SANTA CRUZ BIOTECHNOLOGY, INC.

cGKII (E-7): sc-390926

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

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3. Vaandrager, A.B. and de Jonge, H.R. 1996. Signalling by cGMP-dependent protein kinases. Mol. Cell. Biochem.157: 23-30.
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5. Vaandrager, A.B., Ehlert, E.M., Jarchau, T., Lohmann, S.M. and de Jonge, H.R. 1996. N-terminal myristoylation is required for membrane localization of cGMP-dependent protein kinase type II. J. Biol. Chem. 271: 7025-7029.
6. Wagner, C., Pfeifer, A., Ruth, P., Hofmann, F. and Kurtz, A. 1998. Role of cGMP-kinase II in the control of renin secretion and renin expression. J. Clin. Invest. 102: 1576-1582.
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CHROMOSOMAL LOCATION

Genetic locus: PRKG2 (human) mapping to 4q21.21.

SOURCE

cGKII (E-7) 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_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

cGKII (E-7) is recommended for detection of cGKII of 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 cGKII siRNA (h): sc-38974, cGKII shRNA Plasmid (h): sc-38974-SH and cGKII shRNA (h) Lentiviral Particles: sc-38974-V.

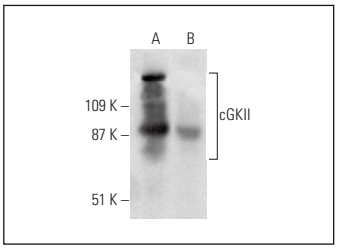
Molecular Weight of cGKII: 86 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, human prostate extract: sc-363774 or human cerebral cortex extract: sc-516707.

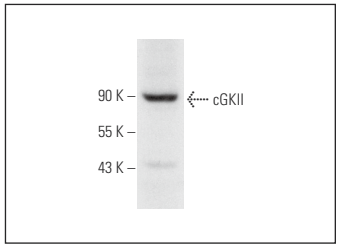
RECOMMENDED SUPPORT REAGENTS

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



cGKII (E-7): sc-390926. Western blot analysis of cGKII expression in human prostate (**A**) and human cerebral cortex (**B**) tissue extracts.



cGKII (E-7): sc-390926. Western blot analysis of cGKII expression in COLO 320DM whole cell lysate.

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.