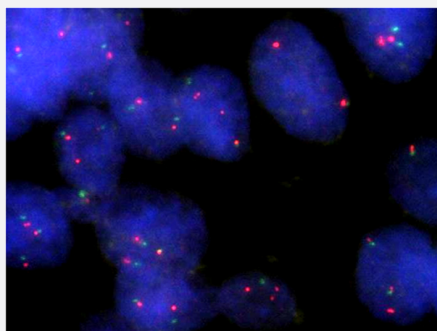


# CDK4/CEN12q FISH Probe

Catalog # FG0033

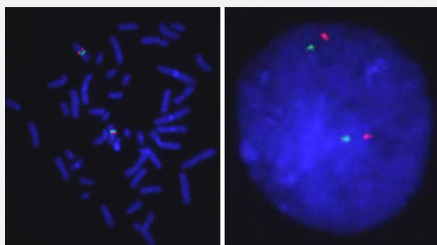
Size 200 uL, 100 uL

## Applications



### Fluorescent *In Situ* Hybridization (Formalin/PFA-fixed paraffin-embedded sections)

Human lung, adenosquamous cell carcinoma (FFPE) stained with CDK4/CEN12q FISH Probe. Human lung, adenosquamous cell carcinoma showed no CDK4 gene amplification



### Hybridization position of the probes on the chromosome.

□

Hybridization position of the probes on the chromosome.

## Specification

### Product Description

Labeled FISH probes for identification of gene amplification using Fluorescent In Situ Hybridization Technique. ([Technology](#)).

|                                |                                                                                                                                                                                                                               |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Probe 1</b>                 | <b>Name:</b> CDK4<br><b>Size:</b> Approximately 350kb<br><b>Fluorophore:</b> Texas Red<br><b>Location:</b> 12q14.1                                                                                                            |
| <b>Probe 2</b>                 | <b>Name:</b> CEN12q<br><b>Size:</b> Approximately 580kb<br><b>Fluorophore:</b> FITC<br><b>Location:</b> 12q12                                                                                                                 |
| <b>Probe Gap</b>               | The gap between two probes is approximately 13,900 kb.                                                                                                                                                                        |
| <b>Origin</b>                  | Human                                                                                                                                                                                                                         |
| <b>Source</b>                  | Genomic DNA                                                                                                                                                                                                                   |
| <b>Reactivity</b>              | Human                                                                                                                                                                                                                         |
| <b>Form</b>                    | Liquid                                                                                                                                                                                                                        |
| <b>Notice</b>                  | We <b>strongly recommend</b> the customer to use FFPE FISH PreTreatment Kit 1 (Catalog #: <a href="#">KA2375</a> or <a href="#">KA2691</a> ) for the pretreatment of Formalin-Fixed Paraffin-Embedded (FFPE) tissue sections. |
| <b>Regulation Status</b>       | For research use only (RUO)                                                                                                                                                                                                   |
| <b>Quality Control Testing</b> | Representative images of normal human cell (lymphocyte) stain with the dual color FISH probe. The left image is chromosomes at metaphase, and the right image is an interphase nucleus.                                       |
| <b>Supplied Product</b>        | DAPI Counterstain (1500 ng/mL ) 125 uL for each 100 uL FISH Probe                                                                                                                                                             |
| <b>Storage Instruction</b>     | Store at 4°C in the dark.                                                                                                                                                                                                     |
| <b>Note</b>                    | <p>Hybridization position of the probes on the chromosome.</p> <p>Hybridization position of the probes on the chromosome.</p>                                                                                                 |

## Applications

- Fluorescent In Situ Hybridization (Cell)

[Protocol Download](#)

- Fluorescent *In Situ* Hybridization (Formalin/PFA-fixed paraffin-embedded sections)

Human lung, adenosquamous cell carcinoma (FFPE) stained with CDK4/CEN12q FISH Probe. Human lung, adenosquamous cell carcinoma showed no CDK4 gene amplification

[Protocol Download](#)

## 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 sub unit 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](#)
- [Chronic myeloid leukemia](#)
- [Glioma](#)
- [Melanoma](#)
- [Non-small cell lung cancer](#)
- [p53 signaling pathway](#)
- [Pancreatic cancer](#)
- [Pathways in cancer](#)
- [Small cell lung cancer](#)

- [T cell receptor signaling pathway](#)
- [Tight junction](#)

## Disease

- [Adenocarcinoma](#)
- [Birth Weight](#)
- [Brain Neoplasms](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Cardiovascular Diseases](#)
- [Diabetes Mellitus](#)
- [Edema](#)
- [Esophageal Neoplasms](#)
- [Genetic Predisposition to Disease](#)
- [Glioblastoma](#)
- [Head and Neck Neoplasms](#)
- [Kidney Failure](#)
- [Leukemia](#)
- [Lung Neoplasms](#)
- [Lymphoma](#)
- [Malignant melanoma](#)
- [Melanoma](#)
- [Mouth Neoplasms](#)
- [Neoplasm Invasiveness](#)
- [Neoplasm Recurrence](#)

- [Neoplasms](#)
- [Obesity](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Pancreatic cancer](#)
- [Pancreatic Neoplasms](#)
- [Precancerous Conditions](#)
- [Pulmonary Disease](#)
- [Retinoblastoma](#)
- [Skin Neoplasms](#)
- [Urinary Bladder Neoplasms](#)
- [Uveal Neoplasms](#)
- [Werner syndrome](#)