SANTA CRUZ BIOTECHNOLOGY, INC.

cGKII (H-120): sc-25430

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

REFERENCES

1. Uhler, M.D. 1993. Cloning and expression of a novel cyclic GMP-dependent protein kinase from mouse brain. J. Biol. Chem. 268: 13586-13591.
2. Gamm, D.M., et al. 1995. The type II isoform of cGMP-dependent protein kinase is dimeric and possesses regulatory and catalytic properties distinct from the type I isoforms. J. Biol. Chem. 270: 27380-27388.
3. Vaandrager, A.B., et al. 1996. Signalling by cGMP-dependent protein kinases. Mol. Cell. Biochem. 157: 23-30.

CHROMOSOMAL LOCATION

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

SOURCE

cGKII (H-120) is a rabbit polyclonal antibody raised against amino acids 1-120 mapping at the N-terminus of cGKII 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

cGKII (H-120) is recommended for detection of cGKII 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), 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).

cGKII (H-120) is also recommended for detection of cGKII in additional species, including equine, canine, bovine and porcine.

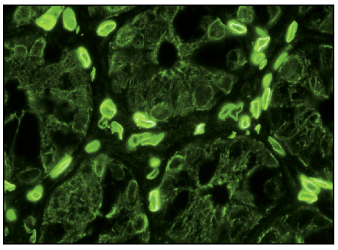
Suitable for use as control antibody for cGKII siRNA (h): sc-38974, cGKII siRNA (m): sc-38975, cGKII shRNA Plasmid (h): sc-38974-SH, cGKII shRNA Plasmid (m): sc-38975-SH, cGKII shRNA (h) Lentiviral Particles: sc-38974-V and cGKII shRNA (m) Lentiviral Particles: sc-38975-V.

Molecular Weight of cGKII: 86 kDa.

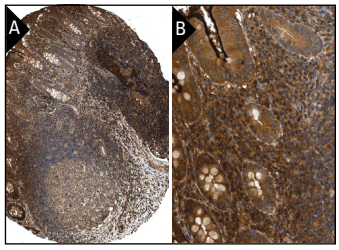
STORAGE

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

DATA



cGKII (H-120): sc-25430. Immunofluorescence staining of normal mouse intestine frozen section showing membrane staining.



cGKII (H-120): sc-25430. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular and lymphoid cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Lindsay, S.L., et al. 2007. Modulation of lamellipodial structure and dynamics by NO-dependent phosphorylation of VASP Ser 239. J. Cell Sci. 120: 3011-3021.
2. Paul, C., et al. 2008. Signaling through cGMP-dependent protein kinase I in the amygdala is critical for auditory-cued fear memory and long-term potentiation. J. Neurosci. 28: 14202-14212.
3. Liu, C.Y., et al. 2009. Grueneberg ganglion olfactory subsystem employs a cGMP signaling pathway. J. Comp. Neurol. 516: 36-48.
4. Blom, J.J., et al. 2009. Functional localization of the nitric oxide/cGMP pathway in the salamander retina. Vis. Neurosci. 26: 275-286.
5. Blom, J., et al. 2012. Characterization of the nitric oxide signaling pathways in the mouse retina. J. Comp. Neurol. 520: 4204-417.

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.