



## P23 siRNA (m): sc-62742

### BACKGROUND

P23, also known as PTGES3 (prostaglandin E synthase 3) or TEBP (telomerase-binding protein p23), is a ubiquitously expressed protein that functions as a cochaperone and plays an important role in signal transduction. One of several proteins in the HSP 90-based molecular chaperone complex, P23 promotes the breakdown of transcriptional regulatory complexes by disrupting receptor-mediated transcriptional activation. P23 acts in a hormone-dependent manner to chaperone estrogen receptor  $\alpha$  (ER $\alpha$ ), a steroid complex, to its mature form and to regulate the expression of ER $\alpha$ -related genes. Localized to the cytoplasm, P23 interacts with the glucocorticoid receptor (GR) and, through disassembly of the GR transcription machinery, is thought to inhibit GR-dependent transcription. The involvement of P23 in various steroid receptor-mediated pathways suggests close involvement in signal transduction and regulation of cellular processes. Upregulation of P23 is implicated in the invasion and metastasis of various cancers.

### REFERENCES

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- Freeman, B.C., et al. 2002. Disassembly of transcriptional regulatory complexes by molecular chaperones. *Science* 296: 2232-2235.
- Felts, S.J., et al. 2003. P23, a simple protein with complex activities. *Cell Stress Chaperones* 8: 108-113.
- Tanioka, T., et al. 2003. Regulation of cytosolic prostaglandin E2 synthase by 90 kDa heat shock protein. *Biochem. Biophys. Res. Commun.* 303: 1018-1023.
- Gausdal, G., et al. 2004. Caspase-dependent, geldanamycin-enhanced cleavage of cochaperone P23 in leukemic apoptosis. *Leukemia* 18: 1989-1996.
- Mollerup, J. and Berchtold, M.W. 2005. The co-chaperone p23 is degraded by caspases and the proteasome during apoptosis. *FEBS Lett.* 579: 4187-4192.
- Picard, D. 2006. Intracellular dynamics of the Hsp90 co-chaperone p23 is dictated by Hsp90. *Exp. Cell Res.* 312: 198-204.

### CHROMOSOMAL LOCATION

Genetic locus: Ptges3 (mouse) mapping to 10 D3.

### PRODUCT

P23 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 P23 shRNA Plasmid (m): sc-62742-SH and P23 shRNA (m) Lentiviral Particles: sc-62742-V as alternate gene silencing products.

For independent verification of P23 (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-62742A, sc-62742B and sc-62742C.

### 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

P23 siRNA (m) is recommended for the inhibition of P23 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

P23 (JJ6): sc-101496 is recommended as a control antibody for monitoring of P23 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™ Molecular Weight Standards: sc-2035, UltraCruz® 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® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

### RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor P23 gene expression knockdown using RT-PCR Primer: P23 (m)-PR: sc-62742-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.