

# PKR2 (H-4): sc-365696

## BACKGROUND

The prokineticin receptors, PKR1 (GPR73a) and PKR2 (GPR73b), 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.

## CHROMOSOMAL LOCATION

Genetic locus: PROKR2 (human) mapping to 20p12.3; Prokr2 (mouse) mapping to 2 F2.

## SOURCE

PKR2 (H-4) is a mouse monoclonal antibody raised against amino acids 1-49 mapping at the N-terminus of PKR2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PKR2 (H-4) is available conjugated to agarose (sc-365696 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365696 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365696 PE), fluorescein (sc-365696 FITC), Alexa Fluor® 488 (sc-365696 AF488), Alexa Fluor® 546 (sc-365696 AF546), Alexa Fluor® 594 (sc-365696 AF594) or Alexa Fluor® 647 (sc-365696 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365696 AF680) or Alexa Fluor® 790 (sc-365696 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

PKR2 (H-4) is recommended for detection of PKR2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for PKR2 siRNA (h): sc-72363, PKR2 siRNA (m): sc-152285, PKR2 shRNA Plasmid (h): sc-72363-SH, PKR2 shRNA Plasmid (m): sc-152285-SH, PKR2 shRNA (h) Lentiviral Particles: sc-72363-V and PKR2 shRNA (m) Lentiviral Particles: sc-152285-V.

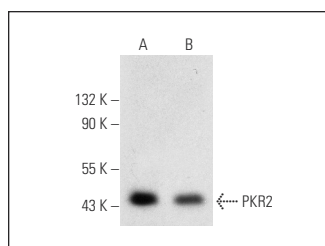
Molecular Weight of PKR2: 44 kDa.

Positive Controls: A-375 cell lysate: sc-3811 or ES-2 cell lysate: sc-24674.

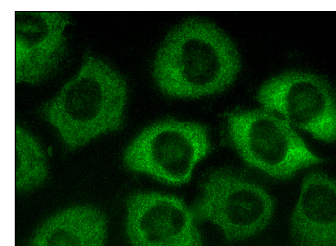
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



PKR2 (H-4): sc-365696. Western blot analysis of PKR2 expression in A-375 (A) and ES-2 (B) whole cell lysates.



PKR2 (H-4): sc-365696. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Bao, Z., et al. 2021. Prokineticin-2 prevents neuronal cell deaths in a model of traumatic brain injury. *Nat. Commun.* 12: 4220.
- Noda, K., et al. 2021. Differential inflammation-mediated function of prokineticin 2 in the synovial fibroblasts of patients with rheumatoid arthritis compared with osteoarthritis. *Sci. Rep.* 11: 18399.
- Zhang, R., et al. 2022. Matrine alleviates spatial learning and memory impairment in diabetic mice by inhibiting endoplasmic reticulum stress and through modulation of PK2/PKR pathway. *Neurochem. Int.* 154: 105289.
- Fullone, M.R., et al. 2022. Arginine 125 is an essential residue for the function of MRAP2. *Int. J. Mol. Sci.* 23: 9853.

## 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](http://www.scbt.com) for detailed protocols and support products.