

GPR75 (T-14): sc-164539

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. GPR75 is a 540 amino acid multi-pass membrane protein that functions as an orphan receptor and belongs to the GPR1 family. Highly expressed in spinal cord and brain, GPR75 is also found at low levels in retinal pigment epithelium. The gene encoding GPR75 maps to human chromosome 2, which consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2 including harlequin ichthyosis, sitosterolemia and Alström syndrome.

REFERENCES

1. Tarttelin, E.E., et al. 1999. Cloning and characterization of a novel orphan G protein-coupled receptor localized to human chromosome 2p16. *Biochem. Biophys. Res. Commun.* 260: 174-180.
2. Zumsteg, U., et al. 2000. Alstrom syndrome: confirmation of linkage to chromosome 2p12-13 and phenotypic heterogeneity in three affected sibs. *J. Med. Genet.* 37: E8.
3. Shulenin, S., et al. 2001. An ATP-binding cassette gene (ABCG5) from the ABCG (White) gene subfamily maps to human chromosome 2p21 in the region of the sitosterolemia locus. *Cytogenet. Cell Genet.* 92: 204-208.
4. 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.
5. Hearn, T., et al. 2002. Mutation of ALMS1, a large gene with a tandem repeat encoding 47 amino acids, causes Alström syndrome. *Nat. Genet.* 31: 79-83.

CHROMOSOMAL LOCATION

Genetic locus: GPR75 (human) mapping to 2p16.2; Gpr75 (mouse) mapping to 11 A4.

SOURCE

GPR75 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of GPR75 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-164539 P, (100 µg 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

GPR75 (T-14) is recommended for detection of GPR75 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.

GPR75 (T-14) is also recommended for detection of GPR75 in additional species, including equine and bovine.

Suitable for use as control antibody for GPR75 siRNA (h): sc-94341, GPR75 siRNA (m): sc-145738, GPR75 shRNA Plasmid (h): sc-94341-SH, GPR75 shRNA Plasmid (m): sc-145738-SH, GPR75 shRNA (h) Lentiviral Particles: sc-94341-V and GPR75 shRNA (m) Lentiviral Particles: sc-145738-V.

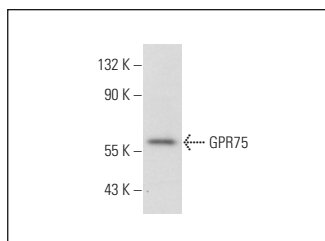
Molecular Weight of GPR75: 59 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812.

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



GPR75 (T-14): sc-164539. Western blot analysis of GPR75 expression in SH-SY5Y whole cell lysate.

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.