SANTA CRUZ BIOTECHNOLOGY, INC.

cGKIβ (L-16): sc-10341

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

cGKII (cGMP-dependent protein kinase type II) is a major receptor of intracellular cGMP which mediates a plethora of physiological responses. The cGKII gene maps to human chromosome 4q13.1-q21.1. The cGKII protein contains a conserved leucine zipper motif at the amino-terminus. cGKII is expressed in small intestine, colon, prostate and human brain tissues and 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. cGMP-dependent protein kinase type I (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.

CHROMOSOMAL LOCATION

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

SOURCE

cGKIβ (L-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of cGKIβ 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-10341 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

cGKIβ (L-16) is recommended for detection of cGKIβ 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).

cGKIβ (L-16) is also recommended for detection of cGKIβ in additional species, including equine, 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.

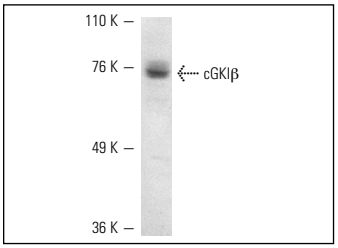
Molecular Weight of cGKIβ: 75 kDa.

Positive Controls: A-10 cell lysate: sc-3806.

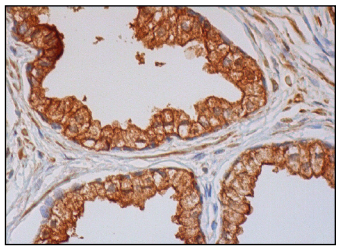
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



cGKIβ (L-16): sc-10341. Western blot analysis of cGKIβ expression in A-10 whole cell lysate.



cGKIβ (L-16): sc-10341. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Green, A.K., et al. 2007. Atrial natriuretic peptide attenuates elevations in Ca^{2+} and protects hepatocytes by stimulating net plasma membrane Ca^{2+} efflux. J. Biol. Chem. 282: 34542-34554.
2. Stratton, R.C., et al. 2008. ANP stimulates hepatocyte Ca^{2+} efflux via plasma membrane recruitment of PKGIα. Biochem. Biophys. Res. Commun. 368: 965-970.

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.

MONOS Satisfaction Guaranteed

Try **cGKIα/β (G-3): sc-271766** or **cGKIα/β (E-1): sc-271765**, our highly recommended monoclonal alternatives to cGKIβ (L-16).