

Bioactive

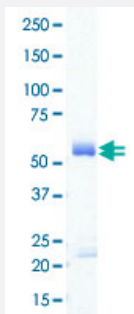
Full-Length

CDK4/CCND3 (Human) Recombinant Protein

Catalog # P5514

Size 5 ug

Applications



Result of activity analysis

Result of activity analysis

□

Specification

Product Description	Human CDK4 (NP_000066.1, 1 a.a. - 303 a.a.) and CCND3 (AAA51927.1, 1 a.a. - 292 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	84 % 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: DYRKtide-F. ATP: 200 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 — CCND3

Entrez GeneID	896
Protein Accession#	NP_000066.1 (Gene ID : 1019);AAA51927.1 (Gene ID : 896)
Gene Name	CCND3
Gene Alias	-
Gene Description	cyclin D3
Omim ID	123834
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 CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with and be involved in the phosphorylation of tumor suppressor protein Rb. The CDK4 activity associated with this cyclin was reported to be necessary for cell cycle progression through G2 phase into mitosis after UV radiation. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq]

Other Designations

D3-type cyclin|G1/S-specific cyclin D3|OTTHUMP00000016390

Gene Info — CDK4

Entrez GeneID

[1019](#)

Protein Accession#

[NP_000066.1 \(Gene ID : 1019\);AAA51927.1 \(Gene ID : 896\)](#)

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

- [Bladder cancer](#)
- [Cell cycle](#)
- [Cell cycle](#)
- [Chronic myeloid leukemia](#)
- [Focal adhesion](#)
- [Glioma](#)
- [Jak-STAT signaling pathway](#)
- [Melanoma](#)

- [Non-small cell lung cancer](#)
- [p53 signaling pathway](#)
- [p53 signaling pathway](#)
- [Pancreatic cancer](#)
- [Pathways in cancer](#)
- [Small cell lung cancer](#)
- [T cell receptor signaling pathway](#)
- [Tight junction](#)
- [Wnt signaling pathway](#)

Disease

- [Adenocarcinoma](#)
- [Adenocarcinoma](#)
- [Alzheimer disease](#)
- [Birth Weight](#)
- [Brain Neoplasms](#)
- [Breast cancer](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Breast Neoplasms](#)
- [Cardiovascular Diseases](#)
- [Cerebral Amyloid Angiopathy](#)
- [Diabetes Mellitus](#)
- [Edema](#)
- [Esophageal Neoplasms](#)
- [Esophageal Neoplasms](#)

- [Genetic Predisposition to Disease](#)
- [Genetic Predisposition to Disease](#)
- [Glioblastoma](#)
- [Head and Neck Neoplasms](#)
- [Kidney Failure](#)
- [Kidney Failure](#)
- [Leukemia](#)
- [Lung Neoplasms](#)
- [Lung Neoplasms](#)
- [Lymphoma](#)
- [Malignant melanoma](#)
- [Melanoma](#)
- [Mouth Neoplasms](#)
- [Neoplasm Invasiveness](#)
- [Neoplasm Invasiveness](#)
- [Neoplasm Recurrence](#)
- [Neoplasms](#)
- [Neuroblastoma](#)
- [Obesity](#)
- [Ovarian cancer](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Ovarian Neoplasms](#)
- [Pancreatic cancer](#)
- [Pancreatic Neoplasms](#)
- [Precancerous Conditions](#)

- [Pulmonary Disease](#)
- [Pulmonary Disease](#)
- [Retinoblastoma](#)
- [Skin Neoplasms](#)
- [Urinary Bladder Neoplasms](#)
- [Urinary Bladder Neoplasms](#)
- [Uveal Neoplasms](#)
- [Werner syndrome](#)
- [Werner syndrome](#)