mutaFISH™ KRAS G12wt G13wt RNA Probes

Catalog # FP0017 Size 1 Probe Set

Applications

Copyright © 2023 Abnova Corporation. All Rights Reserved.

Fig. 1

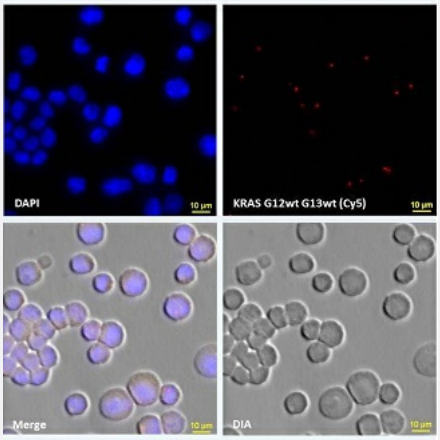


Fig. 2

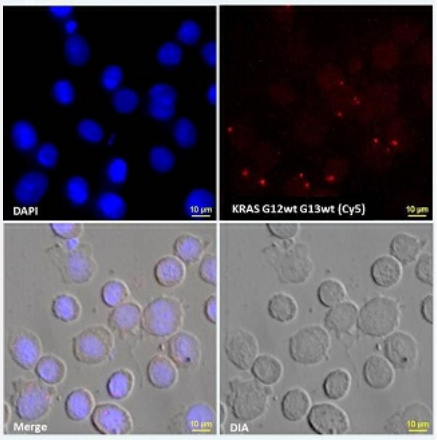
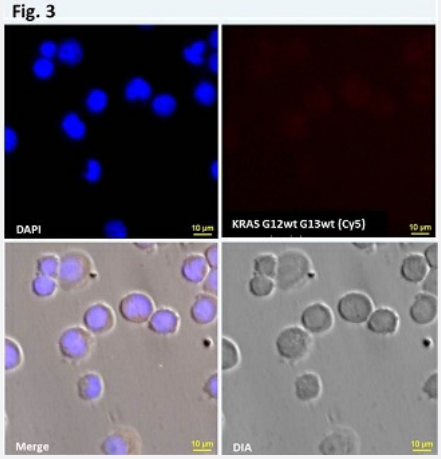


Fig. 3



mutation specific, Fluorescence *In Situ* Hybridization (Cells)

Fig.1 mutaFISH™ staining was performed *in situ* in human HCT116 cells. KRAS G12wt and G13wt were detected via red signal (Cy5).

Fig.2 mutaFISH™ staining was performed *in situ* in human WIDR cells. KRAS G12wt and G13wt were detected via red signal (Cy5).

Fig.3 mutaFISH™ staining was performed *in situ* in human SW480 cells. KRAS G12wt and G13wt were not detected.

Specification

Product Description	mutaFISH™ KRAS G12wt G13wt RNA Probes is designed to detect human KRAS G12/G13 wildtype on single strand RNA in cells using padlock probe and *in situ* rolling-circle amplification technology.
Reactivity	Human

Copyright © 2023 Abnova Corporation. All Rights Reserved.

Supplied Products	Content: 1. RT KRAS G12/G13 Primer 2. mutaFISH™ KRAS G12wt RNA Probe 1 3. mutaFISH™ KRAS G12wt RNA Probe 2 4. mutaFISH™ KRAS G13wt RNA Probe 5. Detection Probe-Texas Red X
Technology	mutaFISH™ (mutation-specific Fluorescence *In Situ* Hybridization)
Comparison	FISH Probes vs mutaFISH™ Probes
Fluorophore	Texas Red X (Excitation Peak (nm): 595; Emission Peak 613)
Probe Position	
Regulatory Status	For research use only (RUO)
Storage Instruction	Store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	We recommend mutaFISH™ RNA Accessory Kit (Catalog #: KA4915) which provides necessary re agents and enzymes for *in situ* reverse transcription, RNA digestion, mutaFISH™ hybridization, ligati on and amplication prior to mutaFISH™.
Self-Attestation	Abnova self-attests to comply with the U.S. Framework for Nucleic Acid Synthesis Screening
Video	

Applications

Copyright © 2023 Abnova Corporation. All Rights Reserved.

- mutation specific, Fluorescence *In Situ* Hybridization (Cells)

Fig.1 mutaFISH™ staining was performed *in situ* in human HCT116 cells. KRAS G12wt and G13wt were detected via red signal (Cy5).

Fig.2 mutaFISH™ staining was performed *in situ* in human WIDR cells. KRAS G12wt and G13wt were detected via red signal (Cy5).

