

# GPR21 (T-13): sc-168029

## BACKGROUND

G protein-coupled receptors (GPRs), also known as seven transmembrane receptors, heptahelical receptors or 7TM receptors, comprise a superfamily of proteins that play a role in many different stimulus-response pathways. G protein-coupled receptors translate extracellular signals into intracellular signals (G protein activation) and they respond to a variety of signaling molecules, such as hormones and neurotransmitters. GPR21 is a 349 amino acid multi-pass membrane protein that functions as an orphan receptor and belongs to the GPR1 family. The gene encoding GPR21 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and Familial dysautonomia, are both associated with chromosome 9.

## REFERENCES

1. O'Dowd, B.F., et al. 1997. Cloning and chromosomal mapping of four putative novel human G protein-coupled receptor genes. *Gene* 187: 75-81.
2. Menzaghi, F., et al. 2002. Constitutively activated G protein-coupled receptors: a novel approach to CNS drug discovery. *Curr. Drug Targets CNS Neurol. Disord.* 1: 105-121.
3. Szekeres, P.G. 2002. Functional assays for identifying ligands at orphan G protein-coupled receptors. *Recept. Channels* 8: 297-308.
4. Vassilatis, D.K., et al. 2003. The G protein-coupled receptor repertoires of human and mouse. *Proc. Natl. Acad. Sci. USA* 100: 4903-4908.
5. Cottin, V., et al. 2007. Pulmonary vascular manifestations of hereditary hemorrhagic telangiectasia (rendu-osler disease). *Respiration* 74: 361-378.
6. Zeitz, M.J., et al. 2009. Organization of the amplified type I interferon gene cluster and associated chromosome regions in the interphase nucleus of human osteosarcoma cells. *Chromosome Res.* 17: 305-319.
7. Axelrod, F.B., et al. 2010. Neuroimaging supports central pathology in familial dysautonomia. *J. Neurol.* 257: 198-206.

## CHROMOSOMAL LOCATION

Genetic locus: GPR21 (human) mapping to 9q33.2; Gpr21 (mouse) mapping to 2 B.

## SOURCE

GPR21 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of GPR21 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-168029 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

GPR21 (T-13) is recommended for detection of GPR21 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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); non cross-reactive with other GPR family members.

GPR21 (T-13) is also recommended for detection of GPR21 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for GPR21 siRNA (h): sc-92521, GPR21 siRNA (m): sc-145730, GPR21 shRNA Plasmid (h): sc-92521-SH, GPR21 shRNA Plasmid (m): sc-145730-SH, GPR21 shRNA (h) Lentiviral Particles: sc-92521-V and GPR21 shRNA (m) Lentiviral Particles: sc-145730-V.

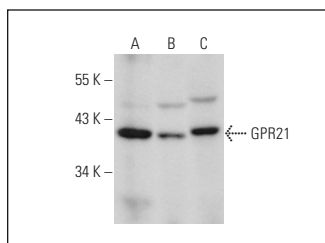
Molecular Weight of GPR21: 40 kDa.

Positive Controls: mouse heart extract: sc-2254, mouse brain extract: sc-2253 or mouse cerebellum extract: sc-2403.

## 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.

## DATA



GPR21 (T-13): sc-168029. Western blot analysis of GPR21 expression in mouse heart (A), mouse brain (B) and mouse cerebellum (C) tissue extracts.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.