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# MAWDBP siRNA (m): sc-149300

## BACKGROUND

MAWDBP (MAWD binding protein), also known as PBLD (phenazine biosynthesis-like protein domain containing) or MAWBP, is a 288 amino acid protein that belongs to the phenazine biosynthesis-like protein (PhzF) family. It has been suggested that MAWDBP is the only representative of the PhzF family in the human genome. Expressed in most tissues, MAWDBP is a WD-40 repeat-containing  $\beta$ -propeller protein believed to participate in the MAPK signaling pathway. Involved in multiple basic cellular functions, expression of MAWDBP is elevated in several disease processes, including Insulin resistance, folate deficiency and hypotension. It is thought that MAWDBP may also be involved in carcinogenesis.

## REFERENCES

1. Mavrodi, D.V., et al. 2004. The purification, crystallization and preliminary structural characterization of PhzF, a key enzyme in the phenazine-biosynthesis pathway from *Pseudomonas fluorescens* 2-79. *Acta Crystallogr. D Biol. Crystallogr.* 60: 184-186.
2. Parsons, J.F., et al. 2004. Structure of the phenazine biosynthesis enzyme PhzG. *Acta Crystallogr. D Biol. Crystallogr.* 60: 2110-2113.
3. Parsons, J.F., et al. 2004. Structure and function of the phenazine biosynthesis protein PhzF from *Pseudomonas fluorescens* 2-79. *Biochemistry* 43: 12427-12435.
4. Blankenfeldt, W., et al. 2004. Structure and function of the phenazine biosynthetic protein PhzF from *Pseudomonas fluorescens*. *Proc. Natl. Acad. Sci. USA* 101: 16431-16436.
5. Solomon, S.S., et al. 2005. Proteome of H-411E (liver) cells exposed to Insulin and tumor necrosis factor- $\alpha$ : analysis of proteins involved in Insulin resistance. *J. Lab. Clin. Med.* 145: 275-283.
6. Chanson, A., et al. 2005. Proteomic analysis reveals changes in the liver protein pattern of rats exposed to dietary folate deficiency. *J. Nutr.* 135: 2524-2529.
7. Liger, D., et al. 2005. Crystal structure of YHI9, the yeast member of the phenazine biosynthesis PhzF enzyme superfamily. *Proteins* 60: 778-786.

## CHROMOSOMAL LOCATION

Genetic locus: Pbl1 (mouse) mapping to 10 B4.

## PRODUCT

MAWDBP siRNA (m) is a pool of 2 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 MAWDBP shRNA Plasmid (m): sc-149300-SH and MAWDBP shRNA (m) Lentiviral Particles: sc-149300-V as alternate gene silencing products.

For independent verification of MAWDBP (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-149300A and sc-149300B.

## 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

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

MAWDBP (1): sc-101502 is recommended as a control antibody for monitoring of MAWDBP 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 MAWDBP gene expression knockdown using RT-PCR Primer: MAWDBP (m)-PR: sc-149300-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.