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 G1 cyclin on the basis of its cyclic pattern of mRNA expression, with maximal levels being detected near the G1/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 G1 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 (HE12) is a mouse monoclonal antibody raised against recombinant cyclin E of human origin.

PRODUCT

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cyclin E (HE12) is available conjugated to fluorescein (sc-247 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

In addition, cyclin E (HE12) is available conjugated to TRITC (sc-247 TRITC, 200 µg/ml), for IF, IHC(P) and FCM.

APPLICATIONS

cyclin E (HE12) is recommended for detection of cyclin E (doublet at 50 kDa and single band at 42 kDa) 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 1:150-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for cyclin 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-29289-V and cyclin E shRNA (m) Lentiviral Particles: sc-29289-V.

Molecular Weight of cyclin E: 53 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MEG-01 cell lysate: sc-2283 or JAR cell lysate: sc-2276.

STORAGE

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

RESEARCH USE

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

DATA

cyclin E (HE12): sc-247. Western blot analysis of cyclin E expression in HeLa (A), MEG-01 (B), JAR (C), MOLT-4 (D), IMR-32 (E) and MCF7 (F) whole cell lysates.

cyclin E (HE12): sc-247. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells (B).

SELECT PRODUCT CITATIONS


See cyclin E (E-4): sc-377100 for cyclin E antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.