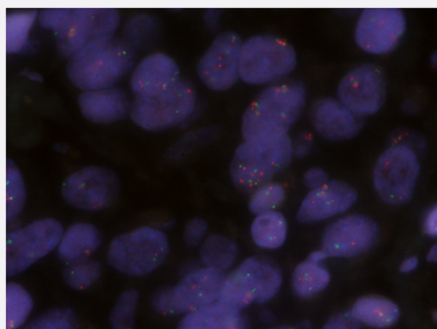


# KRAS/CEN12q FISH Probe

Catalog # FG0017

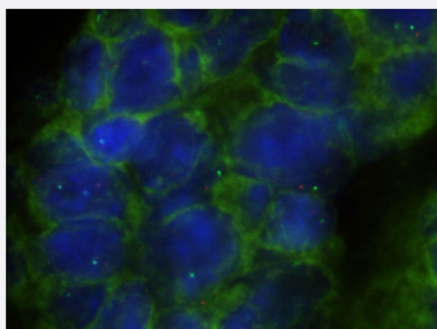
Size 200 uL, 100 uL

## Applications



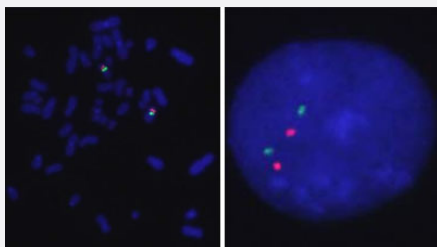
### Fluorescent *In Situ* Hybridization (Formalin/PFA-fixed paraffin-embedded sections)

Human uterus cancer (FFPE) stained with KRAS/CEN12q FISH Probe. Human uterus cancer showed KRAS gene amplification.



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

Human colon cancer (FFPE) stained with KRAS/CEN12q FISH Probe. Human colon cancer showed no KRAS gene amplification.



## Hybridization position of the probes on the chromosome.

□

Hybridization position of the probes on the chromosome.

### Specification

|                                |                                                                                                                                                                                                                               |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Description</b>     | Labeled FISH probes for identification of gene amplification using Fluorescent In Situ Hybridization Technique. ( <a href="#">Technology</a> ).                                                                               |
| <b>Probe 1</b>                 | <b>Name:</b> KRAS<br><b>Size:</b> Approximately 250kb<br><b>Fluorophore:</b> Texas Red<br><b>Location:</b> 12p12                                                                                                              |
| <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 17,900 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.                                                                                                                                                                                                     |

## Note

Hybridization position of the probes on the chromosome.

Hybridization position of the probes on the chromosome.

## Applications

- Fluorescent In Situ Hybridization (Cell)

[Protocol Download](#)

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

Human uterus cancer (FFPE) stained with KRAS/CEN12q FISH Probe. Human uterus cancer showed KRAS gene amplification.

[Protocol Download](#)

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

Human colon cancer (FFPE) stained with KRAS/CEN12q FISH Probe. Human colon cancer showed no KRAS gene amplification.

[Protocol Download](#)

## Gene Info — KRAS

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Entrez GeneID    | <a href="#">3845</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Gene Name        | KRAS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Gene Alias       | C-K-RAS, K-RAS2A, K-RAS2B, K-RAS4A, K-RAS4B, KI-RAS, KRAS1, KRAS2, NS3, RASK2                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Gene Description | v-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Omim ID          | <a href="#">109800</a> <a href="#">114480</a> <a href="#">137215</a> <a href="#">190070</a> <a href="#">211980</a> <a href="#">218040</a> <a href="#">260350</a> <a href="#">609942</a>                                                                                                                                                                                                                                                                                                                                                        |
| Gene Ontology    | <a href="#">Hyperlink</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Gene Summary     | This gene, a Kirsten ras oncogene homolog from the mammalian ras gene family, encodes a protein that is a member of the small GTPase superfamily. A single amino acid substitution is responsible for an activating mutation. The transforming protein that results is implicated in various malignancies, including lung adenocarcinoma, mucinous adenoma, ductal carcinoma of the pancreas and colorectal carcinoma. Alternative splicing leads to variants encoding two isoforms that differ in the C-terminal region. [provided by RefSeq] |

**Other Designations**

K-ras p21 protein|Kirsten rat sarcoma-2 viral (v-Ki-ras2) oncogene homolog|PR310 c-K-ras oncogene|c-K-ras2 protein|c-Kirsten-ras protein|cellular c-Ki-ras2 proto-oncogene|oncogene KRAS2|transforming protein p21|v-Ki-ras2 Kirsten rat sarcoma 2 viral oncogene

**Publication Reference**

- [KIF13B-NRG1 Gene Fusion and KRAS Amplification in a Case of Natural Progression of Lung Cancer.](#)

Xia D, Le LP, lafrate AJ, Lennerz J.

Amino Acids 2017 Apr; 25(3):238.

Application: FISH, Human , Human lung cancer

- [Clonal evolution and KRAS-MET coamplification during secondary resistance to EGFR-targeted therapy in metastatic colorectal cancer.](#)

Bianchi AS, Valtorta E, Amatua A , Veronese S, Lauricella C, Bonazzina E, Siravegna G, Truini M, Bardelli A, Siena S.

ESMO Open 2016 Aug; 1(4):e000079.

Application: FISH, Human, Colorectal cancer

**Pathway**

- [Acute myeloid leukemia](#)
- [Axon guidance](#)
- [B cell receptor signaling pathway](#)
- [Bladder cancer](#)
- [Chemokine signaling pathway](#)
- [Chronic myeloid leukemia](#)
- [Colorectal cancer](#)
- [Dorso-ventral axis formation](#)
- [Endometrial cancer](#)
- [ErbB signaling pathway](#)
- [Fc epsilon RI signaling pathway](#)
- [Gap junction](#)

- [Glioma](#)
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- [Insulin signaling pathway](#)
- [Long-term depression](#)
- [Long-term potentiation](#)
- [MAPK signaling pathway](#)
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- [Neurotrophin signaling pathway](#)
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- [Pathways in cancer](#)
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- [Tonsillar Neoplasms](#)
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- [Werner syndrome](#)