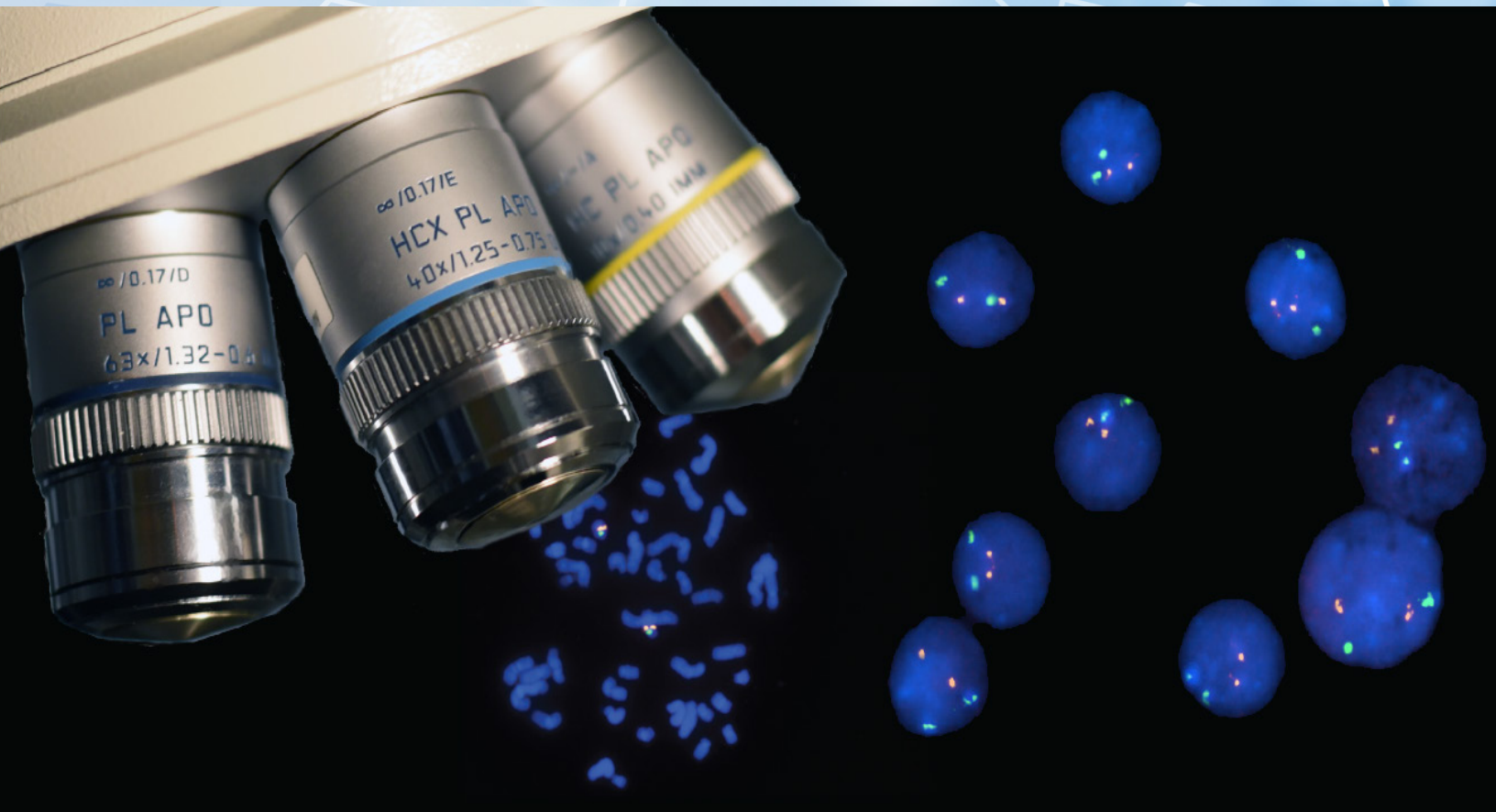


# CYTOTEST<sup>®</sup>

## PRODUCTS & SERVICES CATALOG

2019 CATALOG | MAY EDITION



Premium FISH for  
Quality of Lives

[www.cytotest.com](http://www.cytotest.com)

**CYTO****TEST**<sup>®</sup>

**CYTO****TEST**<sup>®</sup>



## Message from the CEO

‘It is only the farmer who faithfully plants seeds in the spring, who reaps a harvest in the autumn.’ - B.C. Forbes.

CytoTest is one of the world’s leading companies in the field of biotechnology and is best known for FISH probes. With customers including National Institutes of Health, Mayo Clinic, Walter Reed National Military Medical Center in USA and Karolinska Institute in Sweden, we remain committed to our customers in providing molecular and cytogenetics products with the highest quality and the most competitive prices on the market.

CytoTest will brace another milestone since its foundation. With over 800 products for genetic diagnosis and oncology testing, we specialize in both standard FISH probes as well as custom-designed probes tailored to our customers’ needs. We are also working to build a global service center with distributors all over the world, to provide our customers with the best services and support.

We present this catalog as an easy reference guide for ordering as well as video training and educational purposes. We look forward to working with you. “Always remember our intentions; we will reach our goal eventually.” No matter when and where, I will remember and firmly to this convictions, who served on customer for the benefit of all mankind.

**A standard protocol for CytoTest FISH probes:**

<https://youtu.be/Vghuef3y1EI>



Joseph Cheng  
CEO/ President



## Table of Contents

Message from the CEO

Company Introduction

Product Introduction

Custom Probe Services

### Breast

ERBB2/CCP17 FISH Probe Kit	14
ERBB2/CCP17 FISH Probe Kit	14
ERBB2/TOP2A/CCP17 FISH Probe Kit	15
TOP2A/CCP17 FISH Probe Kit	15
MYC/CCP8 FISH Probe Kit	16
MYB/CCP6 FISH Probe Kit	16
XIST/CCPX FISH Probe Kit	17
SDHB/CCP1 FISH Probe Kit	17
MCF2L/LAMP1 FISH Probe Kit	18
ERBB3/CCP12 FISH Probe Kit	18
ZNF703/CCP8 FISH Probe Kit	19
WHSC1L1/CCP8 FISH Probe Kit	19
ERBB2/TEKT3 FISH Probe Kit	20
ZNF217/CCP20 FISH Probe Kit	20
FGF1 Break Apart FISH Probe Kit	21
NTRK3 Break Apart FISH Probe Kit	21

### Cervical

TERC/CCP7 FISH Probe Kit	23
TERC/TERT/CCP7 FISH Probe Kit	23
TERT/CCP5 FISH Probe Kit	24
TERC/PTGS2/CCP7 FISH Probe Kit	24

### Bladder

PTGS2/CCP1 FISH Probe Kit	26
CDKN2A/CCP9 FISH Probe Kit	26
CDKN2A/CCP3,7,17 FISH Probe Kit	27
IPO11/AHRR FISH Probe Kit	27

## Colon

MYEOV Break Apart FISH Probe Kit	29
MYEOV/CCP11 FISH Probe Kit	29

## Liver

CISD2/CCP4 FISH Probe Kit	31
IGH-MYEOV Dual Fusion/Translocation FISH Probe Kit	31

## Skin

COL1A1 Break Apart FISH Probe Kit	33
COL1A1-PDGFB Dual Fusion/Translocation FISH Probe Kit	33
TYMS/CCP18 FISH Probe Kit	34
IGH-MYEOV Dual Fusion/Translocation FISH Probe Kit	34
PDGFB Break Apart FISH Probe Kit	35
IRF4/DUSP22 Break Apart FISH Probe Kit	35
COL1A1-PDGFB Fusion/Translocation FISH Probe Kit	36
RB1/DLEU1/LAMP1 FISH Probe Kit	36

## Lung

ALK Break Apart FISH Probe Kit	38
EGFR/CCP7 FISH Probe Kit	39
MYC/CCP8 FISH Probe Kit	39
ERBB3/CCP12 FISH Probe Kit	40
TFG Break Apart FISH Probe Kit	40
ROS1 Break Apart FISH Probe Kit	41
YWHAE Break Apart FISH Probe Kit	41
KIF5B-RET Fusion/Translocation FISH Probe Kit	42
PDGFRA Break Apart FISH Probe Kit	42
PDGFRA/CCP4 FISH Probe Kit	43
TNIK/CCP3 FISH Probe Kit	43
CSF1R/EGR1 FISH Probe Kit	44
KIF5B Break Apart FISH Probe Kit	44
CSF1R/EGR1/TERT FISH Probe Kit	45
TFG/CCP3 FISH Probe Kit	45

## Prostate

FUS Break Apart FISH Probe Kit	48
PTEN/CCP10 FISH Probe Kit	48
NKX3-1/CCP8 FISH Probe Kit	49
CHD1/D5S23, D5S721 FISH Probe Kit	49

