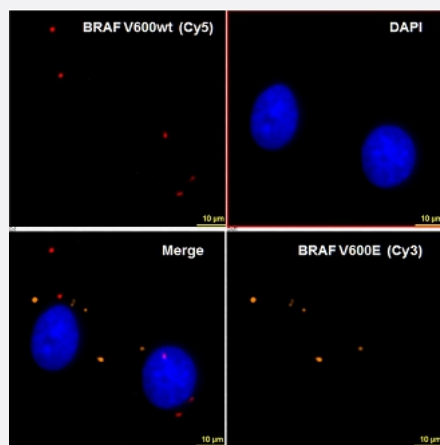


# mutaFISH™ BRAF V600E V600wt RNA Probes

Catalog # FP0011

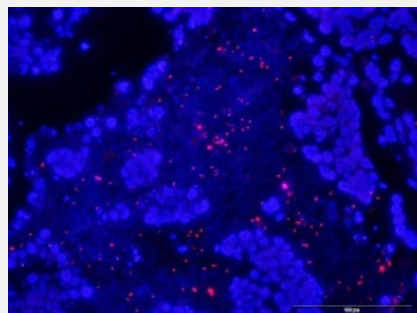
Size 1 Probe Set

## Applications



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

mutaFISH™ staining was performed *in situ* in human Sk-HEP1 cells. BRAF V600E point mutation was detected via orange signal (Cy3), BRAF V600wt was detected via red signal (Cy5).



### mutation specific, Fluorescence *In Situ* Hybridization (FFPE Tissue)

mutaFISH™ staining was performed *in situ* in mouse FFPE BRAF 293T tissue. BRAF V600wt was detected via red signal (Texas Red X).

## Specification

### Product Description

mutaFISH™ BRAF V600E V600wt RNA Probes is designed to detect human BRAF V600E gene mutation on single strand RNA in cells using padlock probe and *in situ* rolling-circle amplification technology.

### Reactivity

Human

|                     |                                                                                                                                                                                                                                                              |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supplied Product    | Content:<br><br>1. RT BRAF V600 Primer<br><br>2. mutaFISH™ BRAF V600E RNA Probe<br><br>3. mutaFISH™ BRAF V600wt RNA Probe<br><br>4. Detection Probe-Aqua 431<br><br>5. Detection Probe-Texas Red X                                                           |
| Technology          | <a href="#">mutaFISH™ (mutation-specific Fluorescence <i>In Situ</i> Hybridization)</a>                                                                                                                                                                      |
| Comparison          | <a href="#">FISH Probes vs mutaFISH™ Probes</a>                                                                                                                                                                                                              |
| Fluorophore         | Aqua 431 (Excitation Peak (nm): 431; Emission Peak (nm): 480)<br>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.<br>Aliquot to avoid repeated freezing and thawing.                                                                                                                                                                                           |
| Note                | We recommend mutaFISH™ RNA Accessory Kit (Catalog #: <a href="#">KA4915</a> ) which provides necessary reagents and enzymes for <i>in situ</i> reverse transcription, RNA digestion, mutaFISH™ hybridization, ligation and amplification prior to mutaFISH™. |
| Video               |                                                                                                                                                                                                                                                              |

## Applications

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- mutation specific, Fluorescence *In Situ* Hybridization (FFPE Tissue)

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## Gene Info — BRAF

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Entrez GeneID      | <a href="#">673</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Gene Name          | BRAF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Gene Alias         | B-RAF1, BRAF1, FLJ95109, MGC126806, MGC138284, RAFB1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Gene Description   | v-raf murine sarcoma viral oncogene homolog B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Omim ID            | <a href="#">115150</a> <a href="#">164757</a> <a href="#">211980</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Gene Ontology      | <a href="#">Hyperlink</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Gene Summary       | This gene encodes a protein belonging to the raf/mil family of serine/threonine protein kinases. This protein plays a role in regulating the MAP kinase/ERKs signaling pathway, which affects cell division, differentiation, and secretion. Mutations in this gene are associated with cardiofaciocutaneous syndrome, a disease characterized by heart defects, mental retardation and a distinctive facial appearance. Mutations in this gene have also been associated with various cancers, including non-Hodgkin lymphoma, colorectal cancer, malignant melanoma, thyroid carcinoma, non-small cell lung carcinoma, and adenocarcinoma of lung. A pseudogene, which is located on chromosome X, has been identified for this gene. [provided by RefSeq] |
| Other Designations | 94 kDa B-raf protein B-Raf proto-oncogene serine/threonine-protein kinase (p94) Murine sarcoma viral (v-raf) oncogene homolog B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Pathway

