cyclin D1 (A-12): sc-8396

**BACKGROUND**

The proliferation of eukaryotic cells is controlled at specific points in the cell cycle, particularly at the G1 to S and the G2 to M transitions. It is well established that the Cdc2 p34-cyclin B protein kinase plays a critical role in the G2 to M transition, while cyclin A associates with Cdk2 p33 and functions in S phase. Considerable effort directed towards the identification of G1 cyclins has led to the isolation of cyclin D, cyclin C and cyclin E. Of these, cyclin D corresponds to a putative human oncogene, designated PRAD1, which maps at the site of the Bcl1 rearrangement in certain lymphomas and leukemias. Two additional human type D cyclins, as well as their mouse homologs, have been identified. Evidence has established that members of the cyclin D family function to regulate phosphorylation of the retinoblastoma gene product, thereby activating E2F transcription factors.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: CCND1 (human) mapping to 11q13.3; Ccnd1 (mouse) mapping to 6q23.

**SOURCE**

cyclin D1 (A-12) is a mouse monoclonal antibody raised against amino acids 1-295 representing full length cyclin D1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgGk kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cyclin D1 (A-12) is available conjugated to agarose (sc-8396 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8396 HRP), 200 µg/ml, for WB, HICP and ELISA; to either phycoerythrin (sc-8396 PE), fluorescein (sc-8396 FITC), Alexa Fluor® 488 (sc-8396 AF488), Alexa Fluor® 546 (sc-8396 AF546), Alexa Fluor® 594 (sc-8396 AF594) or Alexa Fluor® 647 (sc-8396 AF647), 200 µg/ml, for WB (RGB), IF, HICP (and) FCM; and to either Alexa Fluor® 680 (sc-8396 AF680) or Alexa Fluor® 790 (sc-8396 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, cyclin D1 (A-12) is available conjugated to either TRITC (sc-8396 TRITC, 200 µg/ml) or Alexa Fluor® 405 (sc-8396 AF405), 100 µg/2 ml, for IF, HICP (and) FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**STORAGE**

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

**APPLICATIONS**

cyclin D1 (A-12) is recommended for detection of cyclin D1 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); weakly cross-reactive with cyclin D2; non cross-reactive with cyclin D3.

Suitable for use as control antibody for cyclin D1 siRNA (h): sc-29286, cyclin D1 siRNA (m): sc-29287, cyclin D1 shRNA Plasmid (h): sc-29286-SH, cyclin D1 shRNA Plasmid (m): sc-29287-SH, cyclin D1 shRNA (h) Lentiviral Particles: sc-29286-V and cyclin D1 shRNA (m) Lentiviral Particles: sc-29287-V.

Molecular Weight of cyclin D1: 37 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, C32 nuclear extract: sc-2136 or KNRK nuclear extract: sc-2141.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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