

GPRC5D (G-14): sc-55366

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

1. Bräuner-Osborne, H., et al. 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.
2. Robbins, M.J., et al. 2000. Molecular cloning and characterization of two novel retinoic acid-inducible orphan G protein-coupled receptors (GPRC5B and GPRC5C). *Genomics* 67: 8-18.
3. Robbins, M.J., et al. 2002. Localisation of the GPRC5B receptor in the rat brain and spinal cord. *Brain Res. Mol. Brain Res.* 106: 136-144.
4. Takeda, S., et al. 2002. Identification of G protein-coupled receptor genes from the human genome sequence. *FEBS Lett.* 520: 97-101.
5. Inoue, S., et al. 2004. The RAIG family member, GPRC5D, is associated with hard-keratinized structures. *J. Invest. Dermatol.* 122: 565-573.
6. Imanishi, S., et al. 2007. Changes in expression and localization of GPRC5B and RAR α in the placenta and yolk sac during middle to late gestation in mice. *J. Reprod. Dev.* 53: 1131-1136.

CHROMOSOMAL LOCATION

Genetic locus: Gprc5d (mouse) mapping to 6 G1.

SOURCE

GPRC5D (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of GPRC5D of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-55366 P, (100 μ 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

GPRC5D (G-14) is recommended for detection of GPRC5D of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

GPRC5D (G-14) is also recommended for detection of GPRC5D in additional species, including equine, canine and bovine.

Suitable for use as control antibody for GPRC5D siRNA (m): sc-62412, GPRC5D shRNA Plasmid (m): sc-62412-SH and GPRC5D shRNA (m) Lentiviral Particles: sc-62412-V.

Molecular Weight (predicted) of GPRC5D isoforms: 39/34/37 kDa.

Molecular Weight (observed) of GPRC5D: 29-45 kDa.

Positive Controls: mouse kidney extract: sc-2255 or rat pancreas extract: sc-364806.

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 Blotto 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.

RESEARCH USE

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

PROTOCOLS

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


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Try **GPRC5D (E-7): sc-377504**, our highly recommended monoclonal alternative to GPRC5D (G-14).