



## PMF-1 (G-15): sc-103838

### 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. PMF-1 exists as five isoforms produced by alternative splicing.

### REFERENCES

1. Wang, Y., et al. 1999. Cloning and characterization of human polyamine-modulated factor-1, a transcriptional cofactor that regulates the transcription of the spermidine/spermine N<sup>1</sup>-acetyltransferase gene. *J. Biol. Chem.* 274: 22095-22101.
2. Wang, Y., et al. 2001. Characterization of the interaction between the transcription factors human polyamine modulated factor (PMF-1) and NF-E2-related factor 2 (Nrf2) in the transcriptional regulation of the spermidine/spermine N<sup>1</sup>-acetyltransferase (SSAT) gene. *Biochem. J.* 355: 45-49.
3. Wang, Y., et al. 2002. Polyamine-modulated factor 1 binds to the human homologue of the 7a subunit of the *Arabidopsis* COP9 signalosome: implications in gene expression. *Biochem. J.* 366: 79-86.
4. Cheeseman, et al. 2004. A conserved protein network controls assembly of the outer kinetochore and its ability to sustain tension. *Genes Dev.* 18: 2255-2268.
5. Obuse, C., et al. 2004. A conserved MIS12 centromere complex is linked to heterochromatic HP1 and outer kinetochore protein ZWINT-1. *Nat. Cell Biol.* 6: 1135-1141.
6. 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.
7. Hyvönen, M.T., et al. 2006. Polyamine-regulated unproductive splicing and translation of spermidine/spermine N<sup>1</sup>-acetyltransferase. *RNA* 12: 1569-1582.
8. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 609176. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
9. Aleman, A., et al. 2008. Identification of PMF-1 methylation in association with bladder cancer progression. *Clin. Cancer Res.* 14: 8236-8243.

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### PROTOCOLS

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

### CHROMOSOMAL LOCATION

Genetic locus: Pmf1 (mouse) mapping to 3 F1.

### SOURCE

PMF-1 (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PMF-1 of mouse origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103838 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

PMF-1 (G-15) is recommended for detection of PMF-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PMF-1 siRNA (m): sc-106424, PMF-1 shRNA Plasmid (m): sc-106424-SH and PMF-1 shRNA (m) Lentiviral Particles: sc-106424-V.

Molecular Weight of PMF-1: 20 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.