

# PAQR4 (N-13): sc-136794

## 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 3 alternatively spliced isoforms.

## REFERENCES

1. Fernandes, M.S., et al. 2005. Regulated expression of putative membrane progesterone receptor homologues in human endometrium and gestational tissues. *J. Endocrinol.* 187: 89-101.
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. Thomas, P. 2008. Characteristics of membrane progesterone receptor  $\alpha$  (mPR $\alpha$ ) and progesterone membrane receptor component 1 (PGMRC1) and their roles in mediating rapid progesterone actions. *Front Neuroendocrinol.* 29: 292-312.
4. Romero-Sánchez, M., et al. 2008. Expression profile of heptahelical putative membrane progesterone receptors in epithelial ovarian tumors. *Hum. Pathol.* 39: 1026-1033.
5. Smith, J.L., et al. 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.

## CHROMOSOMAL LOCATION

Genetic locus: PAQR4 (human) mapping to 16p13.3; Paqr4 (mouse) mapping to 17 A3.3.

## SOURCE

PAQR4 (N-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of PAQR4 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136794 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

PAQR4 (N-13) is recommended for detection of PAQR4 isoforms 1-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other PAQR family members.

PAQR4 (N-13) is also recommended for detection of PAQR4 isoforms 1-3 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PAQR4 siRNA (h): sc-93375, PAQR4 siRNA (m): sc-152020, PAQR4 shRNA Plasmid (h): sc-93375-SH, PAQR4 shRNA Plasmid (m): sc-152020-SH, PAQR4 shRNA (h) Lentiviral Particles: sc-93375-V and PAQR4 shRNA (m) Lentiviral Particles: sc-152020-V.

Molecular Weight of PAQR4 isoforms: 29/25/21 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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) or our catalog for detailed protocols and support products.