Fig.3 mutaFISH™ staining was performed *in situ* in human SW480 cells. KRAS G12wt and G13wt were not detected.

Gene Info — KRAS

Entrez GeneID	3845
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	109800 114480 137215 190070 211980 218040 260350 609942
Gene Ontology	Hyperlink
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 oncoge

Pathway

- Acute myeloid leukemia
- Axon guidance
- B cell receptor signaling pathway
- Bladder cancer
- Chemokine signaling pathway
- Chronic myeloid leukemia

Copyright © 2023 Abnova Corporation. All Rights Reserved.

- Colorectal cancer
- Dorso-ventral axis formation
- Endometrial cancer
- ErbB signaling pathway
- Fc epsilon RI signaling pathway
- Gap junction
- Glioma
- GnRH signaling pathway
- Insulin signaling pathway
- Long-term depression
- Long-term potentiation
- MAPK signaling pathway
- Melanogenesis
- Melanoma
- Natural killer cell mediated cytotoxicity
- Neurotrophin signaling pathway
- Non-small cell lung cancer
- Pancreatic cancer
- Pathways in cancer
- Prostate cancer
- Regulation of actin cytoskeleton
- Renal cell carcinoma
- T cell receptor signaling pathway
- Thyroid cancer
- Tight junction
- VEGF signaling pathway

Copyright © 2023 Abnova Corporation. All Rights Reserved.

Disease

- Abnormalities
- Acute Disease
- Adenocarcinoma
- Adenoma
- Adenomatous Polyposis Coli
- Alcoholism
- Anus Neoplasms
- Biliary Tract Neoplasms
- Breast cancer
- Breast Neoplasms
- Carcinoma
- Cardiomyopathy
- Cell Transformation
- Cholangiocarcinoma
- Chromosomal Instability
- Chromosome Aberrations
- Chromosome Deletion
- Cognition Disorders
- Colitis
- Colon cancer
- Colonic Neoplasms
- Colonic Polyps
- Colorectal Neoplasms
- Common Bile Duct Neoplasms

Copyright © 2023 Abnova Corporation. All Rights Reserved.

- Crohn Disease
- Cystadenocarcinoma
- Developmental Disabilities
- Diarrhea
- Dilatation
- Disease Progression
- Down Syndrome
- Drug Toxicity
- Endometrial Hyperplasia
- Endometrial Neoplasms
- Endometriosis
- Eosinophilia
- Esophageal Neoplasms
- Exanthema
- Gastrointestinal Stromal Tumors
- Genetic Predisposition to Disease
- Genomic Instability
- Glioma
- Head and Neck Neoplasms
- Heart Defects
- HIV Infections
- Hyperplasia
- Immunologic Deficiency Syndromes
- Inflammation
- Inflammatory Bowel Diseases
- Kidney Failure

Copyright © 2023 Abnova Corporation. All Rights Reserved.

- Kidney Neoplasms
- LEOPARD Syndrome
- Leukemia
- Liver Neoplasms
- Lung Neoplasms
- Lymphatic Metastasis
- Lymphoma
- Meningeal Neoplasms
- Meningioma
- Microsatellite Instability
- Mouth Neoplasms
- Multiple Myeloma
- Myoma
- Nausea
- Necrosis
- Neoplasm Invasiveness
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms
- Nerve Sheath Neoplasms
- Neurofibromatosis
- Neurofibromatosis 1
- Neutropenia
- Noonan Syndrome
- Obesity
- Ovarian cancer

Copyright © 2023 Abnova Corporation. All Rights Reserved.

- Ovarian Failure
- Ovarian Neoplasms
- Pancreatic cancer
- Pancreatic Neoplasms
- Pancreatitis
- Papillomavirus Infections
- Paraproteinemias
- Peritoneal Neoplasms
- Polycystic Ovary Syndrome
- Precancerous Conditions
- Prostatic Neoplasms
- Puberty
- Pulmonary Disease
- Pulmonary Valve Stenosis
- Ras oncogene
- Rectal Neoplasms
- Recurrence
- Retinal Neoplasms
- Retinoblastoma
- Sarcoma
- Skin Abnormalities
- Stomach Neoplasms
- Syndrome
- Testicular Neoplasms
- Thrombophilia

Copyright © 2023 Abnova Corporation. All Rights Reserved.

- Thyroid Diseases
- Thyroid Neoplasms
- Tobacco Use Disorder
- Tonsillar Neoplasms
- Urinary Bladder Neoplasms
- Uterine Neoplasms
- Werner syndrome

Copyright © 2023 Abnova Corporation. All Rights Reserved.