SANTA CRUZ BIOTECHNOLOGY, INC.

cGKIα/β (H-100): sc-25429

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

cGKI (cGMP-dependent protein kinase type I), also known as PRKG1, lowers the intracellular level of calcium and is important for the relaxation of vascular smooth muscle. cGKI exists as two alternatively spliced isoforms, designated α and β, which differ only in their N-terminal sequence and function to catalyze the phosphorylation of target proteins. The cGKIα/β precursor contains one protein kinase domain, one AGC-kinase C-terminal domain and two cyclic nucleotide-binding domains. cGKII (cGMP-dependent protein kinase type II), a protein that is related to cGKI, is a major receptor of intracellular cGMP that mediates a plethora of physiological responses. cGKII contains a conserved leucine zipper motif at the amino terminus and is expressed in small intestine, colon, prostate and human brain tissue. 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.

CHROMOSOMAL LOCATION

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

SOURCE

cGKIα/β (H-100) is a rabbit polyclonal antibody raised against amino acids 191-290 mapping within an internal region of cGKIα/β 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.

STORAGE

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

APPLICATIONS

cGKIα/β (H-100) is recommended for detection of cGKIα/β 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).

cGKIα/β (H-100) is also recommended for detection of cGKIα/β 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 shRNA Plasmid (h): sc-35059-SH, cGKIα/β shRNA Plasmid (m): sc-35060-SH, cGKIα/β shRNA (h) Lentiviral Particles: sc-35059-V and cGKIα/β shRNA (m) Lentiviral Particles: sc-35060-V.

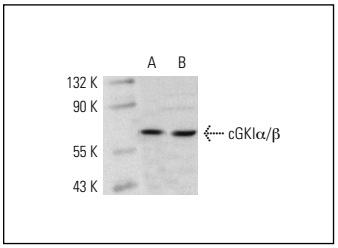
Molecular Weight of cGKIα/β: 75 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or CTLL-2 cell lysate: sc-2242.

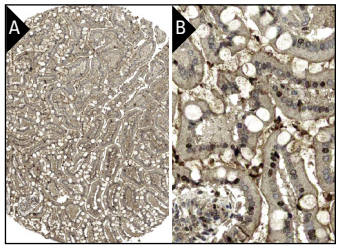
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



cGKIα/β (H-100): sc-25429. Western blot analysis of cGKIα/β expression in NIH/3T3 (**A**) and CTLL-2 (**B**) whole cell lysates.



cGKIα/β (H-100): sc-25429. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human small intestine tissue showing cytoplasmic and nuclear staining of glandular cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Singh, A.K., et al. 2012. Neuronal cGMP kinase I is essential for stimulation of duodenal bicarbonate secretion by luminal acid. FASEB J. 26: 1745-1754.

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.