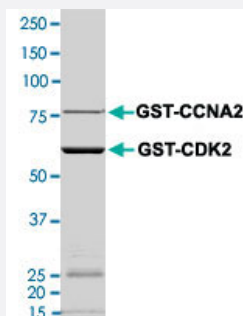


Bioactive

# CDK2/CCNA2 (Human) Recombinant Protein

Catalog # P4642      Size 100 ug

## Applications



## Result of activity analysis

Result of activity analysis

□

## Specification

|                             |                                                                                                                                             |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Description</b>  | Human CDK2 (NM_001798, 1 a.a. - 298 a.a.) and CCNA2 (NM_001237, 1 a.a. - 432 a.a.) Recombinant protein with GST tag expressed in Sf9 cells. |
| <b>Host</b>                 | insect                                                                                                                                      |
| <b>Theoretical MW (kDa)</b> | CDK2: 60.222 , CCNA2                                                                                                                        |
| <b>Form</b>                 | Liquid                                                                                                                                      |
| <b>Preparation Method</b>   | Insect cell (Sf9) expression system                                                                                                         |
| <b>Purification</b>         | One-step affinity purification using GSH-agarose                                                                                            |
| <b>Concentration</b>        | 0.273 ug/uL                                                                                                                                 |

|                         |                                                                                             |
|-------------------------|---------------------------------------------------------------------------------------------|
| Activity                | 67 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.<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 — CCNA2

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Entrez GeneID      | <a href="#">890</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Protein Accession# | <a href="#">NM_001798 (Gene ID : 1017);NM_001237 (Gene ID : 890)</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Gene Name          | CCNA2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Gene Alias         | CCN1, CCNA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Gene Description   | cyclin A2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Omim ID            | <a href="#">123835</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Gene Ontology      | <a href="#">Hyperlink</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 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. In contrast to cyclin A 1, which is present only in germ cells, this cyclin is expressed in all tissues tested. This cyclin binds and activates CDC2 or CDK2 kinases, and thus promotes both cell cycle G1/S and G2/M transitions. [provided by RefSeq] |
| Other Designations | cyclin A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Gene Info — CDK2

Entrez GeneID [1017](#)

Protein Accession# [NM\\_001798 \(Gene ID : 1017\);NM\\_001237 \(Gene ID : 890\)](#)

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](#)
- [Pathways in cancer](#)
- [Prostate cancer](#)
- [Small cell lung cancer](#)

## Disease

- [Adenocarcinoma](#)

- [Azoospermia](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Chromosome Aberrations](#)
- [Diabetes Mellitus](#)
- [Esophageal Neoplasms](#)
- [Genetic Predisposition to Disease](#)
- [Genetic Predisposition to Disease](#)
- [Kidney Failure](#)
- [Kidney Failure](#)
- [Lung Neoplasms](#)
- [Lymphoma](#)
- [Neoplasm Invasiveness](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Ovarian Neoplasms](#)
- [Pulmonary Disease](#)
- [Urinary Bladder Neoplasms](#)
- [Werner syndrome](#)