LSAMP/CCP3 FISH Probe Kit	50
CHD1/CCP5 FISH Probe Kit	50
ERG Break Apart FISH Probe Kit	51
ETV1 Break Apart FISH Probe Kit	51
ETV4 Break Apart FISH Probe Kit	52
TMPRSS2 Break Apart FISH Probe Kit	52
TMPRSS2-ERG Fusion/Translocation FISH Probe Kit	53
TMPRSS2-ETV1 Fusion/Translocation FISH Probe Kit	53
TMPRSS2-ETV4 Fusion/Translocation FISH Probe Kit	54
SMARCB1 Break Apart FISH Probe Kit	54
SMARCB1/CCP22 FISH Probe Kit	55
TMPRSS2-ERG Tri-color Fusion/Translocation FISH Probe Kit	55

## Leukemia

FGFR1 Break Apart FISH Probe Kit	59
MECOM/CCP3 FISH Probe Kit	59
MECOM Break Apart FISH Probe Kit	60
RARA Break Apart FISH Probe Kit	60
TCL1A Break Apart FISH Probe Kit	61
TP53/ATM FISH Probe Kit	61
TRA Break Apart FISH Probe Kit	62
MNX1-ETV6 Dual Fusion/Traslocation FISH Probe Kit	62
DEK-NUP214 Dual Fusion/Translocation FISH Probe Kit	63
BCR-ABL1/ASS1 Tri-color Fusion/Translocation FISH Probe Kit	63
ASS1/CCP9 FISH Probe Kit	64
ABL1 Break Apart FISH Probe Kit	64
CDK14/CCP7 FISH Probe Kit	65
CDK14/CUX1/CCP7 FISH Probe Kit	65
DEK/CCP6 FISH Probe Kit	66
KMT2A/CCP11 FISH Probe Kit	66
MCL1/CCP1 FISH Probe Kit	67
PTPRT/CCP20 FISH Probe Kit	67
RPN1/CCP3 FISH Probe Kit	68
SEC63/SMAD6 FISH Probe Kit	68
SMAD6/CCP15 FISH Probe Kit	69
TP53/CD37 FISH Probe Kit	69
DLEU1/ZBTB16 FISH Probe Kit	70
CCP7/CCP8 FISH Probe Kit	70

MECOM-RUNX1 Dual Fusion/Translocation FISH Probe Kit	71
ASS1/SMAD6 FISH Probe Kit	71
FIP1L1/CHIC2 FISH Probe Kit	72
FIP1L1-CHIC2-PDGFR $\alpha$ Tri-color FISH Probe Kit	72
JAK2 Break Apart FISH Probe Kit	73
TP53/MPO FISH Probe Kit	73
NUP98 Break Apart FISH Probe Kit	74
KMT2A-MLLT1 Dual Fusion/Translocation FISH Probe Kit	74
KMT2A-MLLT3 Dual Fusion/Translocation FISH Probe Kit	75
KMT2A-MLLT4 Dual Fusion/Translocation FISH Probe Kit	75
CCND3 Break Apart FISH Probe Kit	76
ZBTB16-RARA Dual Fusion/Translocation FISH Probe Kit	76
TLX1 Break Apart FISH Probe Kit	77
ZBTB16/CCP11 FISH Probe Kit	77
EPOR Break Apart FISH Probe Kit	78
TCF3 Break Apart FISH Probe Kit	78
PBX1 Break Apart FISH Probe Kit	79
MYC Break Apart FISH Probe Kit	79
CCND1 Break Apart FISH Probe Kit	80
MYH11 Break Apart FISH Probe Kit	80
MLLT1 Break Apart FISH Probe Kit	81
MLLT4 Break Apart FISH Probe Kit	81
PML-RARA Fusion/Translocation FISH Probe Kit	82
KMT2A-AFF1 Single Fusion/Translocation FISH Probe Kit	82
IGL Break Apart FISH Probe Kit	83
IGK Break Apart FISH Probe Kit	83
IGK-MYC Dual Fusion/Translocation LR FISH Probe Kit	84
IGL-MYC Dual Fusion/Translocation LR FISH Probe Kit	84
TCF3-PBX1 Fusion/Translocation FISH Probe Kit	85
MYH11/CCP16 FISH Probe Kit	85
DLEU1/TP53 FISH Probe Kit	86
IGH/CCP14 FISH Probe Kit	86
IGH-EPOR Dual Fusion/Translocation FISH Probe Kit	87
BCR-ABL1 Dual Fusion/Translocation FISH Probe Kit	87
RUNX1-RUNX1T1 Dual Fusion/Translocation FISH Probe Kit	88
PML-RARA Dual Fusion/Translocation FISH Probe Kit	88
ETV6-RUNX1 Dual Fusion/Translocation FISH Probe Kit	89
CBFB-MYH11 Dual Fusion/Translocation FISH Probe Kit	89

KMT2A-AFF1 Dual Fusion/Translocation FISH Probe Kit	90
TCF3-PBX1 Dual Fusion/Translocation FISH Probe Kit	90
KMT2A Break Apart FISH Probe Kit	91
KMT2A Break Apart FISH Probe Kit	91
ETV6 Break Apart FISH Probe Kit	92
CBFB Break Apart FISH Probe Kit	92
NUP214 Break Apart FISH Probe Kit	93
RBM15-MKL1 Dual Fusion/Translocation FISH Probe Kit	93
RBM15 Break Apart FISH Probe Kit	94
MKL1 Break Apart FISH Probe Kit	94
KAT6A Break Apart FISH Probe Kit	95
TP53/CCP17 FISH Probe Kit	95
ATM/CCP11 FISH Probe Kit	96
EGR1/D5S23, D5S721 FISH Probe Kit	96
RB1/LAMP1 FISH Probe Kit	97
CSF1R/D5S23, D5S721 FISH Probe Kit	97
AFF1 Break Apart FISH Probe Kit	98
D20S108/CCP8 FISH Probe Kit	98
D7S486/CCP7 FISH Probe Kit	99
D7S522/CCP7 FISH Probe Kit	99
NSD1/TERT FISH Probe Kit	100
NSD1/D5S23, D5S721 FISH Probe Kit	100
<b>Pancreatic</b>	
NTRK1 Break Apart FISH Probe Kit	102
NTRK2 Break Apart FISH Probe Kit	102
EGFR/CCP7 FISH Probe Kit	103
TGFBR3-MGEA5 Dual Fusion/Translocation FISH Probe Kit	103
RREB1/MYB/CCP6/CCND1 FISH Probe Kit	104
RREB1/CCP6 FISH Probe Kit	104
CUX1/CCP7 FISH Probe Kit	105
FGFR4/D5S23, D5S721 FISH Probe Kit	105
FGFR4 Break Apart FISH Probe Kit	106
KRAS/CCP12 FISH Probe Kit	106
CUX1/VIPR2/CCP7 FISH Probe Kit	107
CUX1/VIPR2 FISH Probe Kit	107
ERBB3/CCP12 FISH Probe Kit	108
PTGS2/CCP1 FISH Probe Kit	108



## CNS & Brain

BRAF-KIAA1549 Dual Fusion/Translocation FISH Probe Kit	110
SOX2/CCP3 FISH Probe Kit	110
TERT/EGR1 FISH Probe Kit	111
KIAA1549 Break Apart FISH Probe Kit	111
MNX1 Break Apart FISH Probe Kit	112
PIK3CA/CCP3 FISH Probe Kit	112
IGH-EPOR Dual Fusion/Translocation FISH Probe Kit	113
ALK Break Apart FISH Probe Kit	113

## Lymphoma

TFG Break Apart FISH Probe Kit	116
BIRC3-MALT1 Dual Fusion/Translocation FISH Probe Kit	116
NPM1-ALK Fusion/Translocation FISH Probe Kit	117
CD37/ZNF443 FISH Probe Kit	117
CDK12/CCP17 FISH Probe Kit	118
CSF1R/EGR1 FISH Probe Kit	118
MCL1/CCP1 FISH Probe Kit	119
TERT/EGR1 FISH Probe Kit	119
IRF4/DUSP22 Break Apart FISH Probe Kit	120
IGH-CCND3 Dual Fusion/Translocation FISH Probe Kit	120
CCND1/CCP11 FISH Probe Kit	121
TLX1 Break Apart FISH Probe Kit	121
IGH-MYC/CCP8 Tri-color Fusion/Translocation FISH Probe Kit	122
IGH Break Apart FISH Probe Kit	122
MALT1 Break Apart FISH Probe Kit	123
BCL2 Break Apart FISH Probe Kit	123
BCL6 Break Apart FISH Probe Kit	124
PDGFRB Break Apart FISH Probe Kit	124
IGH-BCL2 Dual Fusion/Translocation FISH Probe Kit	125
IGH-CCND1 Dual Fusion/Translocation FISH Probe Kit	125
IGH-MYC Dual Fusion/Translocation FISH Probe Kit	126
IGH-BCL6 Dual Fusion/Translocation FISH Probe Kit	126
MYC Break Apart LR FISH Probe Kit	127
IGL Break Apart FISH Probe Kit	127
IGK Break Apart FISH Probe Kit	128
IGK-MYC Dual Fusion/Translocation LR FISH Probe Kit	128
IGL-MYC Dual Fusion/Translocation LR FISH Probe Kit	129
TP63/CCP3 FISH Probe Kit	129

