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# PMFBP1 siRNA (m): sc-152345

## BACKGROUND

PMF-1 (polyamine-modulated factor 1) is a 205 amino acid protein involved in kinetochore formation. Localized to the nucleus, PMF-1 contains a coiled-coil domain which interacts with the leucine-zipper domain of Nrf2. This interaction regulates the transcription of SSAT, a regulatory enzyme for polyamine catabolism. PMF-1 is also a component of the MIS12 complex, which is required for kinetochore formation and chromosomal alignment and segregation. PMF-1 is expressed at highest levels in skeletal muscle and heart, with moderate expression in liver and kidney. PMFBP1 (polyamine-modulated factor 1-binding protein 1) is a 1,022 amino acid protein that binds PMF-1 and may be involved in general organization of the cytoskeleton. Due to evidence that PMFBP1 may play a role in sperm tail morphology, it may therefore affect fertility. There are three isoforms of PMFBP1 that are produced as a result of alternative splicing events.

## REFERENCES

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- Ohuchi, J., et al. 2001. Characterization of a novel gene, sperm-tail-associated protein (Stap), in mouse post-meiotic testicular germ cells. *Mol. Reprod. Dev.* 59: 350-358.
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- Kline, S.L., et al. 2006. The human Mis12 complex is required for kinetochore assembly and proper chromosome segregation. *J. Cell Biol.* 173: 9-17.
- Hyvönen, M.T., et al. 2006. Polyamine-regulated unproductive splicing and translation of spermidine/spermine N<sup>1</sup>-acetyltransferase. *RNA* 12: 1569-1582.
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- Aleman, A., et al. 2008. Identification of PMF-1 methylation in association with bladder cancer progression. *Clin. Cancer Res.* 14: 8236-8243.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: *Pmfbp1* (mouse) mapping to 8 D3.

## PRODUCT

PMFBP1 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 PMFBP1 shRNA Plasmid (m): sc-152345-SH and PMFBP1 shRNA (m) Lentiviral Particles: sc-152345-V as alternate gene silencing products.

For independent verification of PMFBP1 (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-152345A, sc-152345B and sc-152345C.

## 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

PMFBP1 siRNA (m) is recommended for the inhibition of PMFBP1 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PMFBP1 gene expression knockdown using RT-PCR Primer: PMFBP1 (m)-PR: sc-152345-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.