

mPR α siRNA (h): sc-61071

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 the mPR gene family. mPR α , also designated progesterin and adipoQ receptor family member VII (PAQR7), consists of an extracellular N-terminus, an intracellular C-terminus and seven transmembrane domains. mPR α is expressed in ovary, testis, placenta, uterus and bladder. mPR β , or progesterin and adipoQ receptor family member VIII (PAQR8), consists of eight putative transmembrane regions and an intracellular N-terminus that contains a leucine-rich motif. mPR β is a 354 amino acid protein expressed in brain and spinal cord. Both mPR α and mPR β may be G protein-coupled receptors and may be involved in oocyte maturation.

REFERENCES

1. Suzuki, T., et al. 2001. A novel gene in the chromosomal region for juvenile myoclonic epilepsy on 6p12 encodes a brain-specific lysosomal membrane protein. *Biochem. Biophys. Res. Commun.* 288: 626-636.
2. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607779. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Hammes, S.R. 2003. The further redefining of steroid-mediated signaling. *Proc. Natl. Acad. Sci. USA* 100: 2168-2170.
4. Kazeto, Y., et al. 2005. Molecular characterization of three forms of putative membrane-bound progesterin receptors and their tissue-distribution in channel catfish, *Ictalurus punctatus*. *J. Mol. Endocrinol.* 34: 781-791.
5. Tang, Y.T., et al. 2005. PAQR proteins: a novel membrane receptor family defined by an ancient 7-transmembrane pass motif. *J. Mol. Evol.* 61: 372-380.

CHROMOSOMAL LOCATION

Genetic locus: PAQR7 (human) mapping to 1p36.11.

PRODUCT

mPR α siRNA (h) 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 α shRNA Plasmid (h): sc-61071-SH and mPR α shRNA (h) Lentiviral Particles: sc-61071-V as alternate gene silencing products.

For independent verification of mPR α (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61071A, sc-61071B and sc-61071C.

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 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 α siRNA (h) is recommended for the inhibition of mPR α expression in human 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 α gene expression knockdown using RT-PCR Primer: mPR α (h)-PR: sc-61071-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.