

cyclin G2 (L-20): sc-31138

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 Cdc2-cyclin B complex controls the G₂ to M transition whereas Cdc2-cyclin A regulates S phase progression. 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 3 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.

REFERENCES

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2. Fang, F., et al. 1991. Evidence that the G₁-S and G₂-M transitions are controlled by different cdc2 proteins in higher eukaryotes. *Cell* 66: 731-742.
3. Koff, A., et al. 1991. Human cyclin E, a new cyclin that interacts with two members of the CDC2 gene family. *Cell* 66: 1217-1228.
4. Girard, F., et al. 1991. Cyclin A is required for the onset of DNA replication in mammalian fibroblasts. *Cell* 67: 1169-1179.
5. Matsushime, H., et al. 1992. Identification and properties of an atypical catalytic subunit (p34PSK-J3/cdk4) for mammalian D type G₁ cyclins. *Cell* 71: 323-334.
6. Xiong, Y., et al. 1992. D type cyclins associate with multiple protein kinases and the DNA replication and repair factor PCNA. *Cell* 71: 505-514.
7. Tamura, K., et al. 1993. Cyclin G: a new mammalian cyclin with homology to fission yeast Cig1. *Oncogene* 8: 2113-2118.
8. Horne, M.C., et al. 1996. Cyclin G1 and cyclin G2 comprise a new family of cyclins with contrasting tissue-specific and cell cycle-regulated expressions. *J. Biol. Chem.* 271: 6050-6061.

CHROMOSOMAL LOCATION

Genetic locus: CCNG2 (human) mapping to 4q21.1; Ccng2 (mouse) mapping to 5E2.

SOURCE

cyclin G2 (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of cyclin G2 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.

Blocking peptide available for competition studies, sc-31138 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

cyclin G2 (L-20) is recommended for detection of cyclin G2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 G2 (L-20) is also recommended for detection of cyclin G2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for cyclin G2 siRNA (h): sc-37597, cyclin G2 siRNA (m): sc-37598, cyclin G2 shRNA Plasmid (h): sc-37597-SH, cyclin G2 shRNA Plasmid (m): sc-37598-SH, cyclin G2 shRNA (h) Lentiviral Particles: sc-37597-V and cyclin G2 shRNA (m) Lentiviral Particles: sc-37598-V.

Molecular Weight of cyclin G2: 45 kDa.

Positive Controls: Ramos + IL-4 cell lysate: sc-24762.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **cyclin G2 (1F9-C11): sc-293302**, our highly recommended monoclonal alternative to cyclin G2 (L-20).