

# KHS (C-20): sc-6428

## 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 KHS, GLK, NIK, YSK1, HPK1, Krs-1, Krs-2 and GC kinase. KHS (for kinase homologous to SPS1/STE20) is a protein that is most closely related to GC kinase. The KHS kinase has been shown to activate a variety of substrates, including JNK, suggesting a role in stress response.

## REFERENCES

1. Leberer, E., et al. 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., 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. Su, Y.C., et al. 1997. NIK is a new Ste20-related kinase that binds NCK and MEK1 and activates the SAPK/JNK cascade via a conserved regulatory domain. *EMBO J.* 16: 1279-1290.
4. 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.
5. Tung, R.M., et al. 1997. A novel human SPS1/STE20 homologue, KHS, activates Jun N-terminal kinase. *Oncogene* 14: 653-659.

## CHROMOSOMAL LOCATION

Genetic locus: MAP4K5 (human) mapping to 14q21.3, MAP4K3 (human) mapping to 2p22.1; Map4k5 (mouse) mapping to 12 C3, Map4k3 (mouse) mapping to 17 E3.

## SOURCE

KHS (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of KHS of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6428 P, (100  $\mu$ 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.

## RESEARCH USE

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

## APPLICATIONS

KHS (C-20) is recommended for detection of KHS and GLK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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

Molecular Weight of KHS: 95 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, IMR-32 cell lysate: sc-2409 or NIH/3T3 whole cell lysate: sc-2210.

## 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) 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **KHS (E-5): sc-374070** or **KHS (D-4): sc-374071**, our highly recommended monoclonal alternatives to KHS (C-20).