# GPR68 (T-18): sc-79624



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. GPR68 (G protein-coupled receptor 68), also known as OGR1 (ovarian cancer G protein-coupled receptor 1), is a 365 amino acid multi-pass membrane protein that is expressed in testis, spleen, lung, brain and placenta. Existing as a member of the G protein-coupled receptor family, GPR68 functions as a high affinity receptor for sphingosylphosphorylcholine and is coupled to G proteins that enhance phosphoinositide hydrolysis.

# **REFERENCES**

- Larhammar, D., Blomqvist, A.G. and Wahlestedt, C. 1993. The receptor revolution—multiplicity of G-protein-coupled receptors. Drug Des. Discov. 9: 179-188.
- 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.
- Schöneberg, T., Schultz, G. and Gudermann, T. 1999. Structural basis of G protein-coupled receptor function. Mol. Cell. Endocrinol. 151: 181-193.
- 4. 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.
- Ludwig, M.G., Vanek, M., Guerini, D., Gasser, J.A., Jones, C.E., Junker, U., Hofstetter, H., Wolf, R.M. and Seuwen, K. 2003. Proton-sensing G proteincoupled receptors. Nature 425: 93-98.
- Vassilatis, D.K., Hohmann, J.G., Zeng, H., Li, F., Ranchalis, J.E., Mortrud, M.T., Brown, A., Rodriguez, S.S., Weller, J.R., Wright, A.C., Bergmann, J.E. and Gaitanaris, G.A. 2003. The G protein-coupled receptor repertoires of human and mouse. Proc. Natl. Acad. Sci. USA 100: 4903-4908.
- 7. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 601404. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 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.
- Tomura, H., Wang, J.Q., Liu, J.P., Komachi, M., Damirin, A., Mogi, C., Tobo, M., Nochi, H., Tamoto, K., Im, D.S., Sato, K. and Okajima, F. 2008. Cyclooxygenase-2 expression and prostaglandin E2 production in response to acidic pH through OGR1 in a human osteoblastic cell line. J. Bone Miner. Res. 23: 1129-1139.

# **CHROMOSOMAL LOCATION**

Genetic locus: GPR68 (human) mapping to 14q32.11; Gpr68 (mouse) mapping to 12 E.

#### **SOURCE**

GPR68 (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of GPR68 of human origin.

#### **PRODUCT**

Each vial contains 200  $\mu g$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-79624 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

GPR68 (T-18) is recommended for detection of GPR68 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).

GPR68 (T-18) is also recommended for detection of GPR68 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for GPR68 siRNA (h): sc-75185, GPR68 siRNA (m): sc-75186, GPR68 shRNA Plasmid (h): sc-75185-SH, GPR68 shRNA Plasmid (m): sc-75186-SH, GPR68 shRNA (h) Lentiviral Particles: sc-75185-V and GPR68 shRNA (m) Lentiviral Particles: sc-75186-V.

Molecular Weight of GPR68: 41 kDa.

### **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  $4^{\circ}$  C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### **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.

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