

# YSK1 (E-5): sc-271196

## 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  $\beta\gamma$  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.

## CHROMOSOMAL LOCATION

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

## SOURCE

YSK1 (E-5) is a mouse monoclonal antibody raised against a peptide mapping at the N-terminus of YSK1 of human origin.

## PRODUCT

Each vial contains 200  $\mu\text{g}$  IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

YSK1 (E-5) is available conjugated to agarose (sc-271196 AC), 500  $\mu\text{g}$ /0.25 ml agarose in 1 ml, for IP; to HRP (sc-271196 HRP), 200  $\mu\text{g}/\text{ml}$ , for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271196 PE), fluorescein (sc-271196 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271196 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271196 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271196 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271196 AF647), 200  $\mu\text{g}/\text{ml}$ , for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271196 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271196 AF790), 200  $\mu\text{g}/\text{ml}$ , for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271196 P, (100  $\mu\text{g}$  peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

YSK1 (E-5) is recommended for detection of YSK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu\text{g}$  per 100-500  $\mu\text{g}$  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).

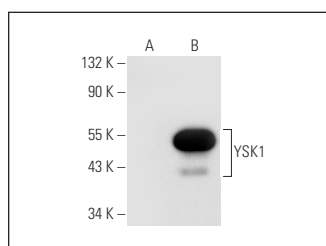
YSK1 (E-5) is also recommended for detection of YSK1 in additional species, including equine and bovine.

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.

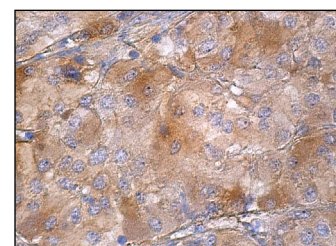
Molecular Weight of YSK1: 48 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, SW480 cell lysate: sc-2219 or YSK1 (h): 293T Lysate: sc-111510.

## DATA



YSK1 (E-5): sc-271196. Western blot analysis of YSK1 expression in non-transfected: sc-11752 (A) and human YSK1 transfected: sc-111510 (B) 293T whole cell lysates.



YSK1 (E-5): sc-271196. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Shi, H., et al. 2012. Cell-based proteome profiling of potential dasatinib targets by use of affinity-based probes. *J. Am. Chem. Soc.* 134: 3001-3014.
2. Xu, J.H., et al. 2021. System analysis of ROS-related genes in the prognosis, immune infiltration, and drug sensitivity in hepatocellular carcinoma. *Oxid. Med. Cell. Longev.* 2021: 6485871.
3. Zhang, Y., et al. 2022. STK25 enhances hepatocellular carcinoma progression through the STRN/AMPK/ACC1 pathway. *Cancer Cell Int.* 22: 4.

## 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.