

GALR2 (L-20): sc-16217

BACKGROUND

The 387 amino acid protein galanin receptor-2 (GALR2) protein belongs to a family of G protein-coupled receptors that specifically bind galanin, a neuropeptide distributed throughout the central and peripheral nervous system, the pituitary gland, the gastrointestinal tract and in the endocrine and exocrine pancreas. GALR2 mRNA is abundant in parvocellular paraventricular nuclei, but in contrast to GALR1, is not expressed in magnocellular neurons or in supraoptic nuclei. Like GALR1 mRNA, GALR2 mRNA is expressed in the POMC neurons, dorsomedial nucleus, arcuate nucleus and in restricted peripheral tissue, with highest mRNA levels in human small intestine. Galanin-like peptide (GALP) is a putative endogenous ligand for GALR2. Binding of GALP to GALR2 results in increased GTPγS binding to the membrane-bound GALR2. GALR2 is therefore a receptor that mediates important functions of galanin in the hypothalamic-pituitary axis, plays a role in hippocampal and cerebellar function and mediates jejunal contraction.

REFERENCES

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- Depczynski, B., et al. 1998. Distribution and characterization of the cell types expressing GALR2 mRNA in the brain and pituitary gland. *Ann. N.Y. Acad. Sci.* 863: 120-128.
- Wang, S., et al. 1998. The GALR2 galanin receptor mediates galanin-induced jejunal contraction, but not feeding behavior, in the rat: differentiation of central and peripheral effects of receptor subtype activation. *FEBS Lett.* 434: 277-282.
- Zdrojewicz, Z. and Sowinska, E. 2000. The significance of galanin in physiologic and pathologic processes in humans. *Postepy Hig. Med. Dosw.* 54: 819-833.
- Bouret, S., et al. 2000. Expression of GALR1 and GALR2 galanin receptor messenger ribonucleic acid in pro-opiomelanocortin neurons of the rat arcuate nucleus: effect of testosterone. *Endocrinology* 141: 1780-1794.
- Kerr, N.C., et al. 2000. Galanin-like peptide (GALP) is expressed in rat hypothalamus and pituitary, but not in DRG. *Neuroreport* 11: 3909-3913.

CHROMOSOMAL LOCATION

Genetic locus: GALR2 (human) mapping to 17q25.1; Galr2 (mouse) mapping to 11 E2.

SOURCE

GALR2 (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GALR2 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-16217 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GALR2 (L-20) is recommended for detection of GALR2 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).

GALR2 (L-20) is also recommended for detection of GALR2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GALR2 siRNA (h): sc-40008, GALR2 siRNA (m): sc-40009, GALR2 shRNA Plasmid (h): sc-40008-SH, GALR2 shRNA Plasmid (m): sc-40009-SH, GALR2 shRNA (h) Lentiviral Particles: sc-40008-V and GALR2 shRNA (m) Lentiviral Particles: sc-40009-V.

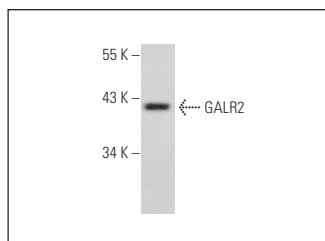
Molecular Weight of GALR2: 41 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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



GALR2 (L-20): sc-16217. Western blot analysis of GALR2 expression in Hep G2 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.

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.