



mPR γ siRNA (m): sc-155918

BACKGROUND

The steroid progesterone induces the resumption of maturation in oocytes via a nongenomic pathway through binding to a novel, membrane progesterin receptor (mPR). This pathway inhibits adenyl cyclase and reduces intracellular cAMP, and also activates mitogen-activated protein kinase to effect signal transduction pathways. Five distinct groups, designated α , β , γ , δ and ϵ , comprise this gene family, and while all contain seven transmembrane domains, they show distinct distributions in reproductive, neural, kidney and intestinal tissues, respectively. These characteristics separate them from nuclear progesterin receptors, and instead imply similarity to G protein-coupled receptors.

REFERENCES

- Sheng, Y., et al. 2001. Regulation of *Xenopus* oocyte meiosis arrest by G protein $\beta\gamma$ subunits. *Curr. Biol.* 11: 405-416.
- Curran-Rauhut, M.A., et al. 2002. The distribution of progesterin receptor mRNA in rat brainstem. *Brain Res. Gene Expr. Patterns* 1: 151-157.
- Zhu, Y., et al. 2003. Cloning, expression, and characterization of a membrane progesterin receptor and evidence it is an intermediary in meiotic maturation of fish oocytes. *Proc. Natl. Acad. Sci. USA* 100: 2231-2236.
- Zhu, Y., et al. 2003. Identification, classification, and partial characterization of genes in humans and other vertebrates homologous to a fish membrane progesterin receptor. *Proc. Natl. Acad. Sci. USA* 100: 2237-2242.
- Kudwa, A.E., et al. 2003. Double oestrogen receptor α and β knockout mice reveal differences in neural oestrogen-mediated progesterin receptor induction and female sexual behaviour. *J. Neuroendocrinol.* 15: 978-983.
- Lonstein, J.S., et al. 2004. Immunocytochemical investigation of nuclear progesterin receptor expression within dopaminergic neurones of the female rat brain. *J. Neuroendocrinol.* 16: 534-543.
- Kudwa, A.E., et al. 2004. Estrogen receptor beta modulates estradiol induction of progesterin receptor immunoreactivity in male, but not in female, mouse medial preoptic area. *Endocrinology* 145: 4500-4506.

CHROMOSOMAL LOCATION

Genetic locus: Paqr5 (mouse) mapping to 9 B.

PRODUCT

mPR γ 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see mPR γ shRNA Plasmid (m): sc-155918-SH and mPR γ shRNA (m) Lentiviral Particles: sc-155918-V as alternate gene silencing products.

For independent verification of mPR γ (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-155918A, sc-155918B and sc-155918C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

mPR γ siRNA (m) is recommended for the inhibition of mPR γ 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 μ M in 66 μ 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor mPR γ gene expression knockdown using RT-PCR Primer: mPR γ (m)-PR: sc-155918-PR (20 μ 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 for detailed protocols and support products.