

# 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

1. Sunkel, C.E., et al. 1988. Polo, a mitotic mutant of *Drosophila* displaying abnormal spindle poles. *J. Cell Sci.* 89: 25-38.
2. 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.
3. Lake, R.J., et al. 1993. Cell cycle- and terminal differentiation-associated 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 µg IgG<sub>1</sub> 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 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374643 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374643 PE), fluorescein (sc-374643 FITC), Alexa Fluor® 488 (sc-374643 AF488), Alexa Fluor® 546 (sc-374643 AF546), Alexa Fluor® 594 (sc-374643 AF594) or Alexa Fluor® 647 (sc-374643 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374643 AF680) or Alexa Fluor® 790 (sc-374643 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## 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).

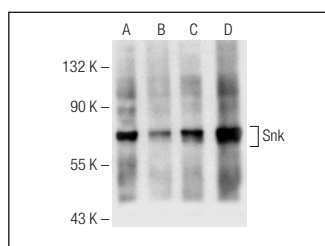
Snk (E-10) is also recommended for detection of Snk in additional species, including bovine and porcine.

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.

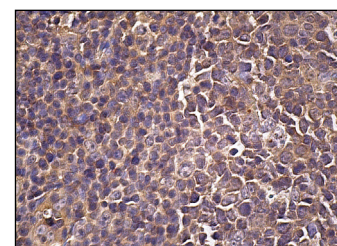
Molecular Weight of Snk: 78 kDa.

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

1. 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.
3. Kim, D.E., et al. 2022. Plk2-mediated phosphorylation and translocation of Nrf2 activates anti-inflammation through p53/Plk2/p21<sup>cip1</sup> signaling in acute kidney injury. *Cell Biol. Toxicol.* E-published.
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.