

PKR2 (H-49): sc-134988

BACKGROUND

The prokineticin receptors, PKR1 (GPR73 α) and PKR2 (GPR73 β), are G protein-coupled receptors responsible for mediating the signal transduction of both EG-VEGF and Prokineticin-2. PKR1 and PKR2 share 87% sequence identity. PKR1 is predominantly expressed in the peripheral tissues and PKR2 is typically expressed in the CNS. Both receptors are found in the testis. Upon ligand binding, PKR1 and PKR2 associate with G protein and can promote intracellular calcium mobilization, stimulate phosphoinositide turnover and activate the MAPK pathway. These receptors play a role in a variety of physiological events such as intestinal contraction, ingestive behavior, spermatogenesis, angiogenesis, circadian rhythm, neuronal survival and hyperalgesia. PKR1 may promote cardiomyocyte survival. PKR2 is essential for the normal development of the olfactory bulb. Mutations in the gene encoding PKR2 may result in Kallmann syndrome type 3.

REFERENCES

- Lin, D.C., et al. 2002. Identification and molecular characterization of two closely related G protein-coupled receptors activated by prokineticins/ endocrine gland vascular endothelial growth factor. *J. Biol. Chem.* 277: 19276-19280.
- Soga, T., et al. 2002. Molecular cloning and characterization of prokineticin receptors. *Biochim. Biophys. Acta* 1579: 173-179.
- Battersby, S., et al. 2004. Expression and regulation of the prokineticins (endocrine gland-derived vascular endothelial growth factor and Bv8) and their receptors in the human endometrium across the menstrual cycle. *J. Clin. Endocrinol. Metab.* 89: 2463-2469.
- Negri, L., et al. 2005. Biological activities of Bv8 analogues. *Br. J. Pharmacol.* 146: 625-632.
- Chen, J., et al. 2005. Identification and pharmacological characterization of Prokineticin-2 β as a selective ligand for prokineticin receptor 1. *Mol. Pharmacol.* 67: 2070-2076.
- Hoffmann, P., et al. 2006. Expression and oxygen regulation of endocrine gland-derived vascular endothelial growth factor/Prokineticin-1 and its receptors in human placenta during early pregnancy. *Endocrinology* 147: 1675-1684.
- Matsumoto, S., et al. 2006. Abnormal development of the olfactory bulb and reproductive system in mice lacking prokineticin receptor PKR2. *Proc. Natl. Acad. Sci. USA* 103: 4140-4145.

CHROMOSOMAL LOCATION

Genetic locus: PROKR2 (human) mapping to 20p12.3.

SOURCE

PKR2 (H-49) is a rabbit polyclonal antibody raised against amino acids 1-49 mapping at the N-terminus of PKR2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PKR2 (H-49) is recommended for detection of PKR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

PKR2 (H-49) is also recommended for detection of PKR2 in additional species, including equine and porcine.

Suitable for use as control antibody for PKR2 siRNA (h): sc-72363, PKR2 shRNA Plasmid (h): sc-72363-SH and PKR2 shRNA (h) Lentiviral Particles: sc-72363-V.

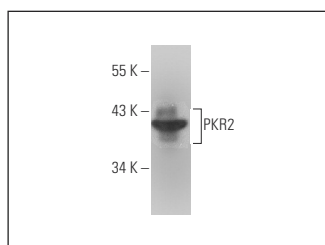
Molecular Weight of PKR2: 44 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

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.

DATA



PKR2 (H-49): sc-134988. Western blot analysis of PKR2 expression in MCF7 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.