

cyclin K (H-180): sc-292521

BACKGROUND

Positive transcription elongation factor β (P-TEF β) complexes are crucial for allowing the elongation of RNA by RNA polymerase II (RNAPII). These complexes are able to phosphorylate the carboxyl-terminal domain of the largest RNAPII subunit. P-TEF β complexes are made up of a catalytic subunit, cyclin dependent kinase 9 (Cdk9), and one of the regulatory cyclins, CycT1, CycT2a, CycT2b or cyclin K. Specifically, cyclin K forms an active P-TEF β complex with Cdk9. This complex promotes transcription by phosphorylating the carboxyl-terminal domain of RNAPII which allows the elongation of transcription to proceed. Cyclin K is ubiquitously expressed in adult mouse and human tissues, with highest levels expressed in the developing germ cells of adult testis and ovaries. Cyclin K is also present in HepG2 cells. The cyclin K gene encodes a 357 amino acid protein and maps to human chromosome 14q32.2.

REFERENCES

1. Edwards, M.C., et al. 1998. Human cyclin K, a novel RNA polymerase II-associated cyclin possessing both carboxy-terminal domain kinase and Cdk-activating kinase activity. *Mol. Cell. Biol.* 7: 4291-4300.
2. Fu, T.J., et al. 1999. Cyclin K functions as a CDK9 regulatory subunit and participates in RNA polymerase II transcription. *J. Biol. Chem.* 274: 34527- 34530.

CHROMOSOMAL LOCATION

Genetic locus: CCNK (human) mapping to 14q32.2.

SOURCE

cyclin K (H-180) is a rabbit polyclonal antibody raised against amino acids 107-286 mapping within an internal region of cyclin K of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

cyclin K (H-180) is recommended for detection of cyclin K of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

cyclin K (H-180) is also recommended for detection of cyclin K in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for cyclin K siRNA (h): sc-37600, cyclin K siRNA (m): sc-142657, cyclin K shRNA Plasmid (h): sc-37600-SH, cyclin K shRNA Plasmid (m): sc-142657-SH, cyclin K shRNA (h) Lentiviral Particles: sc-37600-V and cyclin K shRNA (m) Lentiviral Particles: sc-142657-V.

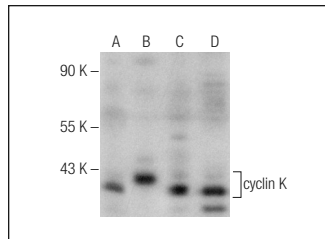
Molecular Weight of cyclin K: 64 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, SW480 cell lysate: sc-2219 or F9 cell lysate: sc-2245.

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



cyclin K (H-180): sc-292521. Western blot analysis of cyclin K expression in 3T3-L1 (A), SW480 (B), c4 (C) and F9 (D) whole cell lysates.

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.


 MONOS
Satisfaction
Guaranteed

Try **cyclin K (G-11): sc-376371** or **cyclin K (R-17): sc-81842**, our highly recommended monoclonal alternatives to cyclin K (H-180).