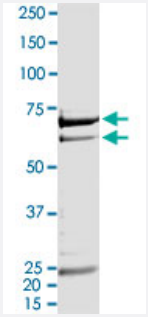
Bioactive

# 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 |

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| | |
|---|---|
| **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.<br>Aliquot to avoid repeated freezing and thawing |
| **Note** | Result of activity analysis<br>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 |

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| | |
|---|---|
| **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 fu nction 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 co mplex 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 p rogress 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 foun d to associate with, and be involved in, the phosphorylation of NPAT protein (nuclear protein map ped to the ATM locus), which participates in cell-cycle regulated histone gene expression and pla ys a critical role in promoting cell-cycle progression in the absence of pRB. Two alternatively splic ed transcript variants of this gene, which encode distinct isoforms, have been described. Two add itional splice variants were reported but detailed nucleotide sequence information is not yet availa ble. [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 f actor (MPF), which is essential for G1/S and G2/M phase transitions of eukaryotic cell cycle. Mitot ic 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 phos phorylation 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 thi s gene. [provided by RefSeq |
| **Other Designations** | OTTHUMP00000019660\|cell cycle controller CDC2\|cell division control protein 2 homolog\|cell div ision cycle 2 protein\|cyclin-dependent kinase 1\|p34 protein kinase |

## Pathway

- Cell cycle

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- 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

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- Urinary Bladder Neoplasms

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