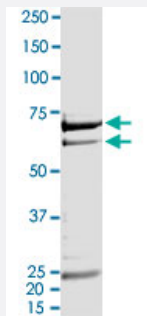


Bioactive

CDC2/CCNE1 (Human) Recombinant Protein

Catalog # P4641 Size 100 ug

Applications



Result of activity analysis

Result of activity analysis

□

Specification

Product Description	Human CDC2 (NM_001786, 1 a.a. - 297 a.a.) and CCNE1 (M73812, 1 a.a. - 395 a.a.) Recombinant protein with GST tag expressed in Sf9 cells.
Host	insect
Theoretical MW (kDa)	CDC2: 63.882 , CCNE1
Form	Liquid
Preparation Method	Insect cell (Sf9) expression system
Purification	One-step affinity purification using GSH-agarose
Concentration	0.166 ug/uL

Activity	53 pmol/ug x min
Quality Control Testing	2 ug/lane SDS-PAGE Stained with Coomassie Blue
Storage Buffer	In 50 mM Tris-HCl, 100 mM NaCl, pH 8.0. (5 mM DTT, 4 mM reduced glutathione, 20% glycerol)
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing
Note	Result of activity analysis Result of activity analysis

Applications

- Functional Study
- SDS-PAGE

Gene Info — CCNE1

Entrez GeneID	898
Protein Accession#	NM_001786 (Gene ID : 983);M73812 (Gene ID : 898)
Gene Name	CCNE1
Gene Alias	CCNE
Gene Description	cyclin E1
Omim ID	123837
Gene Ontology	Hyperlink

Gene Summary

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. [provided by RefSeq]

Other Designations

cyclin Es|cyclin Et

Gene Info — CDC2

Entrez GeneID

[983](#)

Protein Accession#

[NM_001786 \(Gene ID : 983\);M73812 \(Gene ID : 898\)](#)

Gene Name

CDC2

Gene Alias

CDC28A, CDK1, DKFZp686L20222, MGC111195

Gene Description

cell division cycle 2, G1 to S and G2 to M

Omim ID

[116940](#)

Gene Ontology

[Hyperlink](#)

Gene Summary

The protein encoded by this gene is a member of the Ser/Thr protein kinase family. This protein is a catalytic subunit of the highly conserved protein kinase complex known as M-phase promoting factor (MPF), which is essential for G1/S and G2/M phase transitions of eukaryotic cell cycle. Mitotic cyclins stably associate with this protein and function as regulatory subunits. The kinase activity of this protein is controlled by cyclin accumulation and destruction through the cell cycle. The phosphorylation and dephosphorylation of this protein also play important regulatory roles in cell cycle control. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq]

Other Designations

OTTHUMP00000019660|cell cycle controller CDC2|cell division control protein 2 homolog|cell division cycle 2 protein|cyclin-dependent kinase 1|p34 protein kinase

Pathway

- [Cell cycle](#)

- [Cell cycle](#)
- [Gap junction](#)
- [p53 signaling pathway](#)
- [p53 signaling pathway](#)
- [Pathways in cancer](#)
- [Prostate cancer](#)
- [Small cell lung cancer](#)

Disease

- [Adenocarcinoma](#)
- [Alzheimer disease](#)
- [Breast cancer](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Breast Neoplasms](#)
- [Dementia](#)
- [Disease Progression](#)
- [Esophageal Neoplasms](#)
- [Genetic Predisposition to Disease](#)
- [Genetic Predisposition to Disease](#)
- [Lung Neoplasms](#)
- [Neoplasm Invasiveness](#)
- [Neoplasms](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Pulmonary Disease](#)

- [Urinary Bladder Neoplasms](#)