DLEU1/TP53 FISH Probe Kit	130
IGH/CCP14 FISH Probe Kit	130
IGH-MYC Dual Fusion/Translocation LR FISH Probe Kit	131
CSF1R Break Apart FISH Probe Kit	131

### Microdeletion

DiGeorge syndrome: TBX1/ARSA FISH Probe Kit	133
DiGeorge syndrome: D22S75/ARSA FISH Probe Kit	133
Turner syndrome: XIST/CCPX FISH Probe Kit	134
Rubinstein-Taybi syndrome: CREBBP Break Apart FISH Probe Kit	134
Sotos Region: NSD1/D5S23, D5S721 FISH Probe Kit	135
SRY/CCPX FISH Probe Kit	135

### Pre-/Postnatal

CCP13, 18, 21, X, Y FISH Probe Kit	137
SRY/CCPX FISH Probe Kit	137
XIST/CCPX FISH Probe Kit	138
CUX1/VIPR2 FISH Probe Kit	138
CCP13/CCP21 FISH Probe Kit	139
CCP18/CCPX/CCPY FISH Probe Kit	139

Human Chromosome Counting Probes (CCP)

Human Chromosome Subtelomere Probes (STP)

Human Whole Chromosome Painting Probes (WPP)

Other Reagents and Accessories

Filters

Instrument

Product use and Procedure

FISH Procedure for FFPE Specimen 1/3

FISH Procedure for Cytological Specimens 2/3

FISH Procedure Buffer Information 3/3

Troubleshooting

Legal Terms

Notes



# OUR COMPANY

CytoTest Inc. is a world's leading biotechnology company providing high quality, innovative and affordable molecular cytogenetic products and services. Our US headquarters are located in suburban Washington, DC, in Maryland, close to the National

Institutes of Health (NIH), one of the worlds leading centers for biological research. Our proximity to and interaction with NIH, along with spirited connections with our other strategic partners in the academic, biotechnology and clinical communities enables us to stay at the forefront of diagnostic medicine and closely monitor trends and developments in the molecular cytogenetic.



## QUESTIONS?

If you have questions about any of the CytoTests products, please contact us

Email: [sales@CytoTest.com](mailto:sales@CytoTest.com)

[help@CytoTest.com](mailto:help@CytoTest.com)

## USA

CytoTest Inc. 9430 Key West Avenue, suite 210, Rockville, MD 20850

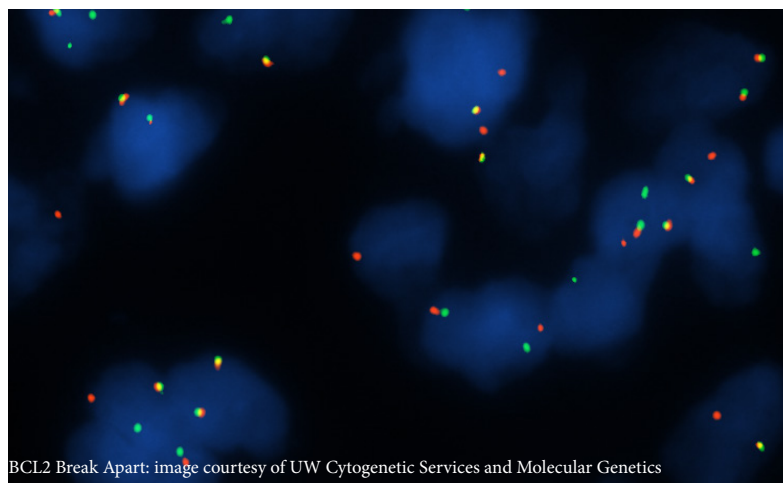
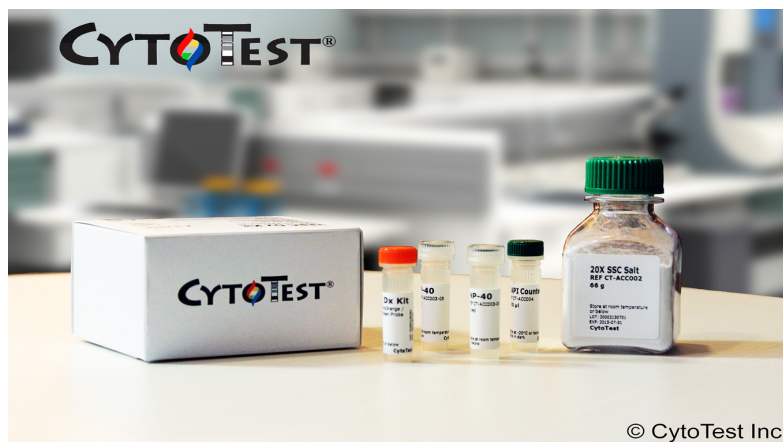
Tel: 1-202-688-1188

Fax: 1-301-296-6950



## OUR PRODUCTS

Our products are prepared for both research and diagnostic purposes in the US, China and worldwide. All of our products are manufactured in accordance with relevant regulations, and are quality tested to assure they meet the highest standards. A multi-year optimization effort resulted in products with higher quality than other probes used in the industry. We carefully follow scientific and technology advances, observe leading-edge discussions of diagnostic-industry standards, certification and regulatory requirements. We stay alert for consensus shifts relevant to in vitro diagnostics (IVDs) and laboratory developed tests. (LDTs)



BCL2 Break Apart: image courtesy of UW Cytogenetic Services and Molecular Genetics

We specialize in the design and production of DNA Fluorescence in situ hybridization (FISH) probes. FISH is a powerful technique designed to detect presence or absence, location, integrity and amount of genomic sequences in tissue samples or cells. Introduced in the early 1980s as a cytogenetic research tool, it is now the most important technique for the clinical diagnosis of chromosomal abnormalities. Since its founding CytoTest Inc. has advanced its technologies from generating fluorescently labeled single nucleotides to the design and manufacturing of FISH probes. To date, we have successfully developed and tested a diverse series of DNA FISH probes for molecular diagnostic applications in oncology, personalized medicine, prenatal testing, theranostics and other areas. Our pipeline includes probes for clinically validated, as well as research-stage targets and custom-designed products. New products are added continually, in part derived from our internal research and development efforts, but more often as a result of requests for development of specific tests from our customers, especially in the areas of rare cancers and of companion diagnostics for novel therapeutics.



## Custom Probe Services

CytoTest frequently receives requests for custom synthesized probes, for novel, rare or specialized applications.

If you are looking for a FISH probe not listed in this catalog, please do not hesitate to contact us by email or phone!

Our pipeline includes probes for clinically validated as well as research-stage targets and custom-designed products. New products are added continually, in part derived from our internal research and development efforts but more often as a result of requests for the development of specific tests from our customers, especially in the areas of rare cancers and of companion diagnostics for novel therapeutics.

If you are looking for a probe, kit or reagent and cannot find it on our website or in our catalog, please let us know! – Your desired product may already be in the pipeline, or may have been recently added and not yet listed. You may only seek a minor modification to design or synthesis of an existing product, e.g. in a new non-standard color or with enhanced intensity, or you may be looking for an entirely new probe or probe set.

We will work with you in a flexible and accommodating fashion, in whichever collaborative model is most preferable and convenient for you, and carry out one or all of the development process steps, including

- n initial design
- n synthesis and testing
- n quality control and performance validation
- n protocol optimization

Custom probe synthesis will be considered completed only after you have received an optimized solution appropriate for your laboratory, clinical or research project. Finally, we will help you to adjust use protocols for unconventional or challenging sample types, such as dense or calcified tissues, complex biological fluids, or specimens derived from unconventional fixing protocols or cell spreads.

Please tell us about your desired reagent or intended application via:  
phone: 1-202-688-1188  
email: [sales@cytotest.com](mailto:sales@cytotest.com)

Our scientists will be honored to assist you in any way they can.



