

# GPR133 (K-12): sc-109275

## 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. GPR133 (G protein-coupled receptor 133), also known as PGR25, is an 874 amino acid multi-pass membrane protein that contains one GPS domain and belongs to the G protein-coupled receptor 2 family. Existing as multiple alternatively spliced isoforms, GPR133 functions as an orphan receptor that is thought to play a role in signaling events throughout the cell.

## REFERENCES

- Larhammar, D., et al. 1993. The receptor revolution—multiplicity of G protein-coupled receptors. *Drug Des. Discov.* 9: 179-188.
- Ji, T.H., et al. 1998. G protein-coupled receptors. I. Diversity of receptor-ligand interactions. *J. Biol. Chem.* 273: 17299-17302.
- Schöneberg, T., et al. 1999. Structural basis of G protein-coupled receptor function. *Mol. Cell. Endocrinol.* 151: 181-193.
- Vanti, W.B., et al. 2003. Novel human G protein-coupled receptors. *Biochem. Biophys. Res. Commun.* 305: 67-71.
- Vassilatis, D.K., et al. 2003. The G protein-coupled receptor repertoires of human and mouse. *Proc. Natl. Acad. Sci. USA* 100: 4903-4908.
- Bjarnadóttir, T.K., et al. 2004. The human and mouse repertoire of the adhesion family of G protein-coupled receptors. *Genomics* 84: 23-33.
- Bjarnadóttir, T.K., et al. 2007. Identification of novel splice variants of Adhesion G protein-coupled receptors. *Gene* 387: 38-48.
- Nordström, K.J., et al. 2009. The Secretin GPCRs descended from the family of Adhesion GPCRs. *Mol. Biol. Evol.* 26: 71-84.

## CHROMOSOMAL LOCATION

Genetic locus: GPR133 (human) mapping to 12q24.33; Gpr133 (mouse) mapping to 5 G1.3.

## SOURCE

GPR133 (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of GPR133 of human origin.

## 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-109275 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

GPR133 (K-12) is recommended for detection of GPR133 of mouse, rat and 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)], 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).

GPR133 (K-12) is also recommended for detection of GPR133 in additional species, including bovine and porcine.

Suitable for use as control antibody for GPR133 siRNA (h): sc-95812, GPR133 siRNA (m): sc-145701, GPR133 shRNA Plasmid (h): sc-95812-SH, GPR133 shRNA Plasmid (m): sc-145701-SH, GPR133 shRNA (h) Lentiviral Particles: sc-95812-V and GPR133 shRNA (m) Lentiviral Particles: sc-145701-V.

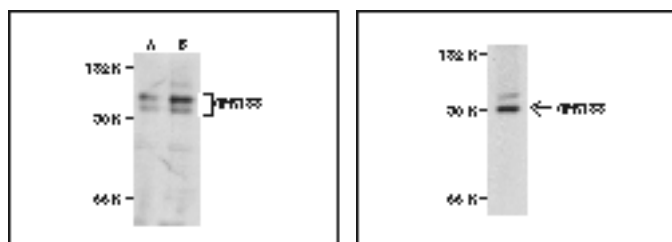
Molecular Weight of GPR133: 97 kDa.

Positive Controls: A549 cell lysate: sc-2413 or GPR133 (h): 293T Lysate: sc-373105.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



GPR133 (K-12) sc-109275 Western Antibody + P  
 GPR133 expression in mouse lysate: sc-145701 (M)  
 and human GPR133 lysate: sc-2413 (H) 293T  
 whole cell lysate.

GPR133 (K-12) sc-109275 Western Antibody + P  
 GPR133 expression in A549 whole cell lysate.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.