLICATIONS

PAI-RBP1 siRNA (m) is recommended for the inhibition of PAI-RBP1 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  $\mu$ M in 66  $\mu$ 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> 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 (m)-PR: sc-151994-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.