SANTA CRUZ BIOTECHNOLOGY, INC.

cyclin E (M-20): sc-481

SANTA CRUZ BIOTECHNOLOGY

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_1 cyclin on the basis of its cyclic pattern of mRNA expression, with maximal levels being detected near the G_1/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_1 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 (M-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of cyclin E of rat origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for biological studies, sc-481 L, ENTER CONCENTRATION HERE!.

cyclin E (M-20) is available conjugated to agarose (sc-481 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; and to fluorescein (sc-481 FITC, 200 µg/ml), for IF, IHC(P) and FCM.

In addition, cyclin E (M-20) is available conjugated to TRITC (sc-481 TRITC, 200 µg/ml),, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-481 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

cyclin E (M-20) is recommended for detection of cyclin E1 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 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.

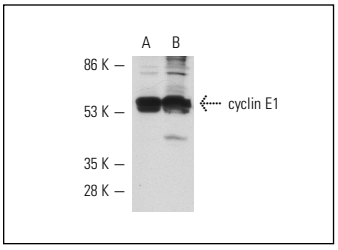
Molecular Weight of cyclin E: 53 kDa.

Positive Controls: 3611-RF nuclear extract: sc-2143, Jurkat nuclear extract: sc-2132 or KNRK nuclear extract: sc-2141.

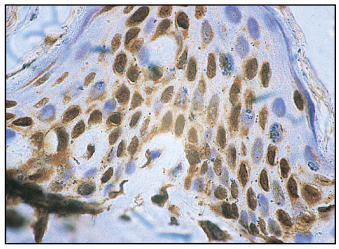
STORAGE

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

DATA



cyclin E (M-20): sc-481. Western blot analysis of cyclin E1 expression in phorbol ester-induced KNRK (**A**) and 3611-RF (**B**) nuclear extracts.



cyclin E (M-20): sc-481. Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human breast tissue showing nuclear staining.

SELECT PRODUCT CITATIONS

1. Ahmad, N., et al. 1998. Photodynamic therapy results in induction of WAF1/CIP1/p21 leading to cell cycle arrest and apoptosis. Proc. Natl. Acad. Sci. USA 95: 6977-6982.
2. Ortega, A., et al. 2012. Parathyroid hormone-related protein is a hypertrophy factor for human mesangial cells: Implications for diabetic nephropathy. J. Cell. Physiol. 227: 1980-1987.
3. Rizzolio, F., et al. 2012. Retinoblastoma tumor-suppressor protein phosphorylation and inactivation depend on direct interaction with Pin1. Cell Death Differ. 19: 1152-1161.
4. Toledano, Y., et al. 2012. Estradiol partially recapitulates murine pituitary cell cycle response to pregnancy. Endocrinology 153: 5011-5022.
5. Dufour, J., et al. 2013. Lack of liver x receptors leads to cell proliferation in a model of mouse dorsal prostate epithelial cell. PLoS ONE 8: e58876.
6. Wu, K., et al. 2013. EYA1 Phosphatase function is essential to drive breast cancer cell proliferation through cyclin D1. Cancer Res. 73: 4488-4499.
7. Oh, J.S., et al. 2013. Cdc25A activity is required for the metaphase II arrest in mouse oocytes. J. Cell Sci. 126: 1081-1085.
8. Bai, M., et al. 2013. Immunohistological analysis of cell cycle and apoptosis regulators in thymus. Ann. Anat. 195: 159-165.

RESEARCH USE

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