

# PAQR4 siRNA (h): sc-93375

## BACKGROUND

The PAQR superfamily of receptors include AdipoR1, AdipoR2 and PAQR3-PAQR9. PAQR proteins encode functional receptors with a broad range of ligand specificities. The best characterized family members are AdipoR1 and AdipoR2, which regulate fatty acid oxidation and the uptake of glucose by adiponectin. Certain PAQR family members have been shown to specifically bind progesterone and mediate non-genomic effects. In yeast, since PAQR progesterone-dependent signaling does not require heterotrimeric G-proteins, it is suspected that PAQRs may function as a novel class of G protein-coupled receptors. PAQR4 (progesterone and adipoQ receptor family member IV) is a 273 amino acid multi-pass membrane protein that is widely expressed and exists as three alternatively spliced isoforms.

## REFERENCES

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2. Tang, Y.T., Hu, T., Arterburn, M., Boyle, B., Bright, J.M., Emtage, P.C. and Funk, W.D. 2005. PAQR proteins: a novel membrane receptor family defined by an ancient 7-transmembrane pass motif. *J. Mol. Evol.* 61: 372-380.
3. Thomas, P. 2008. Characteristics of membrane progesterin receptor  $\alpha$  (mPR $\alpha$ ) and progesterone membrane receptor component 1 (PGMRC1) and their roles in mediating rapid progesterone actions. *Front. Neuroendocrinol.* 29: 292-312.
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5. Smith, J.L., Kupchak, B.R., Garitaonandia, I., Hoang, L.K., Maina, A.S., Regalla, L.M. and Lyons, T.J. 2008. Heterologous expression of human mPR $\alpha$ , mPR $\beta$  and mPR $\gamma$  in yeast confirms their ability to function as membrane progesterone receptors. *Steroids* 73: 1160-1173.
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## CHROMOSOMAL LOCATION

Genetic locus: PAQR4 (human) mapping to 16p13.3.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

PAQR4 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PAQR4 shRNA Plasmid (h): sc-93375-SH and PAQR4 shRNA (h) Lentiviral Particles: sc-93375-V as alternate gene silencing products.

For independent verification of PAQR4 (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-93375A, sc-93375B and sc-93375C.

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

## APPLICATIONS

PAQR4 siRNA (h) is recommended for the inhibition of PAQR4 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  $\mu$ M in 66  $\mu$ 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 PAQR4 gene expression knockdown using RT-PCR Primer: PAQR4 (h)-PR: sc-93375-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.