

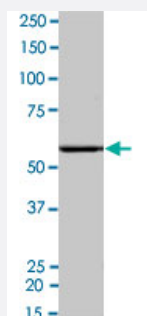
Bioactive

CDK4/CCND1 (Human) Recombinant Protein

Catalog # P4657

Size 100 ug

Applications



Result of activity analysis

Result of activity analysis

□

Specification

Product Description	Human CDK4 (NM_001786, 4 a.a. - 303 a.a.) and CCND1 (NM_053056, 4 a.a. - 295 a.a.) Recombinant protein with GST tag expressed in Sf9 cells.
Host	insect
Theoretical MW (kDa)	CDK4: 59.700 , CCND1
Form	Liquid
Preparation Method	Insect cell (Sf9) expression system
Purification	GST affinity chromatography
Concentration	0.314 ug/uL

Activity	99 pmol/ug x min
Quality Control Testing	2 ug/lane SDS-PAGE Stained with Coomassie Blue
Storage Buffer	In 50 mM Hepes, 100 mM NaCl, pH 7.5. (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 — CCND1

Entrez GeneID	595
Protein Accession#	NM_000075 (Gene ID : 1019);NM_053056 (Gene ID : 595)
Gene Name	CCND1
Gene Alias	BCL1, D11S287E, PRAD1, U21B31
Gene Description	cyclin D1
Omim ID	151400 168461 193300 254500
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 throughout 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 CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with tumor suppressor protein Rb and the expression of this gene is regulated positively by Rb. Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of tumors and may contribute to tumorigenesis. [provided by RefSeq]
Other Designations	B-cell CLL/lymphoma 1 G1/S-specific cyclin D1

Gene Info — CDK4

Entrez GeneID [1019](#)

Protein Accession# [NM_000075 \(Gene ID : 1019\);NM_053056 \(Gene ID : 595\)](#)

Gene Name CDK4

Gene Alias CMM3, MGC14458, PSK-J3

Gene Description cyclin-dependent kinase 4

Omim ID [123829 609048](#)

Gene Ontology [Hyperlink](#)

Gene Summary

The protein encoded by this gene is a member of the Ser/Thr protein kinase family. This protein is highly similar to the gene products of *S. cerevisiae* cdc28 and *S. pombe* cdc2. It is a catalytic subunit of the protein kinase complex that is important for cell cycle G1 phase progression. The activity of this kinase is restricted to the G1-S phase, which is controlled by the regulatory subunits D-type cyclins and CDK inhibitor p16(INK4a). This kinase was shown to be responsible for the phosphorylation of retinoblastoma gene product (Rb). Mutations in this gene as well as in its related proteins including D-type cyclins, p16(INK4a) and Rb were all found to be associated with tumorigenesis of a variety of cancers. Multiple polyadenylation sites of this gene have been reported. [provided by RefSeq]

Other Designations cell division kinase 4|melanoma cutaneous malignant, 3

Pathway

- [Acute myeloid leukemia](#)
- [Bladder cancer](#)
- [Bladder cancer](#)
- [Cell cycle](#)
- [Cell cycle](#)
- [Chronic myeloid leukemia](#)
- [Chronic myeloid leukemia](#)
- [Colorectal cancer](#)
- [Endometrial cancer](#)

- [Focal adhesion](#)
- [Glioma](#)
- [Glioma](#)
- [Jak-STAT signaling pathway](#)
- [Melanoma](#)
- [Melanoma](#)
- [Non-small cell lung cancer](#)
- [Non-small cell lung cancer](#)
- [p53 signaling pathway](#)
- [p53 signaling pathway](#)
- [Pancreatic cancer](#)
- [Pancreatic cancer](#)
- [Pathways in cancer](#)
- [Pathways in cancer](#)
- [Prostate cancer](#)
- [Small cell lung cancer](#)
- [Small cell lung cancer](#)
- [T cell receptor signaling pathway](#)
- [Thyroid cancer](#)
- [Tight junction](#)
- [Wnt signaling pathway](#)

Disease

- [Adenocarcinoma](#)
- [Adenocarcinoma](#)
- [Adenoma](#)

