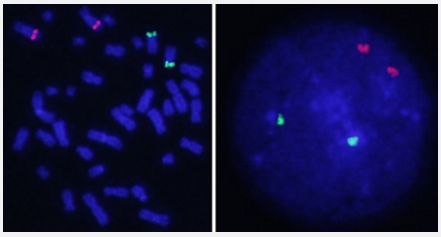
Sm Size

# IGH/MYC Translocation FISH Probe

Catalog # FT0036 Size 200 uL, 100 uL

## Applications



Hybridization position of the probes on the chromosome.

Hybridization position of the probes on the chromosome.

## Specification

| | |
|---|---|
| **Product Description** | Labeled FISH probes for identification of gene translocation using Fluorescent In Situ Hybridization T echnique. (Technology). |
| **Probe 1** | **Name:** IGH<br>**Size:** Approximately 1550kb<br>**Fluorophore:** FITC<br>**Location:** 14q32 |
| **Probe 2** | **Name:** MYC<br>**Size:** Approximately 670kb<br>**Fluorophore:** Texas Red<br>**Location:** 8q24 |
| **Origin** | Human |

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|---|---|
| **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. |
| **Regulatory Status** | For research use only (RUO) |
| **Quality Control Testing** | Representative images of normal human cell (lymphocyte) stain with the dual color FISH probe. The l eft image is chromosomes at metaphase, and the right image is an interphase nucleus. |
| **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 — IGH

| | |
|---|---|
| **Entrez GeneID** | 3492 |
| **Gene Name** | IGH |
| **Gene Alias** | IGH, IGH.1@, IGHDY1, MGC72071, MGC88774 |
| **Gene Description** | immunoglobulin heavy locus |
| **Gene Ontology** | Hyperlink |

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| | |
|---|---|
| **Gene Summary** | Immunoglobulins recognize foreign antigens and initiate immune responses such as phagocytosis and the complement system. Each immunoglobulin molecule consists of two identical heavy chains and two identical light chains. This region represents the germline organization of the heavy chain locus. The locus includes V (variable), D (diversity), J (joining), and C (constant) segments. During B cell development, a recombination event at the DNA level joins a single D segment with a J segment; this partially rearranged D-J gene is then joined to a V segment. The rearranged V-D-J is then transcribed with the IGHM constant region; this transcript encodes a mu heavy chain. Later in development B cells generate V-D-J-Cmu-Cdelta pre-messenger RNA, which is alternatively spliced to encode either a mu or a delta heavy chain. Mature B cells in the lymph nodes undergo switch recombination, so that the V-D-J gene is brought in proximity to one of the IGHG, IGHA, or IGHE genes and each cell expresses either the gamma, alpha, or epsilon heavy chain. Recombination of many different V segments with several J segments provides a wide range of antigen recognition. Additional diversity is attained by junctional diversity, resulting from the random addition of nucleotides by terminal deoxynucleotidyltransferase, and by somatic hypermutation, which occurs during B cell maturation in the spleen and lymph nodes. Several V, D, J, and C segments are known to be incapable of encoding a protein and are considered pseudogenes. [provided by RefSeq |
| **Other Designations** | - |

## Gene Info — MYC

| | |
|---|---|
| **Entrez GeneID** | 4609 |
| **Gene Name** | MYC |
| **Gene Alias** | bHLHe39, c-Myc |
| **Gene Description** | v-myc myelocytomatosis viral oncogene homolog (avian) |
| **Omim ID** | 113970 190080 |
| **Gene Ontology** | Hyperlink |
| **Gene Summary** | The protein encoded by this gene is a multifunctional, nuclear phosphoprotein that plays a role in cell cycle progression, apoptosis and cellular transformation. It functions as a transcription factor that regulates transcription of specific target genes. Mutations, overexpression, rearrangement and translocation of this gene have been associated with a variety of hematopoietic tumors, leukemias and lymphomas, including Burkitt lymphoma. There is evidence to show that alternative translation initiations from an upstream, in-frame non-AUG (CUG) and a downstream AUG start site result in the production of two isoforms with distinct N-termini. The synthesis of non-AUG initiated protein is suppressed in Burkitt's lymphomas, suggesting its importance in the normal function of this gene. [provided by RefSeq |
| **Other Designations** | avian myelocytomatosis viral oncogene homolog\|myc proto-oncogene protein\|v-myc avian myelocytomatosis viral oncogene homolog |

## Pathway

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- Acute myeloid leukemia
- Bladder cancer
- Cell cycle
- Chronic myeloid leukemia
- Colorectal cancer
- Endometrial cancer
- ErbB signaling pathway
- Jak-STAT signaling pathway
- MAPK signaling pathway
- Pathways in cancer
- Small cell lung cancer
- TGF-beta signaling pathway
- Thyroid cancer
- Wnt signaling pathway

## Disease

- Alzheimer disease
- Breast cancer
- Breast Neoplasms
- Carcinoma
- Cardiovascular Diseases
- Chromosome Aberrations
- Chromosome Aberrations
- Colorectal Neoplasms
- Diabetes Complications

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- Disease Progression
- Genetic Predisposition to Disease
- Helicobacter Infections
- Hematologic Diseases
- Hodgkin Disease
- Kidney Failure
- Lung Neoplasms
- Lymphoma
- Lymphoproliferative Disorders
- Metabolic Syndrome X
- Mouth Neoplasms
- Neoplasm Metastasis
- Neoplasms
- Occupational Diseases
- Osteoporosis
- Ovarian cancer
- Ovarian Neoplasms
- Prostate cancer
- Prostatic Neoplasms
- Pulmonary Disease
- Stomach Neoplasms
- Thyroid Diseases
- Thyroid Neoplasms
- Translocation
- Urinary Bladder Neoplasms
- Waldenstrom Macroglobulinemia

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- Werner syndrome

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