

cGKII (D-3): sc-393126

BACKGROUND

cGKII (cGMP-dependent protein kinase type II) is a major receptor of intracellular cGMP and mediates a plethora of physiological responses. cGKII contains a conserved leucine zipper motif at the amino-terminus. It is expressed in small intestine, colon, prostate, and human brain tissues, and the cGKII gene maps to chromosome 4q21.21. cGKII has been shown to regulate the ion transport system in the intestine. Myristoylation of the penultimate glycine in cGKII appears to be essential for directing cGKII to the membrane, since cGKII is devoid of any hydrophobic transmembrane domains. The translocation of cGKII from the cytosol to the membrane allows it to function properly in regulating intestinal ion transport.

CHROMOSOMAL LOCATION

Genetic locus: PRKG2 (human) mapping to 4q21.21; Prkg2 (mouse) mapping to 5 E3.

SOURCE

cGKII (D-3) is a mouse monoclonal antibody raised against amino acids 1-120 mapping at the N-terminus of cGKII of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cGKII (D-3) is available conjugated to agarose (sc-393126 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393126 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393126 PE), fluorescein (sc-393126 FITC), Alexa Fluor® 488 (sc-393126 AF488), Alexa Fluor® 546 (sc-393126 AF546), Alexa Fluor® 594 (sc-393126 AF594) or Alexa Fluor® 647 (sc-393126 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393126 AF680) or Alexa Fluor® 790 (sc-393126 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

cGKII (D-3) is recommended for detection of cGKII 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), immunohistochemistry (including paraffin-embedded sections) (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 cGKII siRNA (h): sc-38974, cGKII siRNA (m): sc-38975, cGKII siRNA (r): sc-270328, cGKII shRNA Plasmid (h): sc-38974-SH, cGKII shRNA Plasmid (m): sc-38975-SH, cGKII shRNA Plasmid (r): sc-270328-SH, cGKII shRNA (h) Lentiviral Particles: sc-38974-V, cGKII shRNA (m) Lentiviral Particles: sc-38975-V and cGKII shRNA (r) Lentiviral Particles: sc-270328-V.

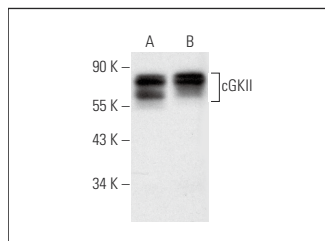
Molecular Weight of cGKII: 86 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226 or T98G cell lysate: sc-2294.

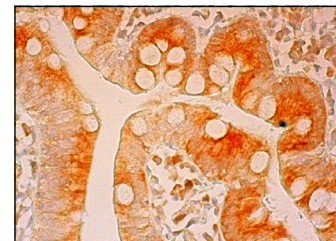
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



cGKII (D-3): sc-393126. Western blot analysis of cGKII expression in COLO 320DM (A) and T98G (B) whole cell lysates.



cGKII (D-3): sc-393126. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Jia, T., et al. 2019. Cinaciguat in combination with Insulin induces a favorable effect on implant osseointegration in type 2 diabetic rats. *Biomed. Pharmacother.* 118: 109216.
- Zhang, Y., et al. 2019. cGMP-dependent protein kinase II determines β-catenin accumulation that is essential for uterine decidualization in mice. *Am. J. Physiol., Cell Physiol.* 317: C1115-C1127.
- Das, S., et al. 2020. Depletion of cyclic-GMP levels and inhibition of cGMP-dependent protein kinase activate p21^{Cip1}/p27^{Kip1} pathways and lead to renal fibrosis and dysfunction. *FASEB J.* 34: 11925-11943.
- Jia, T., et al. 2021. Pharmac activation of PKG2 alleviates diabetes-induced osteoblast dysfunction by suppressing PLCβ1-Ca²⁺-mediated endoplasmic reticulum stress. *Oxid. Med. Cell. Longev.* 2021: 5552530.
- Xie, X., et al. 2021. Ferulic acid ameliorates lipopolysaccharide-induced tracheal injury via cGMP/PKGII signaling pathway. *Respir. Res.* 22: 308.
- Pang, J., et al. 2022. Secretory PKG II blocks activation of PDGFRβ via Ser254 in gastric cancer cells. *Cell Biol. Int.* 46: 747-754.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.