SANTA CRUZ BIOTECHNOLOGY, INC.

GPR161 (1B2): sc-293409

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Ji, T.H., et al. 1998. G protein-coupled receptors. I. Diversity of receptor-ligand interactions. J. Biol. Chem. 273: 17299-17302.
2. Raming, K., et al. 1998. Identification of a novel G protein-coupled receptor expressed in distinct brain regions and a defined olfactory zone. Recept. Channels 6: 141-151.
3. Schöneberg, T., et al. 1999. Structural basis of G protein-coupled receptor function. Mol. Cell. Endocrinol. 151: 181-193.
4. Schwalbe, H. and Wess, G. 2002. Dissecting G protein-coupled receptors: structure, function, and ligand interaction. Chembiochem 3: 915-919.
5. Small, K.M., et al. 2002. False positive non-synonymous polymorphisms of G protein-coupled receptor genes. FEBS Lett. 516: 253-256.
6. Schöneberg, T., et al. 2002. The structural basis of G protein-coupled receptor function and dysfunction in human diseases. Rev. Physiol. Biochem. Pharmacol. 144: 143-227.
7. Bates, B., et al. 2006. Characterization of GPR101 expression and G protein-coupling selectivity. Brain Res. 1087: 1-14.
8. Matteson, P.G., et al. 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.

SOURCE

GPR161 (1B2) is a mouse monoclonal antibody raised against amino acids 362-460 of GPR161 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

GPR161 (1B2) is recommended for detection of GPR161 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

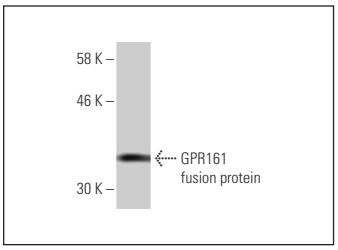
Suitable for use as control antibody for GPR161 siRNA (h): sc-88224, GPR161 shRNA Plasmid (h): sc-88224-SH and GPR161 shRNA (h) Lentiviral Particles: sc-88224-V.

Molecular Weight of GPR161: 59 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



GPR161 (1B2): sc-293409. Western blot analysis of human recombinant GPR161 fusion protein.

RESEARCH USE

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

PROTOCOLS

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