

Bioactive

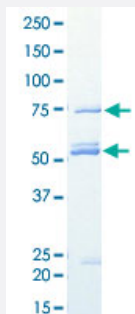
Full-Length

CDK2/CCNA2 (Human) Recombinant Protein

Catalog # P5511

Size 5 ug

Applications



Result of activity analysis

Result of activity analysis

□

Specification

Product Description	Human CDK2 (NP_001789.2, 1 a.a. - 298 a.a.) and CCNA2 (NP_001228.1, 1 a.a. - 432 a.a.) full-length recombinant protein with GST tag expressed in baculovirus infected Sf21 cells.
Host	insect
Theoretical MW (kDa)	61
Form	Liquid
Preparation Method	Baculovirus infected insect cell (Sf21) expression system
Purification	Glutathione sepharose chromatography
Purity	91 % by SDS-PAGE/CBB staining

Activity	The activity was measured by off-chip mobility shift assay. The enzyme was incubated with fluorescence-labeled substrate and Mg(or Mn)/ATP. The phosphorylated and unphosphorylated substrates were separated and detected by LabChip 3000. Substrate: Histone H1 peptide. ATP: 100 uM.
Quality Control Testing	Loading 1 ug protein in SDS-PAGE
Storage Buffer	In 50 mM Tris-HCl, 150 mM NaCl, pH 7.5 (0.1% CHAPS, 1 mM DTT, 10% 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 — CCNA2

Entrez GeneID	890
Protein Accession#	NP_001789.2 (Gene ID : 1017);NP_001228.1 (Gene ID : 890)
Gene Name	CCNA2
Gene Alias	CCN1, CCNA
Gene Description	cyclin A2
Omim ID	123835
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. In contrast to cyclin A1, 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# [NP_001789.2 \(Gene ID : 1017\);NP_001228.1 \(Gene ID : 890\)](#)

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](#)