

GPR161 (K-12): sc-131526

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. GPR161 (G protein-coupled receptor 161), also known as RE2, is a 529 amino acid protein that belongs to the G protein-coupled receptor family. Localized to the cell membrane, GPR161 is a multi-pass membrane protein that functions as an orphan receptor, relaying extracellular signals to the intracellular environment. Two isoforms of GPR161 exist due to alternative splicing events.

REFERENCES

- Ji, T.H., Grossmann, M. and Ji, I. 1998. G protein-coupled receptors. I. Diversity of receptor-ligand interactions. *J. Biol. Chem.* 273: 17299-17302.
- Raming, K., Konzelmann, S. and Breer, H. 1998. Identification of a novel G protein-coupled receptor expressed in distinct brain regions and a defined olfactory zone. *Recept. Channels* 6: 141-151.
- Schöneberg, T., Schultz, G. and Gudermann, T. 1999. Structural basis of G protein-coupled receptor function. *Mol. Cell. Endocrinol.* 151: 181-193.
- Schwalbe, H. and Wess, G. 2002. Dissecting G protein-coupled receptors: structure, function, and ligand interaction. *Chembiochem* 3: 915-919.
- Small, K.M., Seman, C.A., Castator, A., Brown, K.M. and Liggett, S.B. 2002. False positive non-synonymous polymorphisms of G protein-coupled receptor genes. *FEBS Lett.* 516: 253-256.
- Schöneberg, T., Schulz, A. and Gudermann, T. 2002. The structural basis of G protein-coupled receptor function and dysfunction in human diseases. *Rev. Physiol. Biochem. Pharmacol.* 144: 143-227.
- Bates, B., Zhang, L., Nawoschik, S., Kodangattil, S., Tseng, E., Kopsco, D., Kramer, A., Shan, Q., Taylor, N., Johnson, J., Sun, Y., Chen, H.M., Blatcher, M., Paulsen, J.E. and Pausch, M.H. 2006. Characterization of Gpr101 expression and G protein-coupling selectivity. *Brain Res.* 1087: 1-14.
- Matteson, P.G., Desai, J., Korstanje, R., Lazar, G., Borsuk, T.E., Rollins, J., Kadambi, S., Joseph, J., Rahman, T., Wink, J., Benayed, R., Paigen, B. and Millonig, J.H. 2008. The orphan G protein-coupled receptor, Gpr161, encodes the vacuolated lens locus and controls neurulation and lens development. *Proc. Natl. Acad. Sci. USA* 105: 2088-2093.

CHROMOSOMAL LOCATION

Genetic locus: GPR161 (human) mapping to 1q24.2; Gpr161 (mouse) mapping to 1 H2.3.

SOURCE

GPR161 (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of GPR161 of human origin.

RESEARCH USE

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

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-131526 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GPR161 (K-12) is recommended for detection of GPR161 isoforms 1 and 2 of mouse, rat and 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); non cross-reactive with other GPR family members.

GPR161 (K-12) is also recommended for detection of GPR161 isoforms 1 and 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GPR161 siRNA (h): sc-88224, GPR161 siRNA (m): sc-145717, GPR161 shRNA Plasmid (h): sc-88224-SH, GPR161 shRNA Plasmid (m): sc-145717-SH, GPR161 shRNA (h) Lentiviral Particles: sc-88224-V and GPR161 shRNA (m) Lentiviral Particles: sc-145717-V.

Molecular Weight of GPR161: 59 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **GPR161 (1B2): sc-293409**, our highly recommended monoclonal alternative to GPR161 (K-12).