SANTA CRUZ BIOTECHNOLOGY, INC.

GC kinase (N-19): sc-6161

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Several mammalian kinases have been identified with sequence similarity to the *Saccharomyces cerevisiae* serine/threonine kinase STE20. STE20 is involved in relaying signals from G protein-coupled receptors to cytosolic MAP kinase cascades, and it lies upstream of a MAP kinase kinase kinase. Mammalian STE20-like kinases include human GC kinase (also called mouse Rab8ip), HPK1, KHS, GLK, NIK, YSK1, Krs-1 and Krs-2. GC kinase is a protein originally cloned from germinal center B lymphocytes. This serine/ threonine kinase phosphorylates casein and myelin basic protein, and has been shown to activate the SAPK/JNK kinase cascade.

REFERENCES

1. Leberer, E., et al. 1992. The protein kinase homologue Ste20p is required to link the yeast pheromone response G protein βγ subunits to downstream signalling components. EMBO J. 11: 4815-4824.
2. Katz, P., et al. 1994. Differential expression of a novel protein kinase in human B lymphocytes. Preferential localization in the germinal center. J. Biol. Chem. 269: 16802-16809.

CHROMOSOMAL LOCATION

Genetic locus: MAP4K2 (human) mapping to 11q13.1; Map4k2 (mouse) mapping to 19 A.

SOURCE

GC kinase (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GC kinase 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-6161 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GC kinase (N-19) is recommended for detection of GC kinase 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GC kinase siRNA (h): sc-39239, GC kinase siRNA (m): sc-39240, GC kinase shRNA Plasmid (h): sc-39239-SH, GC kinase shRNA Plasmid (m): sc-39240-SH, GC kinase shRNA (h) Lentiviral Particles: sc-39239-V and GC kinase shRNA (m) Lentiviral Particles: sc-39240-V.

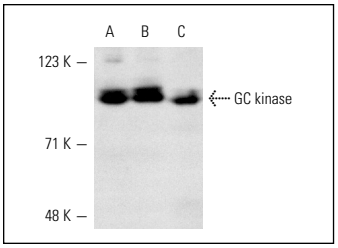
Molecular Weight of GC kinase: 97 kDa.

Positive Controls: GC kinase (h): 293T Lysate: sc-116216, Ramos cell lysate: sc-2216 or rat brain extract: sc-2392.

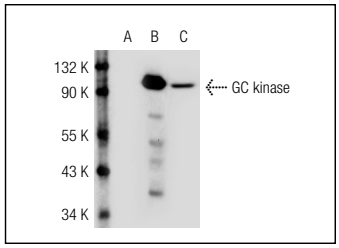
RECOMMENDED SECONDARY REAGENTS

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.

DATA



GC kinase (N-19): sc-6161. Western blot analysis of GC kinase expression in NAMALWA (**A**) and Ramos (**B**) whole cell lysates and rat brain extract (**C**).



GC kinase (N-19): sc-6161. Western blot analysis of GC kinase expression in non-transfected 293T: sc-117752 (**A**), human GC kinase transfected 293T: sc-116216 (**B**) and Ramos (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Werneburg, B.G., et al. 2001. Molecular characterization of CD40 signaling intermediates. J. Biol. Chem. 276: 43334-43342.
2. Bashari, D., et al. 2011. JNK activation is regulated by E2F and promotes E2F1-induced apoptosis. Cell. Signal. 23: 65-70.

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.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **GC kinase (A-10): sc-398967**, our highly recommended monoclonal alternative to GC kinase (N-19).