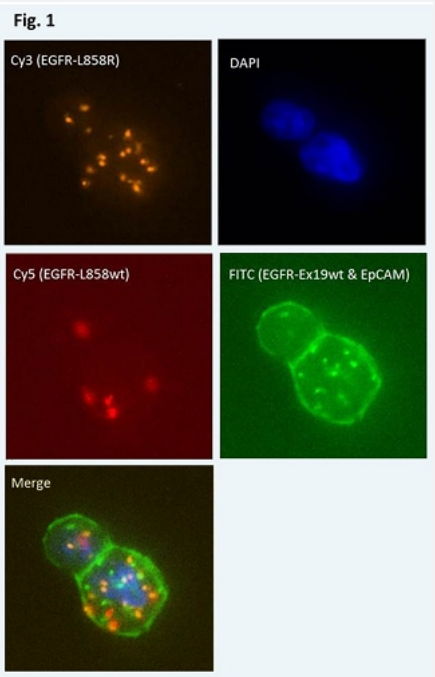
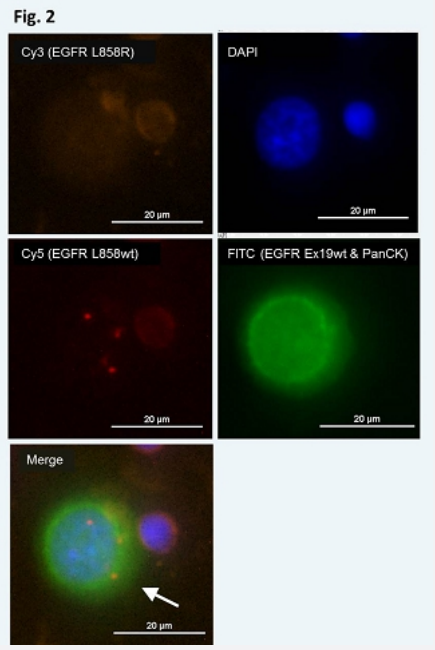
mutaFISH™ EGFR L858R L858wt Ex19wt RNA Probes

Catalog # FP0002 Size 1 Probe Set

Applications

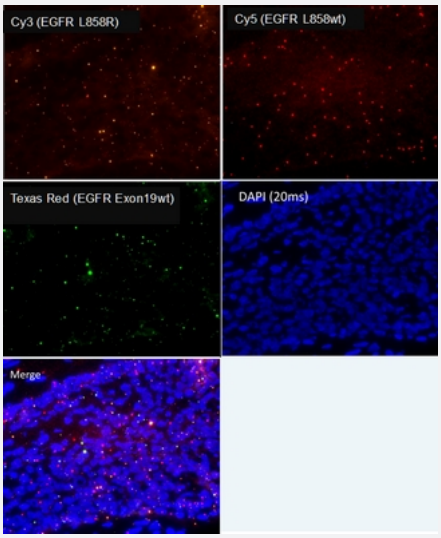




mutation specific, Fluorescence *In Situ* Hybridization (Cells)

Fig.1 mutaFISH™ staining was performed *in situ* in human H1975 cells and with EpCAM immunostained via FITC. EGFR L858R point mutation was detected via orange signal (Cy3), EGFR L858wt was detected via red signal (Cy5), and EGFR Ex19wt was detected via green signal (FITC).

Fig. 2 mutaFISH™ staining was performed *in situ* in human PC-14 cells (white arrow) and with PanCK immunostained via FITC. EGFR L858R point mutation was not detected, EGFR L858wt was detected via red signal (Cy5), and EGFR Ex19wt was not detected.



mutation specific, Fluorescence *In Situ* Hybridization (Frozen Tissue)

mutaFISH™ staining was performed *in situ* in human frozen tissue from lung adenocarcinoma. EGFR L858R point mutation was detected via orange signal (Cy3), EGFR L858wt was detected via red signal (Cy5), and EGFR Ex19wt was detected via green signal (Texas Red).

Specification

Product Description	mutaFISH™ EGFR L858R L858wt Ex19wt RNA Probes is designed to detect human EGFR L858R gene mutation and EGFR exon 19 deletion on single strand RNA in cells using padlock probe and *in situ* rolling-circle amplification technology.
Reactivity	Human
Supplied Product	Content: 1. RT EGFR L858 Primer 2. RT EGFR Ex19 Primer 3. mutaFISH™ EGFR L858R RNA Probe 4. mutaFISH™ EGFR L858wt RNA Probe 5. mutaFISH™ EGFR Ex19wt RNA Probe 6. Detection Probe-Aqua 431 7. Detection Probe-Texas Red X 8. Detection Probe-6-HEX
Technology	mutaFISH™ (mutation-specific Fluorescence *In Situ* Hybridization)
Comparison	FISH Probes vs mutaFISH™ Probes
Fluorophore	Aqua 431 (Excitation Peak (nm): 431; Emission Peak (nm): 480) Texas Red X (Excitation Peak (nm): 595; Emission Peak 613) 6-HEX (Excitation Peak (nm): 533; Emission Peak (nm): 559)

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™.
Video	

Applications

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

  Fig.1 mutaFISH™ staining was performed *in situ* in human H1975 cells and with EpCAM immunostained via FITC. EGFR L858R point mutation was detected via orange signal (Cy3), EGFR L858wt was detected via red signal (Cy5), and EGFR Ex19wt was detected via green signal (FITC).

