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 3 hours after growth stimulation and remains elevated with no apparent cell cycle dependence. A serine/threonine kinase, designated GAK (for cyclin G associated kinase), has been identified. GAK has been shown to bind directly to cyclin G and to co-immunoprecipitate with Cdk5, which also associates with cyclin G.

REFERENCES


STORAGE

Store at -20°C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

GAK (h): 293 Lysate: sc-111171

PRODUCT

GAK (h): 293 Lysate represents a lysate of human GAK transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

GAK (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive GAK antibodies. Recommended use: 10-20 µl per lane.

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.

DATA

GAK (R-360): sc-7864. Western blot analysis of GAK expression in non-transfected: sc-117752 (A) and human GAK transfected: sc-111171 (B) 293T whole cell lysates.

RESEARCH USE

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