

# cyclin D1 (HD11): sc-246

## BACKGROUND

The proliferation of eukaryotic cells is controlled at specific points in the cell cycle, particularly at the G<sub>1</sub> to S and the G<sub>2</sub> to M transitions. It is well established that the Cdc2 p34-cyclin B protein kinase plays a critical role in the G<sub>2</sub> to M transition while cyclin A associates with Cdk2 p33 and functions in S phase. Considerable effort directed towards the identification of G<sub>1</sub> 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 Bcl-1 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.

## CHROMOSOMAL LOCATION

Genetic locus: CCND1 (human) mapping to 11q13.3; Ccnd1 (mouse) mapping to 7 F5.

## SOURCE

cyclin D1 (HD11) is a mouse monoclonal antibody raised against recombinant cyclin D1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cyclin D1 (HD11) is available conjugated to agarose (sc-246 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-246 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-246 PE), fluorescein (sc-246 FITC), Alexa Fluor<sup>®</sup> 488 (sc-246 AF488), Alexa Fluor<sup>®</sup> 546 (sc-246 AF546), Alexa Fluor<sup>®</sup> 594 (sc-246 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-246 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-246 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-246 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

cyclin D1 (HD11) 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

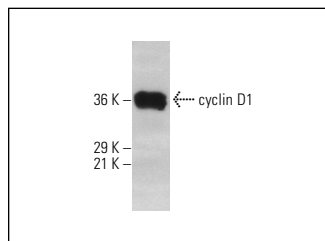
Molecular Weight of cyclin D1: 37 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, KNRK nuclear extract: sc-2141 or MCF7 nuclear extract: sc-2149.

## STORAGE

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

## DATA



cyclin D1 (HD11): sc-246. Western blot analysis of cyclin D1 expression in Jurkat whole cell lysate.

## SELECT PRODUCT CITATIONS

- Smith, E., et al. 1995. Expression of cell cycle regulatory factors in differentiating osteoblasts: postproliferative up-regulation of cyclins B and E. *Cancer Res.* 55: 5019-5024.
- Allen, R.E., et al. 1995. Hepatocyte growth factor activates quiescent skeletal muscle satellite cells *in vitro*. *J. Cell. Physiol.* 165: 307-312.
- Aytac, P.S., et al. 2016. Novel triazolothiadiazines act as potent anticancer agents in liver cancer cells through Akt and ASK-1 proteins. *Bioorg. Med. Chem.* 24: 858-872.
- Yang, M., et al. 2016. miR-935 promotes gastric cancer cell proliferation by targeting Sox7. *Biomed. Pharmacother.* 79: 153-158.
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- Yang, S.F., et al. 2016. Prognostic value of protein inhibitor of activated STAT3 in breast cancer patients receiving hormone therapy. *BMC Cancer* 16: 20.
- Diersch, S., et al. 2016. Kras<sup>G12D</sup> induces EGFR-MYC cross signaling in murine primary pancreatic ductal epithelial cells. *Oncogene* 35: 3880-3886.
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- Gallastegui, E., et al. 2017. p27<sup>Kip1</sup> represses the Pitx2-mediated expression of p21<sup>Cip1</sup> and regulates DNA replication during cell cycle progression. *Oncogene* 36: 350-361.

## RESEARCH USE

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