

GPR177 (S-25): sc-133635

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. GPR177 (G protein-coupled receptor 177), also known as EVI, MRP, WLS or C1orf139, is a 541 amino acid multi-pass membrane protein that plays an essential role in Wnt-mediated cell-cell communication. The gene encoding GPR177 maps to human chromosome 1 and is expressed as multiple alternatively spliced isoforms.

REFERENCES

1. Larhammar, D., et al. 1993. The receptor revolution - multiplicity of G protein-coupled receptors. *Drug Des. Discov.* 9: 179-188.
2. Ji, T.H., et al. 1998. G protein-coupled receptors. I. Diversity of receptor-ligand interactions. *J. Biol. Chem.* 273: 17299-17302.
3. Schöneberg, T., et al. 1999. Structural basis of G protein-coupled receptor function. *Mol. Cell. Endocrinol.* 151: 181-193.
4. 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.
5. Vassilatis, D.K., et al. 2003. The G protein-coupled receptor repertoires of human and mouse. *Proc. Natl. Acad. Sci. USA* 100: 4903-4908.
6. Kristiansen, K. 2004. Molecular mechanisms of ligand binding, signaling, and regulation within the superfamily of G protein-coupled receptors: molecular modeling and mutagenesis approaches to receptor structure and function. *Pharmacol. Ther.* 103: 21-80.
7. Bänziger, C., et al. 2006. Wntless, a conserved membrane protein dedicated to the secretion of Wnt proteins from signaling cells. *Cell* 125: 509-522.
8. Bartscherer, K., et al. 2006. Secretion of Wnt ligands requires Evi, a conserved transmembrane protein. *Cell* 125: 523-533.

CHROMOSOMAL LOCATION

Genetic locus: WLS (human) mapping to 1p31.3; Wls (mouse) mapping to 3 H4.

SOURCE

GPR177 (S-25) is an affinity purified rabbit polyclonal antibody raised against synthetic GPR177 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

GPR177 (S-25) is recommended for detection of GPR177 of mouse, human and canine 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GPR177 siRNA (h): sc-88713, GPR177 siRNA (m): sc-145725, GPR177 shRNA Plasmid (h): sc-88713-SH, GPR177 shRNA Plasmid (m): sc-145725-SH, GPR177 shRNA (h) Lentiviral Particles: sc-88713-V and GPR177 shRNA (m) Lentiviral Particles: sc-145725-V.

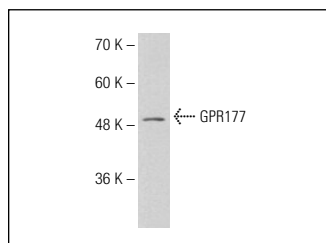
Molecular Weight of GPR177: 48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



GPR177 (S-25): sc-133635. Western blot analysis of GPR177 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Yu, W., et al. 2010. Genes regulated by Nkx2-3 in siRNA-mediated knock-down B cells: implication of endothelin-1 in inflammatory bowel disease. *Mol. Genet. Metab.* 100: 88-95.
2. Huang, S., et al. 2015. Involvement of epithelial Wntless in the regulation of postnatal hair follicle morphogenesis. *Arch. Dermatol. Res.* 307: 835-839.

RESEARCH USE

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