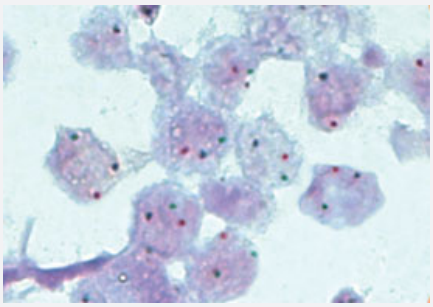
MYC Split CISH Probe

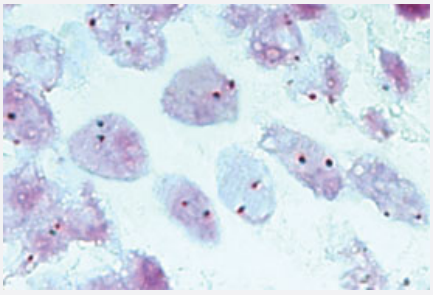
Catalog # CG0011 Size 400 uL

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

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.

Supplied Product	Reagent Provided: 1. Digoxigenin-labeled polynucleotides targeting sequences mapping in 8q24.21* (chr8:130,373,051-130,847,951) distal to the MYC breakpoint region 2. Dinitrophenyl-labeled polynucleotides targeting sequences mapping in 8q24.21* (chr8:127,888,765-128,363,281) proximal to the MYC breakpoint region 3. Formamide based hybridization buffer *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. 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). Normal situation: In interphases of normal cells or cells without a translocation involving the MYC gene region, two red/green fusion signals appear. 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. Unexpected signal patterns should be further investigated.
Interpretation of Result	

Applications

- Chromogenic *In Situ* Hybridization (FFPE Tissue)

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

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
- 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
- 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