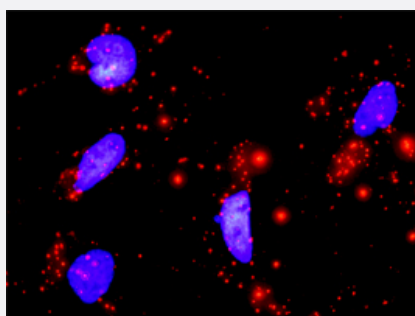


CDK4 & CCND1 Protein Protein Interaction Antibody Pair

Catalog # DI0556

Size 1 Set

Applications



Representative image of Proximity Ligation Assay of protein-protein interactions between CDK4 and CCND1. HeLa cells were stained with anti-CDK4 rabbit purified polyclonal antibody 1:1200 and anti-CCND1 mouse purified polyclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex. The images were analyzed using an optimized freeware (BlobFinder) download from The Centre for Image Analysis at Uppsala University.

Specification

Product Description

This protein protein interaction antibody pair set comes with two antibodies to detect the protein-protein interaction, one against the CDK4 protein, and the other against the CCND1 protein for use in [in situ Proximity Ligation Assay](#). [See Publication Reference below](#).

Reactivity

Human

Quality Control Testing

Protein protein interaction immunofluorescence result.
Representative image of Proximity Ligation Assay of protein-protein interactions between CDK4 and CCND1. HeLa cells were stained with anti-CDK4 rabbit purified polyclonal antibody 1:1200 and anti-CCND1 mouse purified polyclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex. The images were analyzed using an optimized freeware (BlobFinder) download from The Centre for Image Analysis at Uppsala University.

Supplied Product

Antibody pair set content:
1. CDK4 rabbit purified polyclonal antibody (100 ug)
2. CCND1 mouse purified polyclonal antibody (40 ug)
*Reagents are sufficient for at least 30-50 assays using recommended protocols.

Storage Instruction

Store reagents of the antibody pair set at -20°C or lower. Please aliquot to avoid repeated freeze-thaw cycle. Reagents should be returned to -20°C storage immediately after use.

Applications

- *In situ* Proximity Ligation Assay (Cell)

Gene Info — CCND1

Entrez GeneID [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](#)

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](#)