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CCNE1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1945a

Product Information

Application	WB, FC, E
Primary Accession	P24864
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	5F8C5
Isotype	IgG1
Calculated MW	47077
Description	The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance through the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin forms a complex with and functions as a regulatory subunit of CDK2, whose activity is required for cell cycle G1/S transition. This protein accumulates at the G1-S phase boundary and is degraded as cells progress through S phase. Overexpression of this gene has been observed in many tumors, which results in chromosome instability, and thus may contribute to tumorigenesis. This protein was found to associate with, and be involved in, the phosphorylation of NPAT protein (nuclear protein mapped to the ATM locus), which participates in cell-cycle regulated histone gene expression and plays a critical role in promoting cell-cycle progression in the absence of pRB. Two alternatively spliced transcript variants of this gene, which encode distinct isoforms, have been described. Two additional splice variants were reported but detailed nucleotide sequence information is not yet available.
Immunogen	Purified recombinant fragment of human CCNE1 (AA: 307-410) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	898
Other Names	G1/S-specific cyclin-E1, CCNE1, CCNE
Dilution	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions	CCNE1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CCNE1
Synonyms	CCNE
Function	Essential for the control of the cell cycle at the G1/S (start) transition.
Cellular Location	Nucleus.
Tissue Location	Highly expressed in testis and placenta. Low levels in bronchial epithelial cells.

Background

C17orf53 (chromosome 17 open reading frame 53) is a 647 amino acid protein that is encoded by a gene mapping to human chromosome 17. Chromosome 17 makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes. Chromosome 17 is also linked to neurofibromatosis, a condition characterized by neural and epidermal lesions, and dysregulated Schwann cell growth. Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease are also associated with chromosome 17. ; ;

References

1. Cancer Res. 2010 Jun 15;70(12):5074-84. 2. Cancer. 2010 Jun 1;116(11):2621-34.

Images

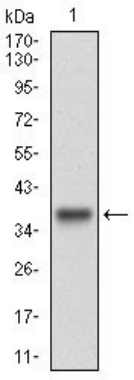
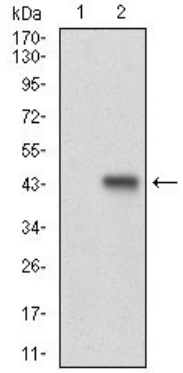


Figure 1: Western blot analysis using CCNE1 mAb against human CCNE1 (AA: 307-410) recombinant protein. (Expected MW is 37.5 kDa)

Figure 2: Western blot analysis using CCNE1 mAb against HEK293 (1) and CCNE1 (AA: 307-410)-hIgGFc transfected HEK293 (2) cell lysate.



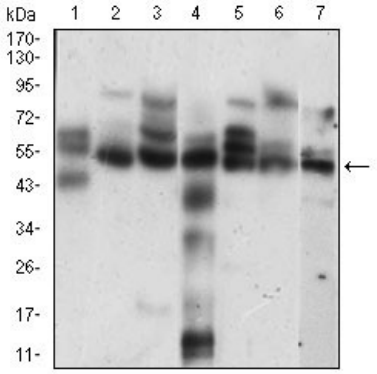


Figure 3: Western blot analysis using CCNE1 mouse mAb against Hela (1), K562 (2), NIH/3T3 (3), C6 (4), MCF-7 (5), Jurkat (6), A431 (7) cell lysate.

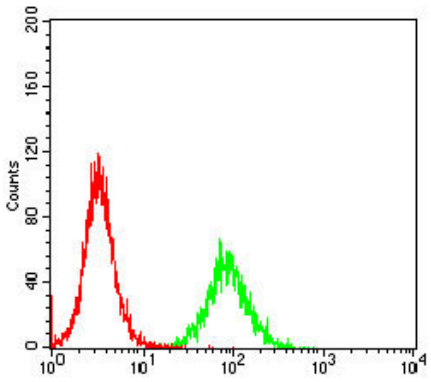


Figure 4: Flow cytometric analysis of K652 cells using CCNE1 mouse mAb (green) and negative control (red).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.