

# GPRC5D (P-20): sc-55370

## BACKGROUND

GPRC5D (G protein-coupled receptor family C group 5 member D) is a 344 amino acid protein encoded by the mouse GPRC5D gene. GPRC5D is an orphan receptor member of the G protein-coupled receptor 3 family and a member of RAIG family. G protein-coupled receptors (GPCRs or GPRs) contain seven transmembrane domains and transduce extracellular signals through heterotrimeric G proteins. Key roles for G protein-coupled receptors include control of protein maturation and cell surface delivery and providing the correct framework for interactions with both heterotrimeric G proteins and arrestins to allow signal generation and its termination. This retinoic acid-inducible G protein-coupled receptor provides evidence for a possible interaction between retinoid and G protein signaling pathways. GPRC5D is found in hard keratinized structures.

## REFERENCES

- Bräuner-Osborne, H. and Krogsgaard-Larsen, P. 2000. Sequence and expression pattern of a novel human orphan G protein-coupled receptor, GPRC5B, a family C receptor with a short amino-terminal domain. *Genomics* 65: 121-128.
- Robbins, M.J., Michalovich, D., Hill, J., Calver, A.R., Medhurst, A.D., Gloger, I., Sims, M., Middlemiss, D.N. and Pangalos, M.N. 2000. Molecular cloning and characterization of two novel retinoic acid-inducible orphan G-protein-coupled receptors (GPRC5B and GPRC5C). *Genomics* 67: 8-18.
- Robbins, M.J., Charles, K.J., Harrison, D.C. and Pangalos, M.N. 2002. Localisation of the GPRC5B receptor in the rat brain and spinal cord. *Brain Res. Mol. Brain Res.* 106: 136-144.
- Takeda, S., Kadowaki, S., Haga, T., Takaesu, H. and Mitaku, S. 2002. Identification of G protein-coupled receptor genes from the human genome sequence. *FEBS Lett.* 520: 97-101.
- Inoue, S., Nambu, T. and Shimomura, T. 2004. The RAIG family member, GPRC5D, is associated with hard-keratinized structures. *J. Invest. Dermatol.* 122: 565-573.
- Imanishi, S., Sugimoto, M., Morita, M., Kume, S. and Manabe, N. 2007. Changes in expression and localization of GPRC5B and RAR $\alpha$  in the placenta and yolk sac during middle to late gestation in mice. *J. Reprod. Dev.* 53: 1131-1136.

## CHROMOSOMAL LOCATION

Genetic locus: GPRC5D (human) mapping to 12p13.3.

## SOURCE

GPRC5D (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of GPRC5D of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55370 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GPRC5D (P-20) is recommended for detection of GPRC5D of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GPRC5D siRNA (h): sc-62411, GPRC5D shRNA Plasmid (h): sc-62411-SH and GPRC5D shRNA (h) Lentiviral Particles: sc-62411-V.

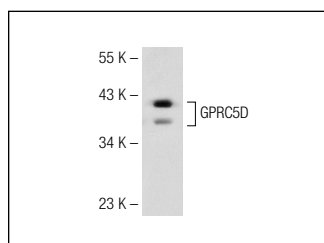
Molecular Weight of GPRC5D: 39 kDa.

Positive Controls: SK-MEL-28 cell lysate: sc-2236.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotting A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



GPRC5D (P-20): sc-55370. Western blot analysis of GPRC5D expression in SK-MEL-28 whole cell lysate.

## 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.