- [Acute myeloid leukemia](#)
- [Bladder cancer](#)
- [Chemokine signaling pathway](#)
- [Chronic myeloid leukemia](#)
- [Colorectal cancer](#)
- [Endometrial cancer](#)
- [ErbB signaling pathway](#)

- [Focal adhesion](#)
- [Glioma](#)
- [Insulin signaling pathway](#)
- [Long-term depression](#)
- [Long-term potentiation](#)
- [MAPK signaling pathway](#)
- [Melanoma](#)
- [mTOR signaling pathway](#)
- [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](#)
- [Thyroid cancer](#)
- [Vascular smooth muscle contraction](#)

## Disease

- [Abnormalities](#)
- [Adenocarcinoma](#)
- [Adenoma](#)
- [Adrenal Cortex Neoplasms](#)
- [Alcoholism](#)
- [Articulation Disorders](#)

- [Astrocytoma](#)
- [Brain Neoplasms](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)
- [Cell Transformation](#)
- [Chromosomal Instability](#)
- [Chromosome Aberrations](#)
- [Cognition](#)
- [Cognition Disorders](#)
- [Colon cancer](#)
- [Colonic Neoplasms](#)
- [Colonic Polyps](#)
- [Colorectal Neoplasms](#)
- [Common Bile Duct Neoplasms](#)
- [Craniofacial Abnormalities](#)
- [Cystadenocarcinoma](#)
- [Cystadenoma](#)
- [Developmental Disabilities](#)
- [Dilatation](#)
- [Disease Progression](#)
- [Diseases in Twins](#)
- [Dyslexia](#)
- [Ectodermal Dysplasia](#)
- [Endometrial Hyperplasia](#)
- [Endometrial Neoplasms](#)

- [Endometriosis](#)
- [Eosinophilia](#)
- [Esophageal Neoplasms](#)
- [Gastrointestinal Stromal Tumors](#)
- [Genetic Predisposition to Disease](#)
- [Glioma](#)
- [Goiter](#)
- [Hashimoto Disease](#)
- [Head and Neck Neoplasms](#)
- [Hearing](#)
- [Heart Defects](#)
- [Hyperpigmentation](#)
- [Hyperplasia](#)
- [Immunologic Deficiency Syndromes](#)
- [Language Disorders](#)
- [Liver Neoplasms](#)
- [Lung Neoplasms](#)
- [Lymphatic Metastasis](#)
- [Lymphoma](#)
- [Malignant melanoma](#)
- [Melanoma](#)
- [Memory](#)
- [Microsatellite Instability](#)
- [Motor Skills](#)
- [Nasopharyngeal Neoplasms](#)
- [Necrosis](#)

- [Neoplasm Invasiveness](#)
- [Neoplasm Metastasis](#)
- [Neoplasm Recurrence](#)
- [Neoplasms](#)
- [Nerve Sheath Neoplasms](#)
- [Neurofibromatosis](#)
- [Neurofibromatosis 1](#)
- [Nevus](#)
- [Noonan Syndrome](#)
- [Obesity](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Pancreatic cancer](#)
- [Pancreatic Neoplasms](#)
- [Papillomavirus Infections](#)
- [Precancerous Conditions](#)
- [Prostatic Neoplasms](#)
- [Ras oncogene](#)
- [Rectal Neoplasms](#)
- [Recurrence](#)
- [Salivary Gland Neoplasms](#)
- [Skin Neoplasms](#)
- [Stomach Neoplasms](#)
- [Syndrome](#)
- [Testicular Neoplasms](#)
- [Thyroid Diseases](#)

- [Thyroid Neoplasms](#)
- [Thyroid Nodule](#)
- [Thyroiditis](#)
- [Tobacco Use Disorder](#)
- [Urinary Bladder Neoplasms](#)