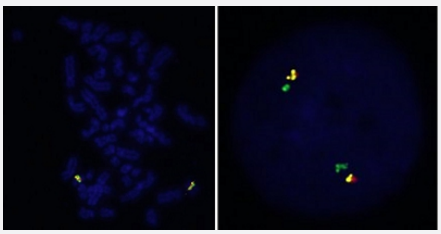
# ERBB2/TOP2A/CEN17q FISH Probe

Catalog # FG0209 Size 200 uL

## Applications



Hybridization position of the probes on the chromosome.

Hybridization position of the probes on the chromosome.

## Specification

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|---|---|
| **Product Description** | Labeled FISH probes for identification of gene amplification using Fluorescent In Situ Hybridization T echnique. (Technology). |
| **Probe 1** | **Name:** TOP2A<br>**Size:** Approximately 180kb<br>**Fluorophore:** R6G<br>**Location:** 17q21 |
| **Probe 2** | **Name:** ERBB2(HER2)<br>**Size:** Approximately 220kb<br>**Fluorophore:** TexRed<br>**Location:** 17q12 |

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|---|---|
| **Probe 3** | **Name:** CEN17q<br>**Size:** Approximately 540kb<br>**Fluorophore:** FITC<br>**Location:** 17q11.2 |
| **Origin** | Human |
| **Source** | Genomic DNA |
| **Reactivity** | Human |
| **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 triple 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 ) 250 uL |
| **Storage Instruction** | Store at 4°C in the dark. |
| **Note** | Hybridization position of the probes on the chromosome.<br>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 (Cell)

  Protocol Download

## Gene Info — ERBB2

| | |
|---|---|
| **Entrez GeneID** | 2064 |
| **Gene Name** | ERBB2 |
| **Gene Alias** | CD340, HER-2, HER-2/neu, HER2, NEU, NGL, TKR1 |
| **Gene Description** | v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogen e homolog (avian) |
| **Omim ID** | 137215 137800 164870 211980 |

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| | |
|---|---|
| **Gene Ontology** | Hyperlink |
| **Gene Summary** | This gene encodes a member of the epidermal growth factor (EGF) receptor family of receptor tyrosine kinases. This protein has no ligand binding domain of its own and therefore cannot bind growth factors. However, it does bind tightly to other ligand-bound EGF receptor family members to form a heterodimer, stabilizing ligand binding and enhancing kinase-mediated activation of downstream signalling pathways, such as those involving mitogen-activated protein kinase and phosphatidylinositol-3 kinase. Allelic variations at amino acid positions 654 and 655 of isoform a (positions 624 and 625 of isoform b) have been reported, with the most common allele, Ile654/Ile655, shown here. Amplification and/or overexpression of this gene has been reported in numerous cancers, including breast and ovarian tumors. Alternative splicing results in several additional transcript variants, some encoding different isoforms and others that have not been fully characterized. [provided by RefSeq |
| **Other Designations** | c-erb B2/neu protein\|erbB-2\|herstatin\|neuroblastoma/glioblastoma derived oncogene homolog\|v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 2 (neuro/glioblastoma derived oncogene homolog) |

## Gene Info — TOP2A

| | |
|---|---|
| **Entrez GeneID** | 7153 |
| **Gene Name** | TOP2A |
| **Gene Alias** | TOP2, TP2A |
| **Gene Description** | topoisomerase (DNA) II alpha 170kDa |
| **Omim ID** | 126430 |
| **Gene Ontology** | Hyperlink |
| **Gene Summary** | This gene encodes a DNA topoisomerase, an enzyme that controls and alters the topologic states of DNA during transcription. This nuclear enzyme is involved in processes such as chromosome condensation, chromatid separation, and the relief of torsional stress that occurs during DNA transcription and replication. It catalyzes the transient breaking and rejoining of two strands of duplex DNA which allows the strands to pass through one another, thus altering the topology of DNA. Two forms of this enzyme exist as likely products of a gene duplication event. The gene encoding this form, alpha, is localized to chromsome 17 and the beta gene is localized to chromosome 3. The gene encoding this enzyme functions as the target for several anticancer agents and a variety of mutations in this gene have been associated with the development of drug resistance. Reduced activity of this enzyme may also play a role in ataxia-telangiectasia. [provided by RefSeq |
| **Other Designations** | DNA topoisomerase II, 170 kD\|DNA topoisomerase II, alpha isozyme\|topoisomerase (DNA) II alpha (170kD) |

## Pathway

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- Adherens junction
- Bladder cancer
- Calcium signaling pathway
- Endometrial cancer
- ErbB signaling pathway
- Focal adhesion
- Non-small cell lung cancer
- Pancreatic cancer
- Pathways in cancer
- Prostate cancer

## Disease

- Adenocarcinoma
- Ataxia telangiectasia
- Brain Neoplasms
- Breast cancer
- Breast cancer
- Breast Neoplasms
- Breast Neoplasms
- Carcinoma
- Cell Transformation
- Cleft Lip
- Cleft Palate
- Colorectal Neoplasms
- Disease Progression

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- Endometrial Neoplasms
- Esophageal Neoplasms
- Fibroadenoma
- Gastritis
- Genetic Predisposition to Disease
- Genetic Predisposition to Disease
- Glioma
- Head and Neck Neoplasms
- Heart Diseases
- Kidney Failure
- Laryngeal Neoplasms
- Leukemia
- Lung Neoplasms
- Lymphatic Metastasis
- Lymphatic Metastasis
- Lymphoma
- Mouth Neoplasms
- Neoplasm Invasiveness
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms
- Obesity
- Ovarian cancer
- Ovarian Neoplasms
- Pancreatic cancer
- Pancreatic Neoplasms

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- Papillomavirus Infections
- Pharyngeal Neoplasms
- Prostate cancer
- Prostatic Hyperplasia
- Prostatic Neoplasms
- Pulmonary Disease
- Recurrence
- Skin Neoplasms
- Stomach Neoplasms
- Stomach Neoplasms
- Thyroid Neoplasms
- Tooth Abnormalities
- Urinary Bladder Neoplasms
- Uterine Cervical Neoplasms
- Werner syndrome

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