  Fig. 2 mutaFISH™ staining was performed *in situ* in human PC-14 cells (white arrow) and with PanCK immunostained via FITC. EGFR L858R point mutation was not detected, EGFR L858wt was detected via red signal (Cy5), and EGFR Ex19wt was not detected.

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

  mutaFISH™ staining was performed *in situ* in human frozen tissue from lung adenocarcinoma. EGFR L858R point mutation was detected via orange signal (Cy3), EGFR L858wt was detected via red signal (Cy5), and EGFR Ex19wt was detected via green signal (Texas Red).

Gene Info — EGFR

Entrez GeneID	1956
Gene Name	EGFR
Gene Alias	ERBB, ERBB1, HER1, PIG61, mENA

Gene Description	epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian)
Omim ID	131550 211980
Gene Ontology	Hyperlink
Gene Summary	The protein encoded by this gene is a transmembrane glycoprotein that is a member of the protei n kinase superfamily. This protein is a receptor for members of the epidermal growth factor family. EGFR is a cell surface protein that binds to epidermal growth factor. Binding of the protein to a lig and induces receptor dimerization and tyrosine autophosphorylation and leads to cell proliferation . Mutations in this gene are associated with lung cancer. [provided by RefSeq
Other Designations	avian erythroblastic leukemia viral (v-erb-b) oncogene homolog|cell growth inhibiting protein 40|ce ll proliferation-inducing protein 61|epidermal growth factor receptor

Pathway

- Adherens junction
- Bladder cancer
- Calcium signaling pathway
- Colorectal cancer
- Cytokine-cytokine receptor interaction
- Dorso-ventral axis formation
- Endocytosis
- Endometrial cancer
- Epithelial cell signaling in Helicobacter pylori infection
- ErbB signaling pathway
- Focal adhesion
- Gap junction
- Glioma
- GnRH signaling pathway
- MAPK signaling pathway
- Melanoma

- Non-small cell lung cancer
- Pancreatic cancer
- Pathways in cancer
- Prostate cancer
- Regulation of actin cytoskeleton

Disease

- Adenocarcinoma
- Anus Neoplasms
- Asthma
- Astrocytoma
- Atherosclerosis
- Barrett Esophagus
- Bile Duct Neoplasms
- Biliary Tract Neoplasms
- Bipolar Disorder
- Brain Neoplasms
- Breast cancer
- Breast Neoplasms
- Bronchial Hyperreactivity
- Carcinoma
- Cardiomyopathy
- Cardiovascular Diseases
- Cell Transformation
- Central Nervous System Neoplasms
- Cervical Intraepithelial Neoplasia

- Cholangiocarcinoma
- Chromosome Aberrations
- Chromosome Deletion
- Cleft Lip
- Cleft Palate
- Cocarcinogenesis
- Colon cancer
- Colonic Neoplasms
- Colorectal Neoplasms
- Cystadenocarcinoma
- Diabetes Mellitus
- Diarrhea
- Disease Progression
- Disease Susceptibility
- DNA Damage
- Drug Eruptions
- Drug Toxicity
- Edema
- Endometrial Neoplasms
- Endometriosis
- Esophageal Neoplasms
- Exanthema
- Genetic Diseases
- Genetic Predisposition to Disease
- Glioblastoma
- Glioma

- Head and Neck Neoplasms
- Hepatitis C
- HIV Infections
- Hyperparathyroidism
- Hypersensitivity
- Hypopharyngeal Neoplasms
- Kidney Failure
- Kidney Neoplasms
- Liver Diseases
- Liver Neoplasms
- Lung carcinoma
- Lung Neoplasms
- Lupus Erythematosus
- Lymphatic Metastasis
- Mental Disorders
- Mouth Neoplasms
- Myoma
- Nasopharyngeal Neoplasms
- Neoplasm Invasiveness
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms
- Osteosarcoma
- Otorhinolaryngologic Neoplasms
- Ovarian cancer
- Ovarian Neoplasms

- Pancreatic cancer
- Pancreatic Neoplasms
- Papillomavirus Infections
- Polycystic Kidney
- Polycystic kidney disease
- Precancerous Conditions
- Prostate cancer
- Prostatic Hyperplasia
- Prostatic Neoplasms
- Pulmonary Disease
- Ras oncogene
- Rectal Neoplasms
- Recurrence
- Skin Neoplasms
- Small Cell Lung Carcinoma
- Stomach Neoplasms
- Thyroid Neoplasms
- Tongue Neoplasms
- Tonsillar Neoplasms
- Urinary Bladder Neoplasms
- Urinary Calculi
- Uterine Cervical Neoplasms
- Uterine Neoplasms
- Viremia
- Werner syndrome