

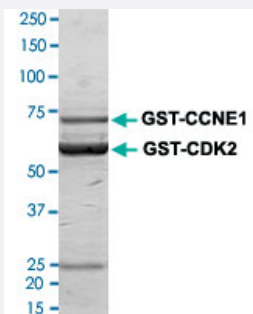
Bioactive

CDK2/CCNE1 (Human) Recombinant Protein

Catalog # P4655

Size 100 ug

Applications



Result of activity analysis

Result of activity analysis

□

Specification

Product Description	Human CDC2 (NM_001786, 1 a.a. - 298 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)	CDK2: 60.222 , CCNE1
Form	Liquid
Preparation Method	Insect cell (Sf9) expression system
Purification	One-step affinity purification using GSH-agarose
Concentration	0.243 ug/uL

Activity	241 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, 15 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_001798 (Gene ID : 1017);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 — CDK2

Entrez GeneID

[1017](#)

Protein Accession#

[NM_001798 \(Gene ID : 1017\);M73812 \(Gene ID : 898\)](#)

Gene Name

CDK2

Gene Alias

p33(CDK2)

Gene Description

cyclin-dependent kinase 2

Omim ID

[116953](#)

Gene Ontology

[Hyperlink](#)

Gene Summary

The protein encoded by this gene is a member of the Ser/Thr protein kinase family. This protein kinase is highly similar to the gene products of *S. cerevisiae* cdc28, and *S. pombe* cdc2. It is a catalytic subunit of the cyclin-dependent protein kinase complex, whose activity is restricted to the G1-S phase, and essential for cell cycle G1/S phase transition. This protein associates with and regulated by the regulatory subunits of the complex including cyclin A or E, CDK inhibitor p21Cip1 (CDKN1A) and p27Kip1 (CDKN1B). Its activity is also regulated by its protein phosphorylation. Two alternatively spliced variants and multiple transcription initiation sites of this gene have been reported. [provided by RefSeq]

Other Designations

cdc2-related protein kinase|cell division kinase 2|p33 protein kinase

Pathway

- [Cell cycle](#)

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

Disease

- [Adenocarcinoma](#)
- [Azoospermia](#)
- [Breast cancer](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Breast Neoplasms](#)
- [Chromosome Aberrations](#)
- [Diabetes Mellitus](#)
- [Disease Progression](#)
- [Esophageal Neoplasms](#)
- [Genetic Predisposition to Disease](#)
- [Genetic Predisposition to Disease](#)
- [Kidney Failure](#)
- [Lymphoma](#)
- [Neoplasm Invasiveness](#)

- [Neoplasm Invasiveness](#)
- [Neoplasms](#)
- [Ovarian cancer](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Ovarian Neoplasms](#)
- [Urinary Bladder Neoplasms](#)