SANTA CRUZ BIOTECHNOLOGY, INC.

PCM1 siRNA (m): sc-61306

BACKGROUND

Pericentriolar material is a dynamic substance whose composition can oscillate during the cell cycle. PCM1 (pericentriolar material 1), is a centrosomal protein that demonstrates a distinct cell cycle-dependent association with the centrosome complex. PCM1 is securely associated with the centrosome complex through G_1, S, and a portion of G_2. However, late in G_2, as cells prepare for mitosis, PCM1 dissociates from the centrosome and then remains evenly diffused throughout the cell during mitosis before re-associating with the centrosomes in the G_1 phase progeny cells. The chromosomal localization of the PCM1 on chromosome 8p22 is one of interest since this region is commonly deleted in several tumors. In thyroid tumor tissue, PCM1 expression drastically decreases and its subcellular localization is shifted.

REFERENCES

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3. Corvi, R., et al. 2000. RET/PCM1: a novel fusion gene in papillary thyroid carcinoma. Oncogene 19: 4236-4242.
4. Mahon, F.X., et al. 2005. JAK the trigger. Oncogene 24: 7125-7126.
5. Bousquet, M., et al. 2005. The t(8;9)(p22;p24) translocation in atypical chronic myeloid leukaemia yields a new PCM1-JAK2 fusion gene. Oncogene 24: 7248-7252.
6. Murati, A., et al. 2005. PCM1-JAK2 fusion in myeloproliferative disorders and acute erythroid leukemia with t(8;9) translocation. Leukemia 19: 1692-1696.
7. Venter, D.J., et al. 2005. Complex CGH alterations on chromosome arm 8p at candidate tumor suppressor gene loci in breast cancer cell lines. Cancer Genet. Cytogenet. 160: 134-140.
8. Reiter, A., et al. 2005. The t(8;9)(p22;p24) is a recurrent abnormality in chronic and acute leukemia that fuses PCM1 to JAK2. Cancer Res. 65: 2662-2667.

CHROMOSOMAL LOCATION

Genetic locus: Pcm1 (mouse) mapping to 8 A4.

PRODUCT

PCM1 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 PCM1 shRNA Plasmid (m): sc-61306-SH and PCM1 shRNA (m) Lentiviral Particles: sc-61306-V as alternate gene silencing products.

For independent verification of PCM1 (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-61306A, sc-61306B and sc-61306C.

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

PCM1 siRNA (m) is recommended for the inhibition of PCM1 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

PCM1 (G-6): sc-398365 is recommended as a control antibody for monitoring of PCM1 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 PCM1 gene expression knockdown using RT-PCR Primer: PCM1 (m)-PR: sc-61306-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.