SANTA CRUZ BIOTECHNOLOGY, INC.

MAZ siRNA (m): sc-38036

BACKGROUND

The Myc-associated zinc finger protein MAZ (also designated ZF87, and Pur-1 in mouse) is a transcription factor that participates in both the initiation and termination of transcription of target genes. MAZ functions as a true transcriptional repressor in that it represses transcription independent of the c-Myc promoter. Both MAZ and SP1 bind to the parathyroid hormone (PTH)/PTH-related peptide receptor promoter, thereby influencing the cell-specific expression of its gene product. MAZ and SP1 also regulate expression from the serotonin 1A receptor gene promoter, suggesting that MAZ may act on a variety of promoters through G-C rich sequences, which serve as binding sites for the SP1 family of transcription factors. Competition between SP1 and MAZ control tissue-specific expression of the PNMT gene. The interaction of MAZ with the transcriptional repressor FAC1 may affect gene regulation in neurodegeneration. MAZ also acts as a growth suppressor protein, in part by affecting the levels of key cell cycle regulatory proteins such as cyclin A and E.

REFERENCES

1. Parks, C.L. and Shenk, T. 1996. The serotonin 1A receptor gene contains a TAT-less promoter that responds to MAZ and Sp1. J. Biol. Chem. 271: 4417-4430.
2. Song, J., et al. 1998. Genomic organization and expression of a human gene for Myc-associated zinc finger protein (MAZ). J. Biol. Chem. 273: 20603-20614.
3. Song, J., et al. 1998. Human genes for KNSL4 and MAZ are located close to one another on chromosome 16p11.2. Genomics 52: 374-377.
4. Her, S., et al. 1999. Phenyl-ethanolamine N-methyltransferase gene expression. Sp1 and MAZ potential for tissue-specific expression. J. Biol. Chem. 274: 8698-8707.
5. Izzo, M.W., et al. 1999. Transcriptional repression from the c-Myc P2 promoter by the zinc finger protein ZF87/MAZ. J. Biol. Chem. 274: 19498-19506.
6. Song, J., et al. 1999. Structural organization and expression of the mouse gene for Pur-1, a highly conserved homolog of the human MAZ gene. Eur. J. Biochem. 259: 676-683.

CHROMOSOMAL LOCATION

Genetic locus: Maz (mouse) mapping to 7 F3.

PRODUCT

MAZ 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MAZ shRNA Plasmid (m): sc-38036-SH and MAZ shRNA (m) Lentiviral Particles: sc-38036-V as alternate gene silencing products.

For independent verification of MAZ (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-38036A, sc-38036B and sc-38036C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

MAZ siRNA (m) is recommended for the inhibition of MAZ 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 µM in 66 µl. 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

MAZ (133.7): sc-130915 is recommended as a control antibody for monitoring of MAZ 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 MAZ gene expression knockdown using RT-PCR Primer: MAZ (m)-PR: sc-38036-PR (20 µl). 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 for detailed protocols and support products.