# SANTA CRUZ BIOTECHNOLOGY, INC.

# Snk (E-10): sc-374643



## BACKGROUND

Plks (polo-like kinases) encode serine/threonine kinases that are closely related to polo and CDC5, genes that are required for passage through mitosis in *Drosophila* and *Saccharomyces*, respectively. Polo-like kinases, which include Plk, Snk (for serum-inducible kinase, also designated Plk2) and Fnk (for FGF-inducible kinase, also designated Plk3 or PRK), play a role in cell proliferation. Plk protein accumulates in the cell during S and G<sub>2</sub> phases of the cell cycle, and both protein content and catalytic activity peak at the onset of mitosis, followed by a rapid reduction after mitosis. Snk and Fnk are immediate-early response genes that are first expressed during G<sub>1</sub> phase. Fnk expression peaks in late S and G<sub>2</sub> phases, and it may play a role in regulating the onset of M phase.

## REFERENCES

- Sunkel, C.E. and Glover, D.M. 1988. Polo, a mitotic mutant of *Drosophila* displaying abnormal spindle poles. J. Cell Sci. 89: 25-38.
- Kitada, K., et al. 1993. A multicopy suppressor gene of the Saccharomyces cerevisiae G<sub>1</sub> cell cycle mutant gene dbf4 encodes a protein kinase and is identified as CDC5. Mol. Cell. Biol. 13: 4445-4457.
- Lake, R.J. and Jelenik, W.R. 1993. Cell cycle- and terminal differentiationassociated regulation of the mouse mRNA encoding a conserved mitotic protein kinase. Mol. Cell. Biol. 73: 7793-7801.

#### **CHROMOSOMAL LOCATION**

Genetic locus: PLK2 (human) mapping to 5q11.2; Plk2 (mouse) mapping to 13 D2.2.

## SOURCE

Snk (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-27 at the N-terminus of Snk of human origin.

#### PRODUCT

Each vial contains 200  $\mu g\, lg G_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Snk (E-10) is available conjugated to agarose (sc-374643 AC), 500  $\mu$ g/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374643 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374643 PE), fluorescein (sc-374643 AF546), Alexa Fluor<sup>®</sup> 488 (sc-374643 AF488), Alexa Fluor<sup>®</sup> 546 (sc-374643 AF546), Alexa Fluor<sup>®</sup> 594 (sc-374643 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-374643 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-374643 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-374643 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374643 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## **RESEARCH USE**

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

## **APPLICATIONS**

Snk (E-10) is recommended for detection of Snk of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Snk (E-10) is also recommended for detection of Snk in additional species, including bovine and porcine.

Suitable for use as control antibody for Snk siRNA (h): sc-39152, Snk siRNA (m): sc-39153, Snk shRNA Plasmid (h): sc-39152-SH, Snk shRNA Plasmid (m): sc-39153-SH, Snk shRNA (h) Lentiviral Particles: sc-39152-V and Snk shRNA (m) Lentiviral Particles: sc-39153-V.

Molecular Weight of Snk: 78 kDa.

Positive Controls: ES-2 cell lysate: sc-24674, MCF7 whole cell lysate: sc-2206 or T24 cell lysate: sc-2292.

#### DATA





Snk (E-10): sc-374643. Western blot analysis of Snk expression in T24 (A), ES-2 (B), MCF7 (C) and HISM (D) whole cell lysates.

Snk (E-10): sc-374643. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of cells in germinal and non-germinal centers.

## **SELECT PRODUCT CITATIONS**

- Jin, G., et al. 2019. Xanthoceraside prevented synaptic loss and reversed learning-memory deficits in APP/PS1 transgenic mice. J. Physiol. Sci. 69: 477-488.
- 2. Tan, Y., et al. 2020. LY354740 reduces extracellular glutamate concentration, inhibits phosphorylation of Fyn/NMDARs, and expression of PLK2/ pS129  $\alpha$ -synuclein in mice treated with acute or sub-acute MPTP. Front. Pharmacol. 11: 183.
- Kim, D.E., et al. 2023. Plk2-mediated phosphorylation and translocalization of Nrf2 activates anti-inflammation through p53/Plk2/p21<sup>cip1</sup> signaling in acute kidney injury. Cell Biol. Toxicol. 39: 1509-1529.
- 4. Arimoto, K.I., et al. 2023. Expansion of interferon inducible gene pool via USP18 inhibition promotes cancer cell pyroptosis. Nat. Commun. 14: 251.

## **STORAGE**

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