

Fnk (H-140): sc-25422

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 G₂ 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 G₁ phase. Fnk expression peaks in late S and G₂ phases, and it may play a role in regulating the onset of M phase.

REFERENCES

1. Sunkel, C.E. and Glover, D.M. 1988. Polo, a mitotic mutant of *Drosophila* displaying abnormal spindle poles. *J. Cell Sci.* 89: 25-38.
2. Lake, R.J. and Jelenik, W.R. 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: PLK3 (human) mapping to 1p34.1; Plk3 (mouse) mapping to 4 D1.

SOURCE

Fnk (H-140) is a rabbit polyclonal antibody raised against amino acids 321-460 mapping within an internal region of Fnk 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.

APPLICATIONS

Fnk (H-140) is recommended for detection of Fnk 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Fnk (H-140) is also recommended for detection of Fnk in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Fnk siRNA (h): sc-39150, Fnk siRNA (m): sc-39151, Fnk shRNA Plasmid (h): sc-39150-SH, Fnk shRNA Plasmid (m): sc-39151-SH, Fnk shRNA (h) Lentiviral Particles: sc-39150-V and Fnk shRNA (m) Lentiviral Particles: sc-39151-V.

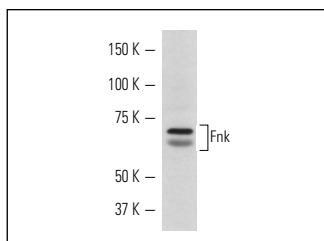
Molecular Weight of Fnk: 70 kDa.

Positive Controls: mouse lung extract: sc-2390.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Fnk (H-140): sc-25422. Western blot analysis of Fnk expression in mouse lung tissue extract.

SELECT PRODUCT CITATIONS

1. Zimmerman, W.C. and Erkison, R.L. 2007. Polo-like kinase 3 is required for entry into S phase. *Proc. Natl. Acad. Sci. USA* 104: 1847-1852.
2. Sang, M., et al. 2009. Plk3 inhibits pro-apoptotic activity of p73 through physical interaction and phosphorylation. *Genes Cells* 14: 775-788.
3. Zhu, F., et al. 2010. Prostaglandin (PG)D₂ and 15-deoxy-Delta(12,14)-PGJ(2), but not PGE(2), mediate shear-induced chondrocyte apoptosis via protein kinase A-dependent regulation of polo-like kinases. *Cell Death Differ.* 17: 1325-1334.
4. Mbefo, M.K., et al. 2010. Phosphorylation of synucleins by members of the Polo-like kinase family. *J. Biol. Chem.* 285: 2807-2822.
5. Ward, A., et al. 2011. Aberrant methylation of Polo-like kinase CpG islands in Plk4 heterozygous mice. *BMC Cancer* 11: 71.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.