SANTA CRUZ BIOTECHNOLOGY, INC.

YSK1 (N-19): sc-6865

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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, and it lies upstream of a MAP kinase kinase kinase. Mammalian STE20-like kinases include YSK1, KHS, GLK, NIK, HPK1, Krs-1, Krs-2 and GC kinase. YSK1 (yeast SPS/STE20-related kinase 1) is expressed in a wide variety of cell types and tissues and has been shown to have kinase activity. Unlike many of the other STE20-like kinases, however, overexpression of YSK1 does not lead to activation of the SAPK/JNK pathway.

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. 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.

CHROMOSOMAL LOCATION

Genetic locus: STK25 (human) mapping to 2q37.3; Stk25 (mouse) mapping to 1 D.

SOURCE

YSK1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of YSK1 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-6865 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

YSK1 (N-19) is recommended for detection of YSK1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

YSK1 (N-19) is also recommended for detection of YSK1 in additional species, including equine, canine, bovine, porcine and avian.

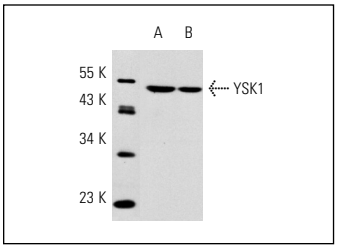
Suitable for use as control antibody for YSK1 siRNA (h): sc-39253, YSK1 siRNA (m): sc-39254, YSK1 shRNA Plasmid (h): sc-39253-SH, YSK1 shRNA Plasmid (m): sc-39254-SH, YSK1 shRNA (h) Lentiviral Particles: sc-39253-V and YSK1 shRNA (m) Lentiviral Particles: sc-39254-V.

Molecular Weight of YSK1: 48 kDa.

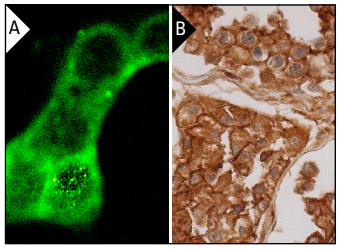
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



YSK1 (N-19): sc-6865. Western blot analysis of YSK1 expression in K-562 (**A**) and A-431 (**B**) whole cell lysates.



YSK1 (N-19): sc-6865. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts and Leydig cells (B).

SELECT PRODUCT CITATIONS

1. Preisinger, C., et al. 2004. YSK1 is activated by the Golgi matrix protein GM130 and plays a role in cell migration through its substrate 14-3-3ζ. J. Cell Biol. 164: 1009-1020.
2. Voss, K., et al. 2007. CCM3 interacts with CCM2 indicating common pathogenesis for cerebral cavernous malformations. Neurogenetics 8: 249-256.
3. Nogueira, E., et al. 2008. SOK1 translocates from the Golgi to the nucleus upon chemical anoxia and induces apoptotic cell death. J. Biol. Chem. 283: 16248-16258.
4. Zhou, J., et al. 2009. Serine 58 of 14-3-3ζ is a molecular switch regulating ASK1 and oxidant stress-induced cell death. Mol. Cell. Biol. 29: 4167-4176.
5. Voss, K., et al. 2009. Functional analyses of human and zebrafish 18-amino acid in-frame deletion pave the way for domain mapping of the cerebral cavernous malformation 3 protein. Hum. Mutat. 30: 1003-1011.
6. Fidalgo, M., et al. 2010. CCM3/PDCD10 stabilizes GCKIII proteins to promote Golgi assembly and cell orientation. J. Cell Sci. 123: 1274-1284.
7. Fidalgo, M., et al. 2012. Adaptor protein cerebral cavernous malformation 3 (CCM3) mediates phosphorylation of the cytoskeletal proteins ezrin/radixin/moesin by mammalian Ste20-4 to protect cells from oxidative stress. J. Biol. Chem. 287: 11556-11565.

RESEARCH USE

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