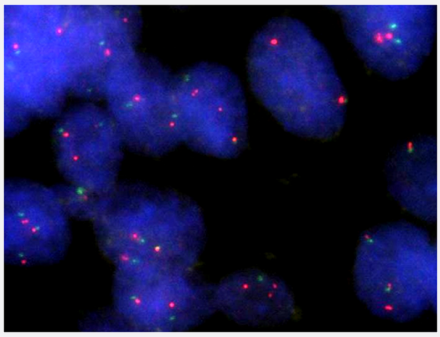
Sm Size

CDK4/CEN12q FISH Probe

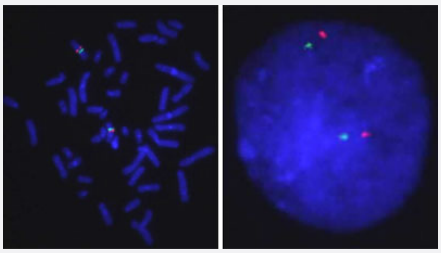
Catalog # FG0033 Size 200 uL, 100 uL

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 T echnique. (Technology).

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

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

  Protocol Download

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- Fluorescent In Situ Hybridization (Cell)

  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 activit y of this kinase is restricted to the G1-S phase, which is controlled by the regulatory subunits D-typ e cyclins and CDK inhibitor p16(INK4a). This kinase was shown to be responsible for the phosph orylation of retinoblastoma gene product (Rb). Mutations in this gene as well as in its related prote ins including D-type cyclins, p16(INK4a) and Rb were all found to be associated with tumorigenes is of a variety of cancers. Multiple polyadenylation sites of this gene have been reported. [provide d by RefSeq
Other Designations	cell division kinase 4|melanoma cutaneous malignant, 3

Publication Reference

- Prognostic Implications of MDM2 and CDK4 Co-amplification in Liposarcoma: Insights from FISH analysis for Translational Oncology.

  Jessinntha James, Aidy Irman Yajid, Sahran Yahaya, Sarimah Abdullah, Sharifah Emilia Tuan Sharif.

  Clinical & Translational Oncology 2025 Jul; 0:0.

  Application: FISH-P, Human, Lipomatous tumour tissue

Pathway

- Bladder cancer

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- 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

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- 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

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