

GPRC5D (K-15): sc-55367

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. and Krosggaard-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.
2. 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.
3. 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.
4. 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.
5. 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.
6. Imanishi, S., Sugimoto, M., Morita, M., Kume, S. and Manabe, N. 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 (human) mapping to 12p13.1.

SOURCE

GPRC5D (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-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 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-55367 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GPRC5D (K-15) is recommended for detection of GPRC5D of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (K-15) is also recommended for detection of GPRC5D in additional species, including equine.

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

Molecular Weight (observed) of GPRC5D: 29-45 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 Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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.