

# GPR107 (T-15): sc-164511

## BACKGROUND

G protein-coupled receptors (GPRs or GPCRs), also known as seven transmembrane receptors, heptahelical receptors or 7TM receptors, are members of the largest protein family and play a role in many different stimulus-response pathways. G protein-coupled receptors mediate extracellular signals into intracellular signals (G protein activation). They respond to a wide variety of signaling molecules, including hormones, neurotransmitters and other proteins and peptides. GPR proteins are usually integral seven pass membrane proteins with some conserved amino acid regions. GPR107 (G protein-coupled receptor 107), also known as LUSTER1 (lung seven transmembrane receptor 1) or KIAA1624, is a 600 amino acid multi-pass membrane protein that belongs to the LU7TM family. Localizing to membrane, GPR107 exists as three alternatively spliced isoforms.

## REFERENCES

- Humphray, S.J., et al. 2004. DNA sequence and analysis of human chromosome 9. *Nature* 429: 369-374.
- Covington, D.K., et al. 2006. The G-protein-coupled receptor 40 family (GPR40-GPR43) and its role in nutrient sensing. *Biochem. Soc. Trans.* 34: 770-773.
- Zaslavsky, A., et al. 2006. Homo- and hetero-dimerization of LPA/S1P receptors, OGR1 and GPR4. *Biochim. Biophys. Acta* 1761: 1200-1212.
- Jones, P.G., et al. 2007. Tissue distribution and functional analyses of the constitutively active orphan G protein coupled receptors, GPR26 and GPR78. *Biochim. Biophys. Acta* 1770: 890-901.
- Yonezawa, T., et al. 2007. Short-chain fatty acids induce acute phosphorylation of the p38 mitogen-activated protein kinase/heat shock protein 27 pathway via GPR43 in the MCF-7 human breast cancer cell line. *Cell. Signal.* 19: 185-193.
- Edgar, A.J. 2007. Human GPR107 and murine Gpr108 are members of the LUSTER family of proteins found in both plants and animals, having similar topology to G-protein coupled receptors. *DNA Seq.* 18: 235-241.
- Rayasam, G.V., et al. 2007. Fatty acid receptors as new therapeutic targets for diabetes. *Expert Opin. Ther. Targets* 11: 661-671.
- Gorbushin, A.M., et al. 2009. *Himasthla elongata*: effect of infection on expression of the LUSTER-like receptor mRNA in common periwinkle haemocytes. *Exp. Parasitol.* 123: 24-30.

## CHROMOSOMAL LOCATION

Genetic locus: GPR107 (human) mapping to 9q34.11; Gpr107 (mouse) mapping to 2 B.

## SOURCE

GPR107 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GPR107 of human origin.

## STORAGE

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

## 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-164511 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GPR107 (T-15) is recommended for detection of GPR107 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.

GPR107 (T-15) is also recommended for detection of GPR107 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for GPR107 siRNA (h): sc-92782, GPR107 siRNA (m): sc-145691, GPR107 shRNA Plasmid (h): sc-92782-SH, GPR107 shRNA Plasmid (m): sc-145691-SH, GPR107 shRNA (h) Lentiviral Particles: sc-92782-V and GPR107 shRNA (m) Lentiviral Particles: sc-145691-V.

Molecular Weight of GPR107 isoform 1/2/3: 67/62/33 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.