

cGKI β (E-20): sc-10342

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

cGKI β (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of cGKI β of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10342 P, (100 μ g 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.

APPLICATIONS

cGKI β (E-20) is recommended for detection of cGKI β 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).

cGKI β (E-20) is also recommended for detection of cGKI β in additional species, including equine, bovine and porcine.

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

Molecular Weight of cGKI β : 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) 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. Feil, S., et al. 2005. Distribution of cGMP-dependent protein kinase type I and its isoforms in the mouse brain and retina. *Neuroscience* 135: 863-868.
3. Waldkirch, E.S., et al. 2007. Immunohistochemical distribution of cyclic GMP-dependent protein kinase-1 in human prostate tissue. *Eur. Urol.* 52: 495-501.
4. 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.
5. Waldkirch, E., et al. 2008. Expression and distribution of cyclic GMP-dependent protein kinase-1 isoforms in human penile erectile tissue. *J. Sex. Med.* 5: 536-543.

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.



Try **cGKI α / β (G-3): sc-271766** or **cGKI α / β (E-1): sc-271765**, our highly recommended monoclonal alternatives to cGKI β (E-20).