

GPR17 (H-90): sc-292193

BACKGROUND

G protein-coupled receptor 17, GPR17, also known as uracil nucleotide/cysteinyl leukotriene receptor or P2Y-like receptor (P2YL), is a 367 amino acid member of the G protein-coupled receptor 1 family of proteins. While GPR17 is expressed in kidney, heart and umbilical vein endothelial cells, it is expressed in the highest levels in the brain. Upon brain injury, the extracellular concentrations of nucleotides and cysteinyl leukotrienes (CysLTs), two families of endogenous signaling molecules, increase significantly at the site of damage. In some neurons, GPR17, a membrane receptor for uracil nucleotide and CysLTs, is upregulated as well, infiltrating the lesioned area. GPR17 is thought to play a role in mediating neuronal death, remodeling brain circuitries by microglia and initiating remyelination in damaged neurons. Two named isoforms of GPR17 exist as a result of alternative splicing events.

REFERENCES

- Lee, D.K., et al. 2001. Discovery and mapping of ten novel G protein-coupled receptor genes. *Gene* 275: 83-91.
- Moro, S. et al. 2002. Molecular modeling as a tool to investigate molecular recognition in P2Y receptors. *Curr. Pharm. Des.* 8: 2401-2413.
- Ciana, P., et al. 2006. The orphan receptor GPR17 identified as a new dual uracil nucleotides/cysteinyl-leukotrienes receptor. *EMBO J.* 25: 4615-4627.
- Belous, A.E., et al. 2006. Mitochondrial calcium transport is regulated by P2Y1- and P2Y2-like mitochondrial receptors. *J. Cell. Biochem.* 99: 1165-1174.
- von Kügelgen, I. 2006. Pharmacological profiles of cloned mammalian P2Y-receptor subtypes. *Pharmacol. Ther.* 110: 415-432.
- Parravicini, C., et al. 2008. GPR17: molecular modeling and dynamics studies of the 3-D structure and purinergic ligand binding features in comparison with P2Y receptors. *BMC Bioinformatics* 9: 263.
- Lecca, D., et al. 2008. The recently identified P2Y-like receptor GPR17 is a sensor of brain damage and a new target for brain repair. *PLoS ONE* 3: e3579.
- Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 603071. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Temporini, C., et al. 2009. Development of an immobilized GPR17 receptor stationary phase for binding determination using frontal affinity chromatography coupled to mass spectrometry. *Anal. Biochem.* 384: 123-129.

CHROMOSOMAL LOCATION

Genetic locus: GPR17 (human) mapping to 2q14.3; Gpr17 (mouse) mapping to 18 B1.

SOURCE

GPR17 (H-90) is a rabbit polyclonal antibody raised against amino acids 278-367 mapping at the C-terminus of GPR17 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.

APPLICATIONS

GPR17 (H-90) is recommended for detection of GPR17 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).

GPR17 (H-90) is also recommended for detection of GPR17 in additional species, including canine, equine and bovine.

Suitable for use as control antibody for GPR17 siRNA (h): sc-76030, GPR17 siRNA (m): sc-76031, GPR17 siRNA (r): sc-270023, GPR17 shRNA Plasmid (h): sc-76030-SH, GPR17 shRNA Plasmid (m): sc-76031-SH, GPR17 shRNA Plasmid (r): sc-270023-SH, GPR17 shRNA (h) Lentiviral Particles: sc-76030-V, GPR17 shRNA (m) Lentiviral Particles: sc-76031-V and GPR17 shRNA (r) Lentiviral Particles: sc-270023-V.

Molecular Weight of GPR17: 38-41 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or mouse kidney extract: sc-2255.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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 or our catalog for detailed protocols and support products.



Try **GPR17 (A-10): sc-514723**, our highly recommended monoclonal alternative to GPR17 (H-90).