## Breast

ERBB2/CCP17 FISH Probe Kit	14
ERBB2/CCP17 FISH Probe Kit	14
ERBB2/TOP2A/CCP17 FISH Probe Kit	15
TOP2A/CCP17 FISH Probe Kit	15
MYC/CCP8 FISH Probe Kit	16
MYB/CCP6 FISH Probe Kit	16
XIST/CCPX FISH Probe Kit	17
SDHB/CCP1 FISH Probe Kit	17
MCF2L/LAMP1 FISH Probe Kit	18
ERBB3/CCP12 FISH Probe Kit	18
ZNF703/CCP8 FISH Probe Kit	19
WHSC1L1/CCP8 FISH Probe Kit	19
ERBB2/TEKT3 FISH Probe Kit	20
ZNF217/CCP20 FISH Probe Kit	20
FGF1 Break Apart FISH Probe Kit	21
NTRK3 Break Apart FISH Probe Kit	21



## ERBB2/CCP17 FISH Probe Kit

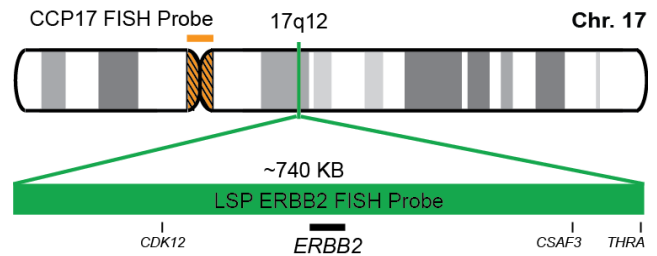


Cat. No. CT-PAC001-10-GO (100 µL)

## ERBB2/CCP17 FISH Probe Kit

The ERBB2/CCP17 FISH Probe Kit is designed to detect the human ERBB2 gene located on chromosome band 17q12, along with the number of chromosome 17 copies per cell. Abnormal expression of the ERBB2 gene – also known as NEU, NGL, HER2, TKR1, CD340, HER-2, MLN 19 or HER-2/neu – has been observed in breast carcinoma and many other solid tumor types.

Cont.	Color
LSP ERBB2 FISH Probe	CytoGreen
CCP17 FISH Probe	CytoOrange



## ERBB2/CCP17 FISH Probe Kit

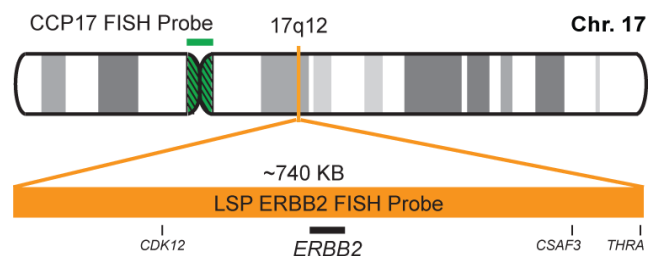


Cat. No. CT-PAC001-10-OG (100 µL)

## ERBB2/CCP17 FISH Probe Kit

The ERBB2/CCP17 FISH Probe Kit is designed to detect the human ERBB2 gene located on chromosome band 17q12, along with the number of chromosome 17 copies per cell. Abnormal expression of the ERBB2 gene – also known as NEU, NGL, HER2, TKR1, CD340, HER-2, MLN 19 or HER-2/neu – has been observed in breast carcinoma and many other solid tumor types.

Cont.	Color
LSP ERBB2 FISH Probe	CytoOrange
CCP17 FISH Probe	CytoGreen





# ERBB2/TOP2A/CCP17 FISH Probe Kit

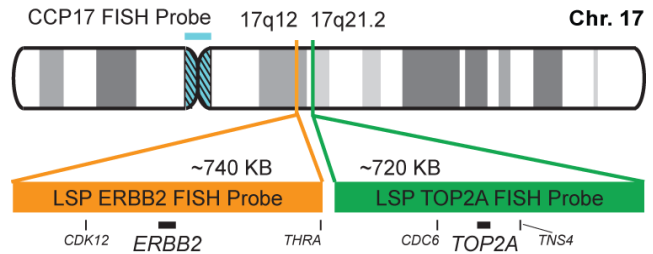


Cat. No. CT-PAC007-10-OGA (100 µL)

## ERBB2/TOP2A/CCP17 FISH Probe Kit

The ERBB2/TOP2A/CCP17 FISH Probe Kit is designed to detect the human ERBB2 gene, located on chromosome band 17q12, and the TOP2A gene on chromosome band 17q21.2, along with the number of chromosome 17 copies per cell. Abnormal expression or rearrangements of both genes (ERBB2 – also known as NEU, NGL, HER2, TKR1, CD340, HER-2, MLN 19 or HER-2/neu – and TOP2A – also known as TOP2 or TP2A) has been observed in breast carcinoma and many other solid tumor types.

Cont.	Color
LSP ERBB2 FISH Probe	CytoOrange
LSP TOP2A FISH Probe	CytoGreen
CCP17 FISH Probe	CytoAqua



## TOP2A/CCP17 FISH Probe Kit

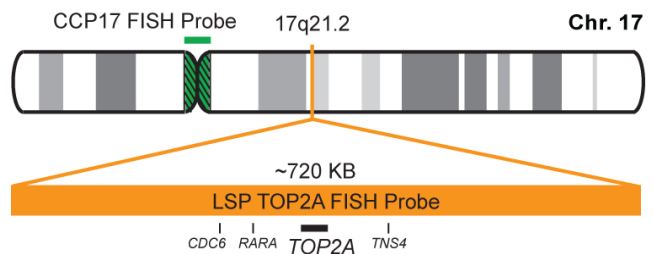


Cat. No. CT-PAC008-10-OG (100 µL)

## TOP2A/CCP17 FISH Probe Kit

The TOP2A/CCP17 FISH Probe Kit is designed to detect the human TOP2A gene located on chromosome band 17q21.2, along with the number of chromosome 17 copies per cell. Amplification and abnormal expression of the TOP2A gene – also known as TOP2 or TP2A – has been observed in breast cancer and other tumor types.

Cont.	Color
LSP TOP2A FISH Probe	CytoOrange
CCP17 FISH Probe	CytoGreen



## MYC/CCP8 FISH Probe Kit

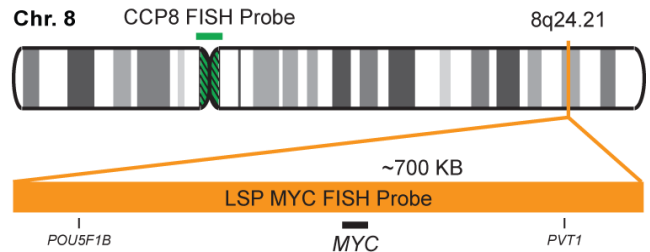


Cat. No. CT-PAC017-10-OG (100 µL)

## MYC/CCP8 FISH Probe Kit

The MYC/CCP8 FISH Probe Kit is designed to detect the human MYC gene located on chromosome band 8q24.21, along with the number of chromosome 8 copies per cell. Rearrangements and abnormal expression of the MYC gene – also known as EV, MRTL, MYCC, c-Myc or bHLHe39 – have been observed in Burkitt's Lymphoma and other hematological malignancies, myeloma, as well as breast, cervical, colon, ovarian and other tumor types.

Cont.	Color
LSP MYC FISH Probe	CytoOrange
CCP8 FISH Probe	CytoGreen



## MYB/CCP6 FISH Probe Kit

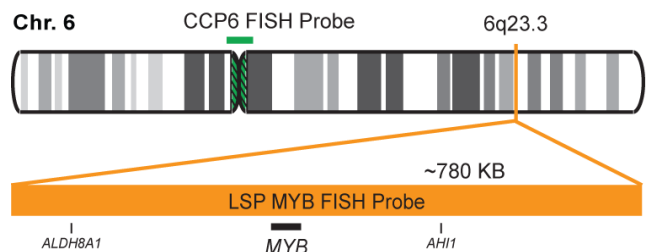


Cat. No. CT-PAC018-10-OG (100 µL)

## MYB/CCP6 FISH Probe Kit

The MYB/CCP6 FISH Probe Kit is designed to detect the human MYB gene located on chromosome band 6q23.3, along with the number of chromosome 6 copies per cell. Rearrangements and abnormal expression of the MYB gene – also known as efg, Cmyb, c-myb or c-myb\_CDS – have been observed in acute and lymphoid leukemias, colorectal, breast and other solid tumors and malignancies.

