

cGKI α (N-16): sc-10335

BACKGROUND

cGKI (cGMP-dependent protein kinase type II) is a major receptor of intracellular cGMP, and mediates a plethora of physiological responses. cGKI contains a conserved leucine zipper motif at the amino terminus. It is expressed in small intestine, colon, prostate, and human brain tissues, and the cGKI gene maps to chromosome 4q13.1-q21.1. cGKI has been shown to regulate the ion transport system in the intestine. Myristoylation of the penultimate glycine in cGKI appears to be essential for directing cGKI to the membrane, since cGKI is devoid of any hydrophobic transmembrane domains. The translocation of cGKI from the cytosol to the membrane allows it to function properly in regulating intestinal 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.

CHROMOSOMAL LOCATION

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

SOURCE

cGKI α (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of cGKI α 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-10335 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

cGKI α (N-16) is recommended for detection of cGKI α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

cGKI α (N-16) is also recommended for detection of cGKI α in additional species, including equine, canine, 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 α : 75 kDa.

Positive Controls: HISM cell lysate: sc-2229.

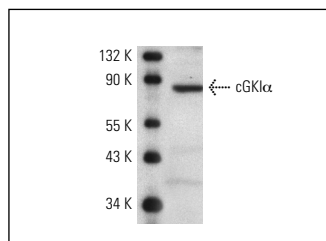
STORAGE

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

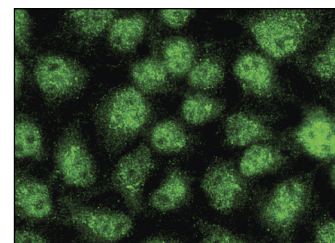
RESEARCH USE

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

DATA



cGKI α (N-16): sc-10335. Western blot analysis of cGKI α expression in HISM whole cell lysate.



cGKI α (N-16): sc-10335. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Gertsberg, I., et al. 2004. Intracellular Ca²⁺ regulates the phosphorylation and the dephosphorylation of ciliary proteins via the NO pathway. *J. Gen. Physiol.* 124: 527-540.
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- 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.
- Green, A.K., et al. 2007. Atrial natriuretic peptide attenuates elevations in Ca²⁺ and protects hepatocytes by stimulating net plasma membrane Ca²⁺ efflux. *J. Biol. Chem.* 282: 34542-34554.
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PROTOCOLS

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