



# GPR26 (Q-11): sc-104290

## BACKGROUND

G protein-coupled receptors (GPRs) are a protein family of transmembrane receptors that transmit an extracellular signal (ligand binding) into an intracellular signal (G protein-activation). GPR signaling is an ancient evolutionarily mechanism used by all eukaryotes to sense environmental stimuli and mediate cell-cell communication. GPRs have seven membrane-spanning domains and the extracellular domains are often glycosylated. These extracellular loops also contain two highly conserved cysteine residues which create disulfide bonds to stabilize the receptor structure. GPR26 (G protein-coupled receptor 26) is a 337 amino acid protein that is primarily expressed in regions of the brain. GPR26 is characterized as an 'orphan' G protein-coupled receptor, which is a receptor that binds an unidentified natural ligand. Due to evidence of GPR26 being downregulated in glioblastomas, it has been suggested that GPR26 may be a suppressor of early glioma development.

## REFERENCES

1. Marchese, A., Sawzdargo, M., Nguyen, T., Cheng, R., Heng, H.H., Nowak, T., Im, D.S., Lynch, K.R., George, S.R. and O'Dowd, B.F. 1999. Discovery of three novel orphan G protein-coupled receptors. *Genomics* 56: 12-21.
2. Lee, D.K., Lynch, K.R., Nguyen, T., Im, D.S., Cheng, R., Saldivia, V.R., Liu, Y., Liu, I.S., Heng, H.H., Seeman, P., George, S.R., O'Dowd, B.F. and Marchese, A. 2000. Cloning and characterization of additional members of the G protein-coupled receptor family. *Biochim. Biophys. Acta* 1490: 311-323.
3. Lee, D.K., Nguyen, T., Lynch, K.R., Cheng, R., Vanti, W.B., Arkhitko, O., Lewis, T., Evans, J.F., George, S.R. and O'Dowd, B.F. 2001. Discovery and mapping of ten novel G protein-coupled receptor genes. *Gene* 275: 83-91.
4. Bresnick, J.N., Skynner, H.A., Chapman, K.L., Jack, A.D., Zamiara, E., Negulescu, P., Beaumont, K., Patel, S. and McAllister, G. 2003. Identification of signal transduction pathways used by orphan G protein-coupled receptors. *Assay Drug Dev. Technol.* 1: 239-249.
5. Vanti, W.B., Nguyen, T., Cheng, R., Lynch, K.R., George, S.R. and O'Dowd, B.F. 2003. Novel human G protein-coupled receptors. *Biochem. Biophys. Res. Commun.* 305: 67-71.
6. Kobilka, B.K. 2007. G protein-coupled receptor structure and activation. *Biochim. Biophys. Acta* 1768: 794-807.
7. Jones, P.G., Nawoschik, S.P., Sreekumar, K., Uveges, A.J., Tseng, E., Zhang, L., Johnson, J., He, L., Paulsen, J.E., Bates, B. and Pausch, M.H. 2007. Tissue distribution and functional analyses of the constitutively active orphan G protein-coupled receptors, GPR26 and GPR78. *Biochim. Biophys. Acta* 1770: 890-901.
8. Carter, A.N., Cole, C.L., Playle, A.G., Ramsay, E.J. and Shervington, A.A. 2008. GPR26: a marker for primary glioblastoma? *Mol. Cell. Probes* 22: 133-137.

## CHROMOSOMAL LOCATION

Genetic locus: GPR26 (human) mapping to 10q26.13; Gpr26 (mouse) mapping to 7 F3.

## RESEARCH USE

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

## SOURCE

GPR26 (Q-11) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of GPR26 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-104290 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GPR26 (Q-11) is recommended for detection of GPR26 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.

Suitable for use as control antibody for GPR26 siRNA (h): sc-90365, GPR26 siRNA (m): sc-145731, GPR26 shRNA Plasmid (h): sc-90365-SH, GPR26 shRNA Plasmid (m): sc-145731-SH, GPR26 shRNA (h) Lentiviral Particles: sc-90365-V and GPR26 shRNA (m) Lentiviral Particles: sc-145731-V.

Molecular Weight of GPR26: 38 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° 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.