Cont.	Color
LSP MYB FISH Probe	CytoOrange
CCP6 FISH Probe	CytoGreen



## XIST/CCPX FISH Probe Kit



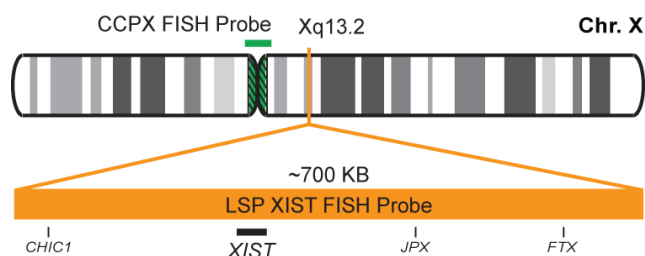
Cat. No. CT-PAC020-10-OG (100 µL)

Breast

### XIST/CCPX FISH Probe Kit

The XIST/CCPX FISH Probe Kit is designed to detect the human XIST gene located on chromosome band Xq13.2, along with the number of chromosome X copies per cell. Rearrangements in the XIST gene region – also known as SXI1, swd66, DXS1089, DXS399E, LINC00001 or NCRNA00001 – have been observed in a number of familial and other conditions.

Cont.	Color
LSP XIST FISH Probe CCPX FISH Probe	CytoOrange CytoGreen



## SDHB/CCP1 FISH Probe Kit

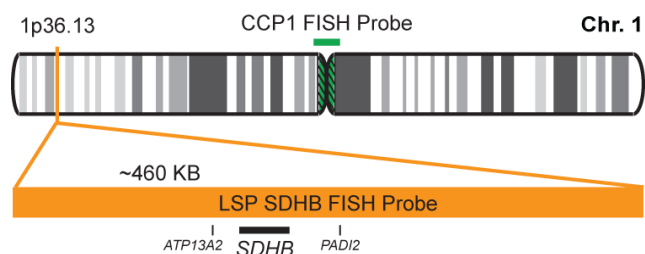


Cat. No. CT-PAC023-10-OG (100 µL)

### SDHB/CCP1 FISH Probe Kit

The SDHB/CCP1 FISH Probe Kit is designed to detect the human SDHB gene located on chromosome band 1p36.13, along with the number of chromosome 1 copies per cell. Abnormal expression of the SDHB gene – also known as IP, SDH, CWS2, PGL4, SDH1, SDH2 or SDHIP – has been observed in paragangliomas, pheochromocytoma and other conditions.

Cont.	Color
LSP SDHB FISH Probe CCP1 FISH Probe	CytoOrange CytoGreen



## MCF2L/LAMP1 FISH Probe Kit

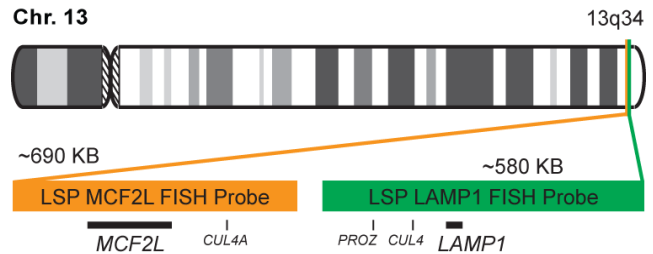


Cat. No. CT-PAC027-10-OG (100 µL)

## MCF2L/LAMP1 FISH Probe Kit

The MCF2L/LAMP1 FISH Probe Kit is designed to detect the human MCF2L gene, located on chromosome band 13q34, and the LAMP1 gene region on chromosome band 13q34. Abnormalities in both genes have been reported in breast cancer and other malignancies.

Cont.	Color
LSP MCF2L FISH Probe	CytoOrange
LSP LAMP1 FISH Probe	CytoGreen



## ERBB3/CCP12 FISH Probe Kit

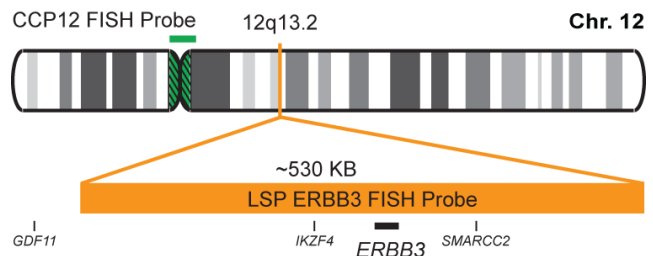


Cat. No. CT-PAC029-10-OG (100 µL)

## ERBB3/CCP12 FISH Probe Kit

The ERBB3/CCP12 FISH Probe Kit is designed to detect the human ERBB3 gene located on chromosome band 12q13.2, along with the number of chromosome 12 copies per cell. Abnormal expression of the ERBB3 gene – also known as HER3, LCCS2, ErbB-3, c-erbB3, erbB3-S, MDA-BF-1, c-erbB-3, p180-ErbB3, p45-sErbB3 or p85-sErbB3 – has been observed in breast, ovarian, prostate, pancreatic, lung and other cancers, and other conditions.

Cont.	Color
LSP ERBB3 FISH Probe	CytoOrange
CCP12 FISH Probe	CytoGreen



## ZNF703/CCP8 FISH Probe Kit

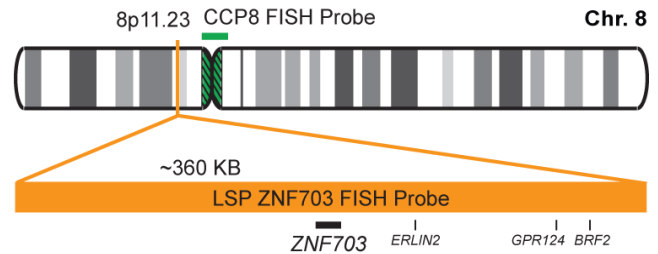


Cat. No. CT-PAC034-10-OG (100 µL)

### ZNF703/CCP8 FISH Probe Kit

The ZNF703/CCP8 FISH Probe Kit is designed to detect the human ZNF703 gene located on chromosome band 8p11.23, along with the number of chromosome 8 copies per cell. Abnormal expression of the ZNF703 gene – also known as NLZ1, ZPO1, ZEPP01 or ZNF503L – has been observed in breast and larynx cancer and other tumor types.

Cont.	Color
LSP ZNF703 FISH Probe CCP8 FISH Probe	CytoOrange CytoGreen



## WHSC1L1/CCP8 FISH Probe Kit

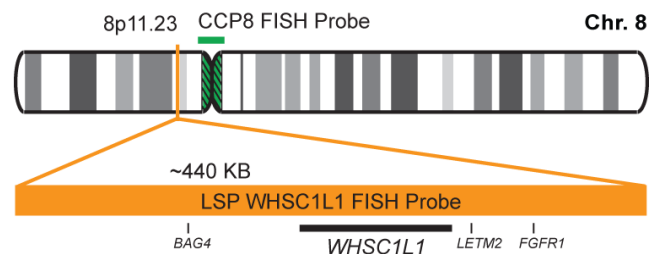


Cat. No. CT-PAC035-10-OG (100 µL)

### WHSC1L1/CCP8 FISH Probe Kit

The WHSC1L1/CCP8 FISH Probe Kit is designed to detect the human WHSC1L1 gene located on chromosome band 8p11.23, along with the number of chromosome 8 copies per cell. Rearrangements and abnormal expression of the WHSC1L1 gene – also known as NSD3 or pp14328 – have been observed in acute non-lymphocytic leukemia and other malignancies.

Cont.	Color
LSP WHSC1L1 FISH Probe CCP8 FISH Probe	CytoOrange CytoGreen



## ERBB2/TEKT3 FISH Probe Kit

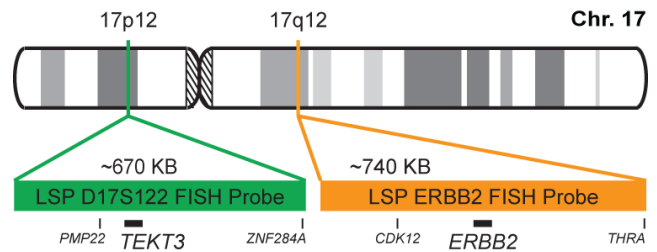


Cat. No. CT-PAC050-10-OG (100 µL)

## ERBB2/TEKT3 FISH Probe Kit

The ERBB2/17p Reflex FISH Probe Kit is designed to detect the human ERBB2 gene located on chromosome band 17q12, and the D17S122 STS marker region on chromosome band 17p12 as a control for integrity of the p-arm of chromosome 17. Abnormal expression of the ERBB2 gene – also known as NEU, NGL, HER2, TKR1, CD340, HER-2, MLN 19 or HER-2/neu – has been observed in breast carcinoma and many other solid tumor types. This probe panel can be used for ERBB2 reflex testing.

