

## cyclin G1 (C-18): sc-320



The Power to Question

## BACKGROUND

Cyclins are the regulatory subunits of Cdc2 p34 and related cyclin-dependent kinases (Cdks) which play critical roles in the control of cell cycle progression. The catalytic subunit for cyclin A and B is Cdc2 p34 kinase. The Cdc2-cyclin B complex controls the G<sub>2</sub> to M transition whereas Cdc2-cyclin A regulates S phase progression. The G<sub>1</sub> to S transition, however, appears to be controlled by the G<sub>1</sub> cyclins. Cyclin D1 accumulates during G<sub>1</sub> and associates with Cdk2, Cdk4 and Cdk5. Cyclin E and Cdk2 interact during the G<sub>1</sub> to S transition. Cyclin G contains a typical N terminal cyclin box and a carboxy-terminal domain sequence homologous to the tyrosine phosphorylation site of the epidermal growth factor receptor. Cyclin G expression is induced within three hours after growth stimulation and remains elevated with no apparent cell cycle dependency. Cyclin G2 shares 53% amino acid sequence identity with cyclin G1. Peak expression of cyclin G2 is seen in late S phase, as opposed to cyclin G1 expression, which is constitutive.

## CHROMOSOMAL LOCATION

Genetic locus: CCNG1 (human) mapping to 5q34; Ccng1 (mouse) mapping to 11 A5.

## SOURCE

cyclin G1 (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of cyclin G1 of rat origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-320 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

cyclin G1 (C-18) is recommended for detection of cyclin G1 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).

cyclin G1 (C-18) is also recommended for detection of cyclin G1 in additional species, including bovine.

Suitable for use as control antibody for cyclin G1 siRNA (h): sc-35139, cyclin G1 siRNA (m): sc-35140, cyclin G1 shRNA Plasmid (h): sc-35139-SH, cyclin G1 shRNA Plasmid (m): sc-35140-SH, cyclin G1 shRNA (h) Lentiviral Particles: sc-35139-V and cyclin G1 shRNA (m) Lentiviral Particles: sc-35140-V.

Molecular Weight of cyclin G1: 34 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HeLa nuclear extract: sc-2120 or HeLa whole cell lysate: sc-2200.

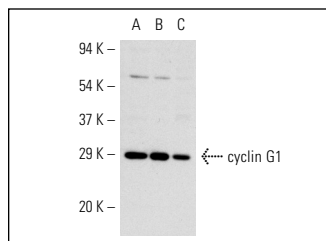
## RESEARCH USE

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

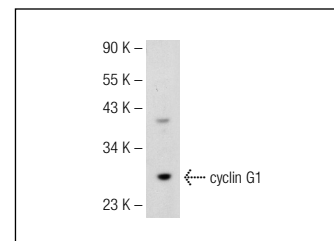
## STORAGE

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

## DATA



cyclin G1 (C-18): sc-320. Western blot analysis of cyclin G1 expression in HeLa nuclear extract (A) and HeLa (B) and ES-2 (C) whole cell lysates.



cyclin G1 (C-18): sc-320. Western blot analysis of cyclin G1 expression in Jurkat nuclear extract.

## SELECT PRODUCT CITATIONS

- Reimer, C.L., et al. 1999. Altered regulation of cyclin G in human breast cancer and its specific localization at replication foci in response to DNA damage in p53<sup>+/+</sup> cells. *J. Biol. Chem.* 274: 11022-11029.
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- Li, J.Q., et al. 2003. Cyclin B1, unlike cyclin G1, increases significantly during colorectal carcinogenesis and during later metastasis to lymph nodes. *Int. J. Oncol.* 22: 1101-1110.
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Try **cyclin G1 (F-5): sc-8016**, our highly recommended monoclonal alternative to cyclin G1 (C-18).