

PAQR3 siRNA (h): sc-89094

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. PAQR3 (progesterin and adipoQ receptor family member 3), also designated Raf kinase trapping to Golgi, is a 311 amino acid multi-pass membrane protein that is localized to the Golgi apparatus membrane. By sequestering it to the Golgi, PAQR3 acts as a spatial regulator of RAF1 kinase.

REFERENCES

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2. 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.
3. Feng, L., et al. 2007. Spatial regulation of Raf kinase signaling by RKTG. *Proc. Natl. Acad. Sci. USA* 104: 14348-14353.
4. Thomas, P. 2008. Characteristics of membrane progesterin receptor α (mPR α) and progesterone membrane receptor component 1 (PGMRC1) and their roles in mediating rapid progesterin actions. *Front. Neuroendocrinol.* 29: 292-312.
5. Romero-Sánchez, M., et al. 2008. Expression profile of heptahelical putative membrane progesterone receptors in epithelial ovarian tumors. *Hum. Pathol.* 39: 1026-1033.
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CHROMOSOMAL LOCATION

Genetic locus: PAQR3 (human) mapping to 4q21.21.

PRODUCT

PAQR3 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 PAQR3 shRNA Plasmid (h): sc-89094-SH and PAQR3 shRNA (h) Lentiviral Particles: sc-89094-V as alternate gene silencing products.

For independent verification of PAQR3 (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-89094A, sc-89094B and sc-89094C.

RESEARCH USE

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

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

PAQR3 siRNA (h) is recommended for the inhibition of PAQR3 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.

GENE EXPRESSION MONITORING

PAQR3 (A-8): sc-515831 is recommended as a control antibody for monitoring of PAQR3 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 PAQR3 gene expression knockdown using RT-PCR Primer: PAQR3 (h)-PR: sc-89094-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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