



GLK (m): 293T Lysate: sc-120502

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., Dignard, D., Hargus, D., Thomas, D.Y. and Whiteway, M. 1992. The protein kinase homologue Ste20p is required to link the yeast pheromone response G protein $\beta\gamma$ subunits to downstream signalling components. *EMBO J.* 11: 4815-4824.
2. Wu, C., Whiteway, M., Thomas, D.Y. and Leberer, E. 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., Qiu, W.R., Wang, X., Meyer, C.F. and Tan, T.H. 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., Han, J., Xu, S., Cobb, M. and Skolnik, E.Y. 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., Wang, X.S., Chen, C., Meyer, C.F., Keesler, G., Zukowski, M., Tan, T.H. and Yao, Z. 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 (mouse) mapping to 17 E3.

PRODUCT

GLK (m): 293T Lysate represents a lysate of mouse GLK transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

GLK (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive GLK antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.