

GLK (C-20): sc-7256

BACKGROUND

Several mammalian kinases have been identified which exhibit 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. Mammalian STE20-like kinases include GLK, KHS, NIK, YSK1, HPK1, Krs-1, Krs-2 and human GC kinase. GLK (for GC-like kinase) is an 885 amino acid protein that shares a high degree of homology with GC kinase and HPK1. Like many of the STE20-like kinases, GLK specifically activates the JNK pathway. Epistasis studies with dominant negative mutants of MEKK1 suggest that GLK functions upstream of MEKK1 in the JNK signaling pathway.

REFERENCES

1. Leberer, E., et al. 1992. The protein kinase homologue Ste20p is required to link the yeast pheromone response G protein β subunits to downstream signalling components. *EMBO J.* 11: 4815-4824.
2. 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.
3. Hu, M.C., et al. 1996. Human HPK1, a novel human hematopoietic progenitor kinase that activates the JNK/SAPK kinase cascade. *Genes Dev.* 10: 2251-2264.
4. 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.
5. Diener, K., et al. 1997. Activation of the c-Jun N-terminal kinase pathway by a novel protein kinase related to human germinal center kinase. *Proc. Natl. Acad. Sci. USA* 94: 9687-9692.

CHROMOSOMAL LOCATION

Genetic locus: MAP4K3 (human) mapping to 2p22.1, MAP4K5 (human) mapping to 14q21.3; Map4k3 (mouse) mapping to 17 E3, Map4k5 (mouse) mapping to 12 C2.

SOURCE

GLK (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GLK 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-7256 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

GLK (C-20) is recommended for detection of GLK and KHS 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).

GLK (C-20) is also recommended for detection of GLK and KHS in additional species, including equine, canine, bovine, porcine and avian.

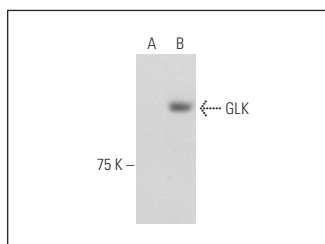
Molecular Weight of GLK isoforms: 101/100/99 kDa.

Positive Controls: GLK (m): 293T Lysate: sc-120502.

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



GLK (C-20): sc-7256. Western blot analysis of GLK expression in non-transfected: sc-117752 (A) and mouse GLK transfected: sc-120502 (B) 293T whole cell lysates.

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.

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Try **GLK (C-6): sc-515064**, our highly recommended monoclonal alternative to GLK (C-20).