SANTA CRUZ BIOTECHNOLOGY, INC.

PGRMC2 siRNA (m): sc-106403

BACKGROUND

PGRMC2 (progesterone receptor membrane component 2), also known as DG6 (steroid receptor protein DG6) or PMBP (progesterone membrane-binding protein), is a single pass membrane protein belonging to the cytochrome b5 family (MAPR (membrane associated progesterone receptor) subfamily). Expressed in sperm, PGRMC2 is believed to function as a steroid receptor and may participate in the progesterone-dependent sperm acrosome reaction. PGRMC2 shares approximately 50% overall sequence identity with its close relative PGRMC1. The loss of the gene encoding PGRMC2 is associated with metastasis in uterine endocervical adenocarcinomas, implicating a potential role of PGRMC2 in the suppression of metastasis of endocervical adenocarcinomas.

REFERENCES

1. Gerdes, D., et al. 1998. Cloning and tissue expression of two putative steroid membrane receptors. Biol. Chem. 379: 907-911.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607735. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Hirai, Y., et al. 2004. Putative gene loci associated with carcinogenesis and metastasis of endocervical adenocarcinomas of uterus determined by conventional and array-based CGH. Am. J. Obstet. Gynecol. 191: 1173-1182.
4. Lösel, R., et al. 2005. Classic and non-classic progesterone receptors are both expressed in human spermatozoa. Horm. Metab. Res. 37: 10-14.
5. Nilsson, E.E., et al. 2006. Interactions between progesterone and tumor necrosis factor-α in the regulation of primordial follicle assembly. Reproduction 132: 877-886.
6. Cahill, M.A. 2007. Progesterone receptor membrane component 1: an integrative review. J. Steroid Biochem. Mol. Biol. 105: 16-36.

CHROMOSOMAL LOCATION

Genetic locus: Pgrmc2 (mouse) mapping to 3 B.

PRODUCT

PGRMC2 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 PGRMC2 shRNA Plasmid (m): sc-106403-SH and PGRMC2 shRNA (m) Lentiviral Particles: sc-106403-V as alternate gene silencing products.

For independent verification of PGRMC2 (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-106403A, sc-106403B and sc-106403C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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

PGRMC2 siRNA (m) is recommended for the inhibition of PGRMC2 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

PGRMC2 (F-3): sc-374624 is recommended as a control antibody for monitoring of PGRMC2 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 PGRMC2 gene expression knockdown using RT-PCR Primer: PGRMC2 (m)-PR: sc-106403-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.