

# GPCR2037 (C-12): sc-48518

## BACKGROUND

GPCR2037 (also known as galanin-receptor like, GalRL, PGR7, nGPCR-2037 and GPCR151) is a G protein-coupled receptor that undergoes weak activation by Galanin and is most abundant in the central nervous system (CNS), where it appears to be critical for development. During embryonal development the expression of GPCR2037 is widespread in the nervous system (dorsal thalamus, striatum, locus coeruleus and hindbrain nuclei). GPCR2037 in the CNS of 7- and 15-day-old mouse embryos can localize to the habenular complex. Low levels of GPCR2037 are detectable in testis, liver, kidney and stomach. In addition to GPCR2037, galanin mediates its effects through receptor subtypes GALR1, 2 and 3. Galanin ligand exerts anxiolytic actions via GALR receptors under conditions of high stress. Galanin coexists with norepinephrine and serotonin in neural systems that mediate emotion.

## REFERENCES

1. Birgul, N., et al. 1999. Reverse physiology in *Drosophila*: identification of a novel allatostatin-like neuropeptide and its cognate receptor structurally related to the mammalian somatostatin/galanin/opioid receptor family. *EMBO J.* 18: 5892-5900.
2. Holmes, A., et al. 2003. Galanin GALR1 receptor null mutant mice display increased anxiety-like behavior specific to the elevated plus-maze. *Neuropsychopharmacology* 28: 1031-1044.
3. Blakeman, K.H., et al. 2003. Hyperalgesia and increased neuropathic pain-like response in mice lacking galanin receptor 1 receptors. *Neuroscience* 117: 221-227.
4. Berthold, M., et al. 2003. Cloning of a novel orphan G protein-coupled receptor (GPCR-2037): *in situ* hybridization reveals high mRNA expression in rat brain restricted to neurons of the habenular complex. *Brain Res. Mol. Brain Res.* 120: 22-29.
5. Ignatov, A., et al. 2004. Cloning and characterization of a novel G protein-coupled receptor with homology to galanin receptors. *Neuropharmacology* 46: 1114-1120.
6. Swanson, C.J., et al. 2005. Anxiolytic- and antidepressant-like profiles of the galanin-3 receptor (Gal3) antagonists SNAP 37889 and SNAP 398299. *Proc. Natl. Acad. Sci. USA* 102: 17489-17494.
7. Barrera-Gomez, G., et al. 2005. G protein-coupled galanin receptor distribution in the rat central nervous system. *Neuropeptides* 39: 153-156.

## CHROMOSOMAL LOCATION

Genetic locus: GPR151 (human) mapping to 5q32; Gpr151 (mouse) mapping to 18 B3.

## SOURCE

GPCR2037 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GPCR2037 of human origin.

## RESEARCH USE

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

## 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-48518 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GPCR2037 (C-12) is recommended for detection of GPCR2037 of human, mouse and, to a lesser extent, rat 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).

GPCR2037 (C-12) is also recommended for detection of GPCR2037 in additional species, including porcine.

Suitable for use as control antibody for GPCR2037 siRNA (h): sc-60719, GPCR2037 siRNA (m): sc-60720, GPCR2037 shRNA Plasmid (h): sc-60719-SH, GPCR2037 shRNA Plasmid (m): sc-60720-SH, GPCR2037 shRNA (h) Lentiviral Particles: sc-60719-V and GPCR2037 shRNA (m) Lentiviral Particles: sc-60720-V.

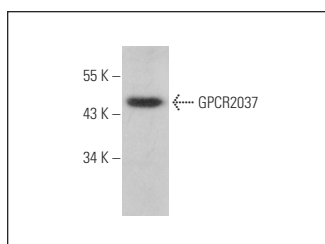
Molecular Weight of GPCR2037: 47 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

## 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



GPCR2037 (C-12): sc-48518. Western blot analysis of GPCR2037 expression in NIH/3T3 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.