

cyclin G2 (N-19): sc-7266

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 G₂ to M transition whereas Cdc2-cyclin A regulates S phase progression. The G₁ to S transition, however, appears to be controlled by the G₁ cyclins. Cyclin D1 accumulates during G₁ and associates with Cdk2, Cdk4 and Cdk5. Cyclin E and Cdk2 interact during the G₁ 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: CCNG2 (human) mapping to 4q21.1; Ccng2 (mouse) mapping to 5 E2

SOURCE

cyclin G2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at 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-7266 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

cyclin G2 (N-19) 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), 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).

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.

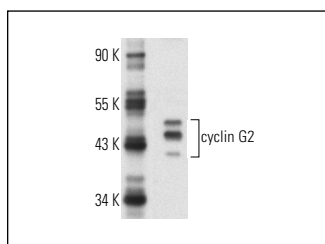
Molecular Weight of cyclin G2: 45 kDa.

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

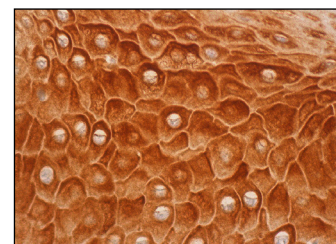
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



cyclin G2 (N-19): sc-7266. Western blot analysis of cyclin G2 expression in IL-4-treated Ramos whole cell lysate.



cyclin G2 (N-19): sc-7266. Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

- Barbon, A., et al. 2010. Acute spinal cord injury persistently reduces R/G RNA editing of AMPA receptors. *J. Neurochem.* 114: 397-407.
- Aguilar, V., et al. 2010. Cyclin G2 regulates adipogenesis through PPAR γ coactivation. *Endocrinology* 151: 5247-5254.
- Ye, X.X., et al. 2012. The expression of cyclin G in nasopharyngeal carcinoma and its significance. *Clin. Exp. Med.* 12: 21-24.
- Uusküla, L., et al. 2012. Mid-gestational gene expression profile in placenta and link to pregnancy complications. *PLoS ONE* 7: e49248.

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 (N-19).