

## cyclin E (E-4): sc-377100



The Power to Question

## BACKGROUND

Cyclins were first identified in invertebrates as proteins that oscillate dramatically through the cell cycle. These proteins have been well conserved through evolution and play a critical role in regulation of cell division. cyclin E, along with the three cyclin D proteins and cyclin C, has been shown to represent a putative G<sub>1</sub> cyclin on the basis of its cyclic pattern of mRNA expression, with maximal levels being detected near the G<sub>1</sub>/S boundary. cyclin E has been found to be associated with the transcription factor E2F in a temporally regulated manner. The cyclin E/E2F complex is detected primarily during the G<sub>1</sub> phase of the cell cycle and decreases as cells enter S phase. E2F is known to be a critical transcription factor for expression of several S phase specific proteins.

## CHROMOSOMAL LOCATION

Genetic locus: CCNE1 (human) mapping to 19q12; Ccne1 (mouse) mapping to 7 B2.

## SOURCE

cyclin E (E-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 367-396 at the C-terminus of cyclin E of rat origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cyclin E (E-4) is available conjugated to agarose (sc-377100 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377100 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377100 PE), fluorescein (sc-377100 FITC), Alexa Fluor® 488 (sc-377100 AF488), Alexa Fluor® 546 (sc-377100 AF546), Alexa Fluor® 594 (sc-377100 AF594) or Alexa Fluor® 647 (sc-377100 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377100 AF680) or Alexa Fluor® 790 (sc-377100 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377100 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

cyclin E (E-4) is recommended for detection of cyclin E1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 E siRNA (h): sc-29288, cyclin E siRNA (m): sc-29289, cyclin E shRNA Plasmid (h): sc-29288-SH, cyclin E shRNA Plasmid (m): sc-29289-SH, cyclin E shRNA (h) Lentiviral Particles: sc-29288-V and cyclin E shRNA (m) Lentiviral Particles: sc-29289-V.

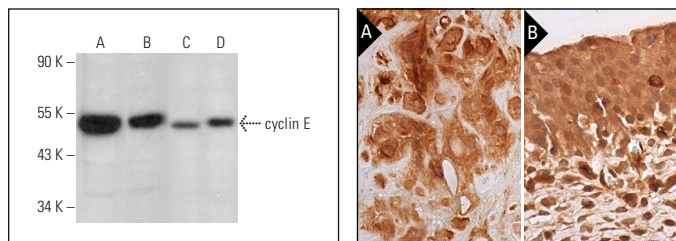
Molecular Weight of cyclin E: 53 kDa.

Positive Controls: JAR cell lysate: sc-2276, MEG-01 cell lysate: sc-2283 or IMR-32 nuclear extract: sc-2148.

## STORAGE

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

## DATA



cyclin E (E-4): sc-377100. Western blot analysis of cyclin E expression in JAR (A) and MEG-01 (B) whole cell lysates and MOLT-4 (C) and IMR-32 (D) nuclear extracts.

cyclin E (E-4): sc-377100. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of decidual cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear and cytoplasmic staining of urothelial cells (B).

## SELECT PRODUCT CITATIONS

- Li, F.Q., et al. 2007. Cell cycle arrest and apoptosis induced by the coronavirus infectious bronchitis virus in the absence of p53. *Virology* 365: 435-445.
- Tichy, E.D., et al. 2012. The abundance of Rad51 protein in mouse embryonic stem cells is regulated at multiple levels. *Stem Cell Res.* 9: 124-134.
- Lee, J.H., et al. 2014. Ghrelin augments murine T-cell proliferation by activation of the phosphatidylinositol-3-kinase, extracellular signal-regulated kinase and protein kinase C signaling pathways. *FEBS Lett.* 588: 4708-4719.
- Han, Y.S., et al. 2015. Fucoidan inhibits the migration and proliferation of HT-29 human colon cancer cells via the phosphoinositide-3 kinase/Akt/mechanistic target of rapamycin pathways. *Mol. Med. Rep.* 12: 3446-3452.
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- Xiong, X., et al. 2018. FBP1 promotes ovarian cancer development through the acceleration of cell cycle transition and metastasis. *Oncol. Lett.* 16: 1682-1688.
- Liu, N., et al. 2019. CADM2 inhibits human glioma proliferation, migration and invasion. *Oncol. Rep.* 41: 2273-2280.
- Li, G., et al. 2020. lncRNA SOX2-OT regulates laryngeal cancer cell proliferation, migration and invasion and induces apoptosis by suppressing miR-654. *Exp. Ther. Med.* 19: 3316-3324.

## RESEARCH USE

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

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