SANTA CRUZ BIOTECHNOLOGY, INC.

GC kinase (A-10): sc-398967

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.
3. Wu, C., et al. 1995. Molecular characterization of Ste20p, a potential mitogen-activated protein or extracellular signal-regulated kinase kinase (MEK) kinase kinase from *Saccharomyces cerevisiae*. J. Biol. Chem. 270: 15984-15992.
4. Tibbles, L.A., et al. 1996. MLK-3 activates the SAPK/JNK and p38/RK pathways via SEK1 and MKK3/6. EMBO J. 15: 7026-7035.
5. Su, Y.C., et al. 1997. NIK is a new Ste20-related kinase that binds NCK and MEKK1 and activates the SAPK/JNK cascade via a conserved regulatory domain. EMBO J. 16: 1279-1290.

CHROMOSOMAL LOCATION

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

SOURCE

GC kinase (A-10) is a mouse monoclonal antibody raised against amino acids 281-460 mapping within an internal region of GC Kinase of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GC kinase (A-10) is available conjugated to agarose (sc-398967 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398967 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398967 PE), fluorescein (sc-398967 FITC), Alexa Fluor® 488 (sc-398967 AF488), Alexa Fluor® 546 (sc-398967 AF546), Alexa Fluor® 594 (sc-398967 AF594) or Alexa Fluor® 647 (sc-398967 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398967 AF680) or Alexa Fluor® 790 (sc-398967 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GC kinase (A-10) is recommended for detection of GC kinase of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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.

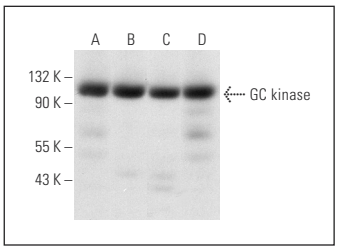
Molecular Weight of GC kinase: 97 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, Ramos cell lysate: sc-2216 or NAMALWA cell lysate: sc-2234.

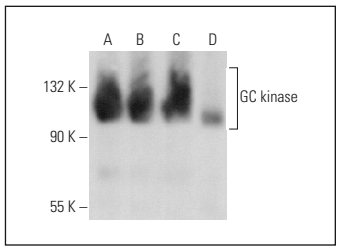
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GC kinase (A-10): sc-398967. Western blot analysis of GC kinase expression in NAMALWA (**A**), Ramos (**B**), Jurkat (**C**) and Raji (**D**) whole cell lysates.



GC kinase (A-10): sc-398967. Western blot analysis of GC kinase expression in Ramos (**A**), HEL 92.1.7 (**B**), THP-1 (**C**) and SP2/0 (**D**) whole cell lysates.

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 for detailed protocols and support products.