Cont.	Color
LSP ERBB2 FISH Probe	CytoOrange
LSP TEKT3 FISH Probe	CytoGreen



## ZNF217/CCP20 FISH Probe Kit

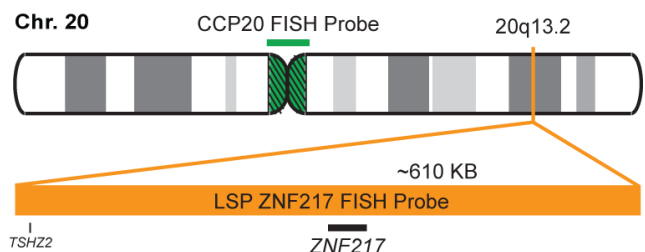


Cat. No. CT-PAC073-10-OG (100 µL)

## ZNF217/CCP20 FISH Probe Kit

The ZNF217/CCP20 FISH Probe Kit is designed to detect the human ZNF217 gene located on chromosome band 20q13.2, along with the number of chromosome 20 copies per cell. Abnormal expression of the ZNF217 gene – also known as ZABC1 – has been observed in breast and larynx cancer and other tumor types.

Cont.	Color
LSP ZNF217 FISH Probe	CytoOrange
CCP20 FISH Probe	CytoGreen



## FGF1 Break Apart FISH Probe Kit

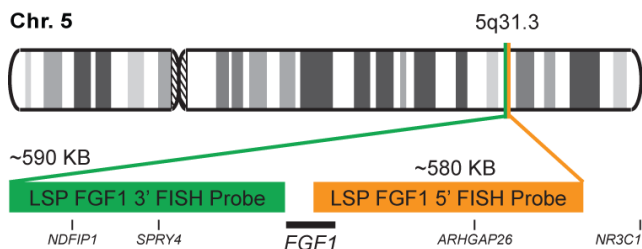


Cat. No. CT-PAC159-10-OG (100 µL)

### FGF1 Break Apart FISH Probe Kit

The FGF1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human FGF1 gene located on chromosome band 5q31.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other FGF1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the FGF1 gene – also known as AFGF, ECGF, ECGF-beta, ECGFA, ECGFB, FGF-1, FGF-alpha, FGFA, GLIO703, HBGF-1 or HBGF1 – have been observed in gastrointestinal tumors, breast cancer and other solid tumor types, and other conditions such as nerve injury and cardiac ischemia.

Cont.	Color
LSP FGF1 5' FISH Probe LSP FGF1 3' FISH Probe	CytoOrange CytoGreen



## NTRK3 Break Apart FISH Probe Kit

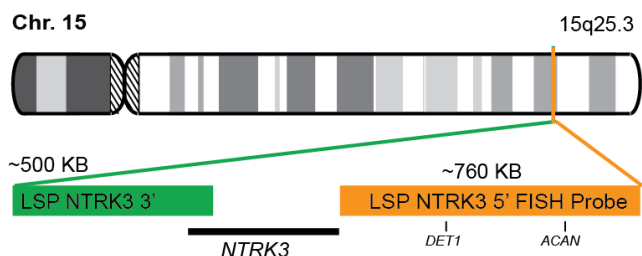


Cat. No. CT-PAC244-10-GO (100 µL)

### NTRK3 Break Apart FISH Probe Kit

The NTRK3 Break Apart FISH Probe Kit is designed to detect rearrangements in the human NTRK3 gene located on chromosome band 15q25.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other NTRK3 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the NTRK3 gene – also known as TRKC, GP145-TrkC or gp145(trkC) - has been observed in medulloblastoma, fibrosarcoma, nephroma, some breast carcinoma subtypes and other malignancies.

Cont.	Color
LSP NTRK3 5' FISH Probe LSP NTRK3 3' FISH Probe	CytoGreen CytoOrange



## Cervical

TERC/CCP7 FISH Probe Kit	23
TERC/TERT/CCP7 FISH Probe Kit	23
TERT/CCP5 FISH Probe Kit	24
TERC/PTGS2/CCP7 FISH Probe Kit	24





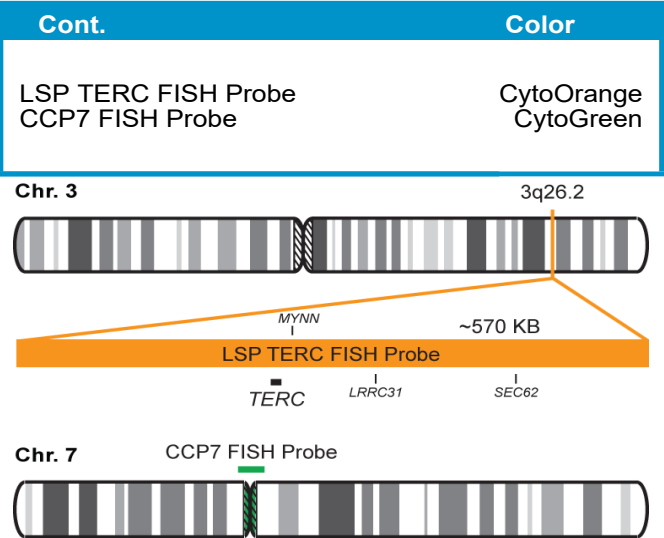
# TERC/CCP7 FISH Probe Kit



Cat. No. CT-PAC002-10-OG (100 µL)

## TERC/CCP7 FISH Probe Kit

The TERC/CCP7 FISH Probe Kit is designed to detect the human TERC gene located on chromosome band 3q26.2, along with the number of chromosome 7 copies per cell. Amplification and abnormal expression of the TERC gene – also known as TR, hTR, TRC3, DKCA1, PFBMFT2 or SCARNA19 – is a hallmark of malignant cervical cancer but also is dysregulated in other tumor types.



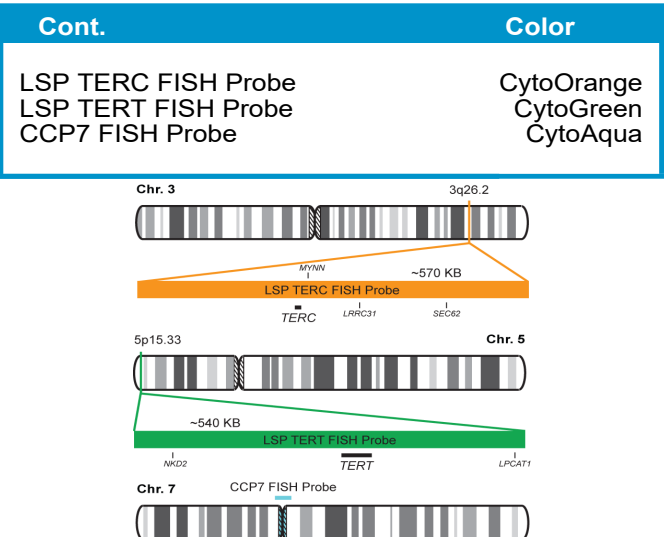
# TERC/TERT/CCP7 FISH Probe Kit



Cat. No. CT-PAC003-10-OGA (100 µL)

## TERC/TERT/CCP7 FISH Probe Kit

The TERC/TERT/CCP7 FISH Probe Kit is designed to detect the human TERC and TERT genes located on chromosome band 3q26.2 and 5p15.33, respectively, along with the number of chromosome 7 copies per cell. Abnormal expression of both genes (TERC – also known as TR, hTR, TRC3, DKCA1, PFBMFT2 or SCARNA19 – and TERT – also known as TP2, TRT, CMM9, EST2, TCS1, hTRT, DKCA2, DKCB4, hEST2 or PFBMFT1) has been observed in cervical carcinoma and a variety of other tumor types.



## TERT/CCP5 FISH Probe Kit

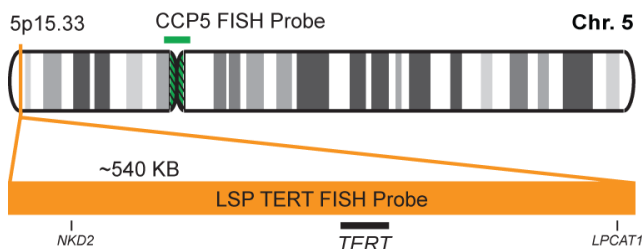


Cat. No. CT-PAC004-10-OG (100 µL)

### TERT/CCP5 FISH Probe Kit

The TERT/CCP5 FISH Probe Kit is designed to detect the human TERT gene located on chromosome band 5p15.33, along with the number of chromosome 5 copies per cell. Gains and losses of portions of the TERT gene – also known as TP2, TRT, CMM9, EST2, TCS1, hTRT, DKCA2, DKCB4, hEST2 or PFBMFT1 – have been reported in a variety of tumor types.

