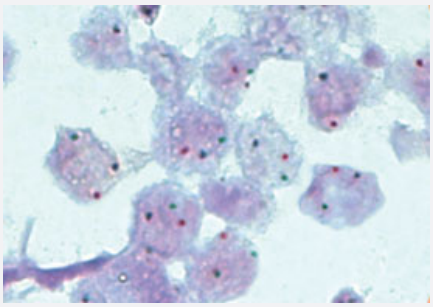
# MYC Split CISH Probe

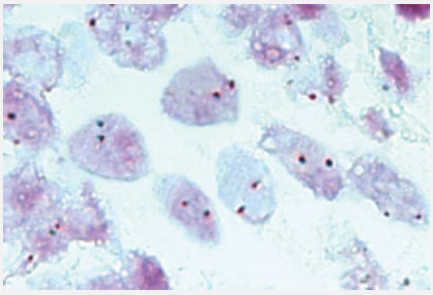
Catalog # CG0011 Size 400 uL

## Applications



### Chromogenic *In Situ* Hybridization (FFPE Tissue)

Non-Hodgkin lymphoma tissue section with translocation affecting the 8q24.21 locus as indicated by one red/green fusion (non-rearranged) signal, one red signal, and one separate green signal.



### Chromogenic *In Situ* Hybridization (Cells)

Normal interphase cells as indicated by two red/green fusion signals per nucleus.

## Specification

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| **Product Description** | MYC Split CISH Probe is designed for the qualitative detection of human MYC gene at 8q24.21 in for malin-fixed, paraffin-embedded specimens by chromogenic *in situ* hybridization (CISH). |
| **Reactivity** | Human |
| **Recommend Usage** | The product is ready-to-use. No reconstitution, mixing, or dilution is required. Bring probe to room te mperature (18-25°C) and mix briefly before use. |

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| **Supplied Products** | Reagent Provided:<br><br>This Probe is available in one size and is composed of:<br>Digoxigenin-labeled polynucleotides targeting sequences mapping in 8q24.21* (chr8:130,373,051-130,847,951) distal to the MYC breakpoint region<br>Dinitrophenyl-labeled polynucleotides targeting sequences mapping in 8q24.21* (chr8:127,888,765-128,363,281) proximal to the MYC breakpoint region<br>Formamide based hybridization buffer<br><br>*according to Human Genome Assembly GRCh37/hg19 |
| **Probe Position** | |
| **Regulatory Status** | For research use only (RUO) |
| **Storage Instruction** | Store at 2-8°C in an upright position. Return to storage conditions immediately after use. |
| **Note** | The probe is intended to be used in combination with the CISH Implementation Kit 2 (Catalog #: KA5366), which provides necessary reagents for specimen pretreatment and post-hybridization processing.<br><br>Hybridization signals of digoxigenin-labeled polynucleotides appear dark green distinct dot-shaped (distal to the MYC breakpoint region), and dinitrophenyl-labeled polynucleotides appear bright red distinct dot-shaped (proximal to the MYC breakpoint region).<br>Normal situation: In interphases of normal cells or cells without a translocation involving the MYC gene region, two red/green fusion signals appear.<br>Aberrant situation: One MYC gene region affected by a translocation is indicated by one separate green signal and one separate red signal. Other signal distribution may be observed in some abnormal samples which might result in a different signal pattern than described above, indicating variant rearrangements.<br>Unexpected signal patterns should be further investigated.<br><br>The digoxigenin-labeled probe and the formamide-based hybridization buffer are pre-mixed and provided in a single ready-to-use vial. Only one tube is included in the package. |
| **Interpretation of Result** | |
| **Self-Attestation** | Abnova self-attests to comply with the U.S. Framework for Nucleic Acid Synthesis Screening |

## Applications

- Chromogenic *In Situ* Hybridization (FFPE Tissue)

  Non-Hodgkin lymphoma tissue section with translocation affecting the 8q24.21 locus as indicated by one red/green fusion (non-rearranged) signal, one red signal, and one separate green signal.

- Chromogenic *In Situ* Hybridization (Cells)

  Normal interphase cells as indicated by two red/green fusion signals per nucleus.

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## 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 c ell cycle progression, apoptosis and cellular transformation. It functions as a transcription factor th at regulates transcription of specific target genes. Mutations, overexpression, rearrangement and translocation of this gene have been associated with a variety of hematopoietic tumors, leukemia s and lymphomas, including Burkitt lymphoma. There is evidence to show that alternative translati on 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 protei n is suppressed in Burkitt's lymphomas, suggesting its importance in the normal function of this ge ne. [provided by RefSeq |
| **Other Designations** | avian myelocytomatosis viral oncogene homolog\|myc proto-oncogene protein\|v-myc avian myeloc ytomatosis viral oncogene homolog |

## Pathway

- 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

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- 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
- Colorectal Neoplasms
- Diabetes Complications
- 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

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- 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
- Werner syndrome

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