- [Ataxia telangiectasia](#)
- [Barrett Esophagus](#)
- [Birth Weight](#)
- [Brain Neoplasms](#)
- [Brain Neoplasms](#)
- [Breast cancer](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)
- [Carcinoma in Situ](#)
- [Cardiovascular Diseases](#)
- [Cell Transformation](#)
- [Chromosome Aberrations](#)
- [Chronic Disease](#)
- [Colitis](#)
- [Colon cancer](#)
- [Colorectal Neoplasms](#)
- [Crohn Disease](#)
- [Diabetes Mellitus](#)
- [Disease Progression](#)
- [Disease Susceptibility](#)
- [DNA Damage](#)
- [Edema](#)
- [Endometrial Neoplasms](#)
- [Esophageal Neoplasms](#)

- [Esophageal Neoplasms](#)
- [Fetal Diseases](#)
- [Gastritis](#)
- [Gastroesophageal Reflux](#)
- [Genetic Predisposition to Disease](#)
- [Genetic Predisposition to Disease](#)
- [Genomic Instability](#)
- [Glioblastoma](#)
- [Glioma](#)
- [Head and Neck Neoplasms](#)
- [Head and Neck Neoplasms](#)
- [Helicobacter Infections](#)
- [Hematologic Diseases](#)
- [Hemophilia A](#)
- [Hepatoblastoma](#)
- [Hodgkin Disease](#)
- [Hyperparathyroidism](#)
- [Hypopharyngeal Neoplasms](#)
- [Inflammatory Bowel Diseases](#)
- [Insulin Resistance](#)
- [Intestinal Neoplasms](#)
- [Kidney Failure](#)
- [Kidney Failure](#)
- [Kidney Neoplasms](#)
- [Laryngeal Diseases](#)
- [Laryngeal Neoplasms](#)

- [Leiomyoma](#)
- [Leukemia](#)
- [Leukemia](#)
- [Leukoplakia](#)
- [Liver Neoplasms](#)
- [Lung Neoplasms](#)
- [Lung Neoplasms](#)
- [Lymphatic Metastasis](#)
- [Lymphoma](#)
- [Lymphoma](#)
- [Lymphoproliferative Disorders](#)
- [Malignant melanoma](#)
- [Melanoma](#)
- [Meningeal Neoplasms](#)
- [Meningioma](#)
- [Mouth Neoplasms](#)
- [Mouth Neoplasms](#)
- [Nasopharyngeal Neoplasms](#)
- [Neoplasm Invasiveness](#)
- [Neoplasm Invasiveness](#)
- [Neoplasm Metastasis](#)
- [Neoplasm Recurrence](#)
- [Neoplasm Recurrence](#)
- [Neoplasms](#)
- [Neoplasms](#)
- [Neuroma](#)

- [Obesity](#)
- [Obesity](#)
- [Occupational Diseases](#)
- [Oropharyngeal Neoplasms](#)
- [Ovarian cancer](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Ovarian Neoplasms](#)
- [Pancreatic cancer](#)
- [Pancreatic Neoplasms](#)
- [Papillomavirus Infections](#)
- [Peptic Ulcer](#)
- [Pituitary Neoplasms](#)
- [Precancerous Conditions](#)
- [Precancerous Conditions](#)
- [Prolactinoma](#)
- [Prostate cancer](#)
- [Prostatic Hyperplasia](#)
- [Prostatic Neoplasms](#)
- [Pulmonary Disease](#)
- [Pulmonary Disease](#)
- [Rectal Neoplasms](#)
- [Recurrence](#)
- [Retinoblastoma](#)
- [Retinoblastoma](#)
- [Skin Neoplasms](#)

- [Skin Neoplasms](#)
- [Stomach Neoplasms](#)
- [Translocation](#)
- [Urinary Bladder Neoplasms](#)
- [Urinary Bladder Neoplasms](#)
- [Uterine Cervical Neoplasms](#)
- [Uterine Neoplasms](#)
- [Uveal Neoplasms](#)
- [Waldenstrom Macroglobulinemia](#)
- [Werner syndrome](#)
- [Werner syndrome](#)