Cont.	Color
LSP TERT FISH Probe	CytoOrange
LSP D5S23,D5S721 FISH Probe	CytoGreen



## TERC/PTGS2/CCP7 FISH Probe Kit

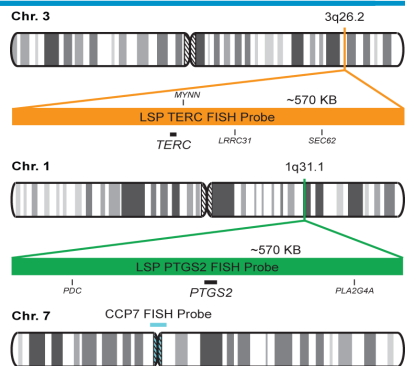


Cat. No. CT-PAC005-10-OGA (100 µL)

### TERC/PTGS2/CCP7 FISH Probe Kit

The TERC/PTGS2/CCP7 FISH Probe Kit is designed to detect the human TERC and PTGS2 genes located on chromosome band 3q26.2 and 1q31.1, respectively, along with the number of chromosome 7 copies per cell. Abnormal expression of both genes (TERC – also known as TR, hTR, TRC3, DKCA1, PFBMFT2 or SCARNA19 – and PTGS2 – also known as COX2, COX-2, PHS-2, PGG/HS, PGHS-2, hCox-2 or GRIPGHS) has been observed in cervical carcinoma, various other solid tumor types, and other conditions.

Cont.	Color
LSP TERC FISH Probe	CytoOrange
LSP PTGS2 FISH Probe	CytoGreen
CCP7 FISH Probe	CytoAqua



## Bladder

PTGS2/CCP1 FISH Probe Kit	26
CDKN2A/CCP9 FISH Probe Kit	26
CDKN2A/CCP3,7,17 FISH Probe Kit	27
IPO11/AHRR FISH Probe Kit	27



## PTGS2/CCP1 FISH Probe Kit

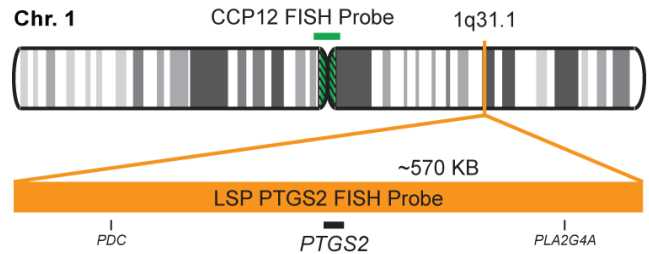


Cat. No. CT-PAC006-10-OG (100 µL)

## PTGS2/CCP1 FISH Probe Kit

The PTGS2/CCP1 FISH Probe Kit is designed to detect the human PTGS2 gene located on chromosome band 1q31.1, along with the number of chromosome 1 copies per cell. Abnormal expression of the PTGS2 gene – also known as COX2, COX-2, PHS-2, PGG/HS, PGHS-2, hCox-2 or GRIPGHS – has been observed in colorectal, lung, uterine, ovarian, pancreatic and many other tumor types.

Cont.	Color
LSP PTGS2 FISH Probe CCP1 FISH Probe	CytoOrange CytoGreen



## CDKN2A/CCP9 FISH Probe Kit

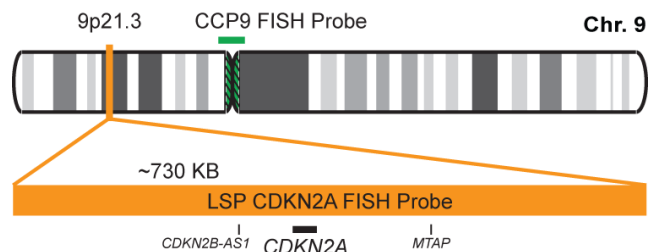


Cat. No. CT-PAC025-10-OG (100 µL)

## CDKN2A/CCP9 FISH Probe Kit

The CDKN2A/CCP9 FISH Probe Kit is designed to detect the human CDKN2A gene located on chromosome band 9p21.3, along with the number of chromosome 9 copies per cell. Abnormalities in CDKN2A – also known as ARF, MLM, P14, P16, P19, CMM2, INK4, MTS1, TP16, CDK4I, CDKN2, INK4A, MTS-1, P14ARF, P19ARF, P16INK4, P16INK4A or P16-INK4A – occur in gliomas and meningiomas as well as numerous other familial and sporadic tumor types.

Cont.	Color
LSP CDKN2A FISH Probe CCP9 (Pericentromeric) FISH Probe	CytoOrange CytoGreen



# CDKN2A/CCP3,7,17 FISH Probe Kit



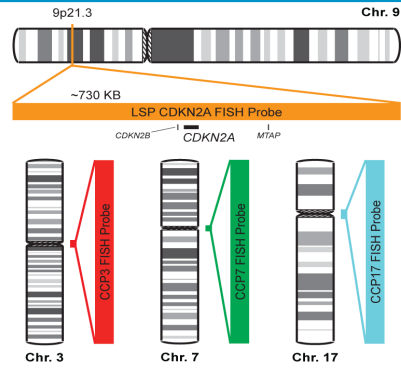
Cat. No. CT-PAC026-10-ORGA (100 µL)

Bladder

## CDKN2A/CCP3,7,17 FISH Probe Kit

The CDKN2A/CCP3,7,17 FISH Probe Kit is designed to detect the human CDKN2A gene located on chromosome band 9p21.3 and simultaneously determine the copy number of human chromosomes 3, 7 and 17. Abnormalities in CDKN2A – also known as ARF, MLM, P14, P16, P19, CMM2, INK4, MTS1, TP16, CDK4I, CDKN2, INK4A, MTS-1, P14ARF, P19ARF, P16INK4, P16INK4A or P16-INK4A – occur in gliomas and meningiomas as well as numerous other familial and sporadic tumor types.

Cont.	Color
LSP CDKN2A FISH Probe	CytoOrange
CCP3 FISH Probe	CytoRed
CCP7 FISH Probe	CytoGreen
CCP17 FISH Probe	CytoAqua



# IPO11/AHRR FISH Probe Kit

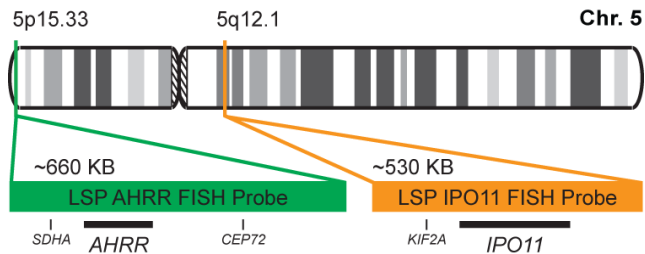


Cat. No. CT-PAC036-10-OG (100 µL)

## IPO11/AHRR FISH Probe Kit

The IPO11/AHRR FISH Probe Kit is designed to detect the human IPO11 gene located on chromosomes band 5q12.1, along with the AHRR gene region on chromosome band 5p15.33 as a control for integrity of the 5p subtelomeric region. Rearrangements and abnormal expression of the IPO11 gene – also known as RanBP11 – have been observed in bladder cancer and other tumor types.

Cont.	Color
LSP IPO11 FISH Probe	CytoOrange
LSP AHRR FISH Probe	CytoGreen



## Colon

MYEOV Break Apart FISH Probe Kit	29
MYEOV/CCP11 FISH Probe Kit	29



# MYEOV Break Apart FISH Probe Kit

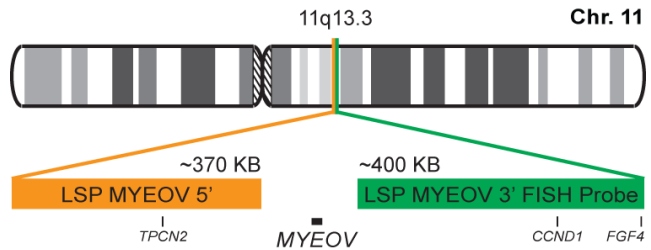


Cat. No. CT-PAC141-10-OG (100 µL)

## MYEOV Break Apart FISH Probe Kit

The MYEOV Break Apart FISH Probe Kit is designed to detect rearrangements in the human MYEOV gene located on chromosome band 11q13.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other MYEOV aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the MYEOV gene – also known as OCIM – have been observed in multiple myeloma, various solid tumor types, such as colon cancer, gastric cancer, neuroblastoma, oral squamous cell carcinoma, etc., and other malignancies.

