SANTA CRUZ BIOTECHNOLOGY, INC.

cGKIα/β (T-19): sc-10343

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, pro-state, and human brain tissues, and the cGKII gene maps to chromosome 4q13.1-q21.1. 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 in-testinal ion transport. cGMP-dependent protein kinase 1 (cGKI) lowers the intracellular level of calcium and is therefore considered important for the relaxation of vascular smooth muscle. There are two isoforms of cGKI, α and β, which differ only in their N-terminal sequence.

REFERENCES

1. 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.
2. Tamura, N., et al. 1996. cDNA cloning and gene expression of human type I α cGMP-dependent protein kinase. Hypertension 27: 552-557.
3. Vaandrager, A.B., et al. 1996. Signalling by cGMP-dependent protein kinases. Mol. Cell. Biochem. 157: 23-30.
4. Orstavik, S., et al. 1997. Characterization of the human gene encoding the type I α and type I β cGMP-dependent protein kinase (PRKG1). Genomics 42: 311-318.

CHROMOSOMAL LOCATION

Genetic locus: PRKG1 (human) mapping to 10q11.23; Prkg1 (mouse) mapping to 19 C1.

SOURCE

cGKIα/β (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of cGKIα 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.

Blocking peptide available for competition studies, sc-10343 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

cGKIα/β (T-19) is recommended for detection of cGKIα and cGKIβ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

cGKIα/β (T-19) is also recommended for detection of cGKIα and cGKIβ in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for cGKIα/β siRNA (h): sc-35059, cGKIα/β siRNA (m): sc-35060, cGKIα/β siRNA (r): sc-270330, cGKIα/β shRNA Plasmid (h): sc-35059-SH, cGKIα/β shRNA Plasmid (m): sc-35060-SH, cGKIα/β shRNA Plasmid (r): sc-270330-SH, cGKIα/β shRNA (h) Lentiviral Particles: sc-35059-V, cGKIα/β shRNA (m) Lentiviral Particles: sc-35060-V and cGKIα/β shRNA (r) Lentiviral Particles: sc-270330-V.

Molecular Weight of cGKIα/β: 75 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Snellman, J., et al. 2004. cGMP-dependent kinase regulates response sensitivity of the mouse on bipolar cell. J. Neurosci. 24: 6621-6628.
2. Kishimoto, I., et al. 2008. C-type natriuretic peptide is a Schwann cell-derived factor for development and function of sensory neurones. J. Neuroendocrinol. 20: 1213-1223.

RESEARCH USE

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