Cont.	Color
LSP MYEOV 5' FISH Probe LSP MYEOV 3' FISH Probe	CytoOrange CytoGreen



## MYEOV/CCP11 FISH Probe Kit

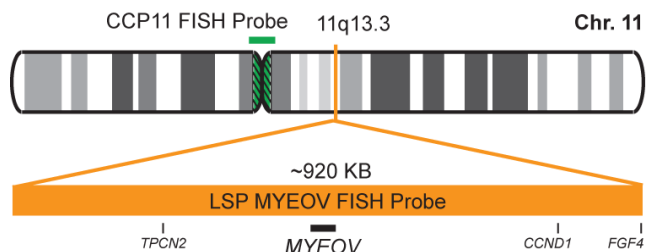


Cat. No. CT-PAC142-10-OG (100 µL)

## MYEOV/CCP11 FISH Probe Kit

The MYEOV/CCP11 FISH Probe Kit is designed to detect the human MYEOV gene located on chromosome band 11q13.3, along with the number of chromosome 11 copies per cell. Abnormalities in MYEOV – also known as OCIM – occur in multiple myeloma, various solid tumor types, such as colon cancer, gastric cancer, neuroblastoma, oral squamous cell carcinoma, etc., and other malignancies.

Cont.	Color
LSP MYEOV FISH Probe CCP11 FISH Probe	CytoOrange CytoGreen



## Liver

CISD2/CCP4 FISH Probe Kit	31
IGH-MYE0V Dual Fusion/Translocation FISH Probe Kit	31





## CISD2/CCP4 FISH Probe Kit

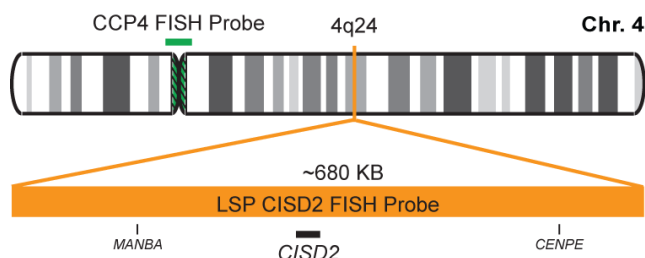


Cat. No. CT-PAC024-10-OG (100 µL)

### CISD2/CCP4 FISH Probe Kit

The CISD2/CCP4 FISH Probe Kit is designed to detect the human CISD2 gene located on chromosome band 4q24, along with the number of chromosome 4 copies per cell. Abnormalities in CISD2 – also known as ERIS, WFS2, ZCD2, NAF-1 or Miner1 – have been observed in liver cancer and other malignancies. The gene has been associated with Wolfram Syndrome.

Cont.	Color
LSP CISD2 FISH Probe CCP4 FISH Probe	CytoOrange CytoGreen



## IGH-MYEOV Dual Fusion/Translocation FISH Probe Kit

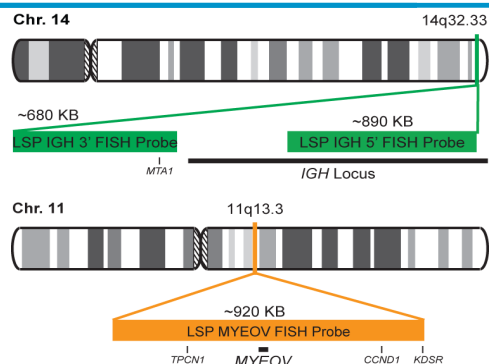


Cat. No. CT-PAC069-10-GO (100 µL)

### IGH-MYEOV Dual Fusion/Translocation FISH Probe Kit

The IGH-MYEOV Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human IGH locus and MYEOV gene located on chromosome bands 14q32.33 and 11q13.3, respectively. Rearrangements between the two regions have been observed in multiple myeloma and other cancer types.

Cont.	Color
LSP IGH 5'-3' FISH Probe LSP MYEOV FISH Probe	CytoGreen CytoOrange



## Skin

COL1A1 Break Apart FISH Probe Kit	33
COL1A1-PDGFB Dual Fusion/Translocation FISH Probe Kit	33
TYMS/CCP18 FISH Probe Kit	34
IGH-MYEOV Dual Fusion/Translocation FISH Probe Kit	34
PDGFB Break Apart FISH Probe Kit	35
IRF4/DUSP22 Break Apart FISH Probe Kit	35
COL1A1-PDGFB Fusion/Translocation FISH Probe Kit	36
RB1/DLEU1/LAMP1 FISH Probe Kit	36



# COL1A1 Break Apart FISH Probe Kit

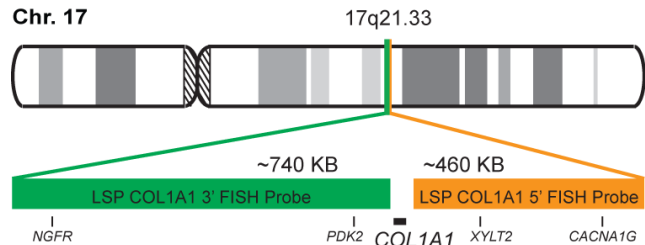


Cat. No. CT-PAC065-10-OG (100 µL)

## COL1A1 Break Apart FISH Probe Kit

The COL1A1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human COL1A1 gene located on chromosome band 17q21.33. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other COL1A1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the COL1A1 gene – also known as OI4 – have been observed in dermatofibrosarcoma protuberans (DFSP) and some other tumor types.

Cont.	Color
LSP COL1A1 5' FISH Probe	CytoOrange
LSP COL1A1 3' FISH Probe	CytoGreen



Skin

# COL1A1-PDGFB Dual Fusion/Translocation FISH Probe Kit

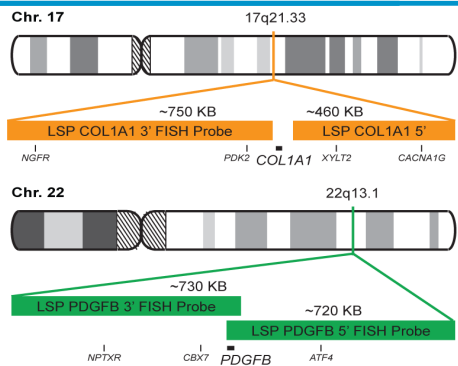


Cat. No. CT-PAC066-10-OG (100 µL)

## COL1A1-PDGFB Dual Fusion/Translocation FISH Probe Kit

The COL1A1-PDGFB Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human COL1A1 and PDGFB genes located on chromosome bands 17q21.33 and 22q13.1, respectively. Rearrangements between the two genes, the COL1A1 gene – also known as OI4 – and the PDGFB gene – also called IBGC5, PDGF-2, PDGF2, SIS, SSV or c-sis, have been observed in dermatofibrosarcoma protuberans (DFSP) and some other tumor types.

Cont.	Color
LSP COL1A1 5'-3' FISH Probe	CytoOrange
LSP PDGFB 5'-3' FISH Probe	CytoGreen



# TYMS/CCP18 FISH Probe Kit

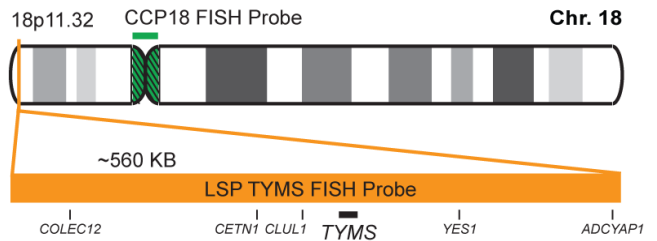


Cat. No. CT-PAC067-10-OG (100 µL)

## TYMS/CCP18 FISH Probe Kit

The TYMS/CCP18 FISH Probe Kit is designed to detect the human TYMS gene located on chromosome band 18p11.32, along with the number of chromosome 18 copies per cell. Abnormal expression of the TYMS gene – also known as TS, TMS or HST422 – has been observed in tuberous sclerosis, some kidney cancers and other conditions.

Cont.	Color
LSP TYMS FISH Probe	CytoOrange
CCP18 FISH Probe	CytoGreen



# IGH-MYEOV Dual Fusion/Translocation FISH Probe Kit

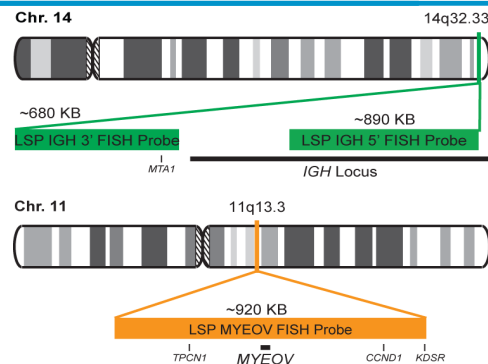


Cat. No. CT-PAC069-10-GO (100 µL)

## IGH-MYEOV Dual Fusion/Translocation FISH Probe Kit

The IGH-MYEOV Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human IGH locus and MYEOV gene located on chromosome bands 14q32.33 and 11q13.3, respectively. Rearrangements between the two regions have been observed in multiple myeloma and other cancer types.

Cont.	Color
LSP IGH 5'-3' FISH Probe	CytoGreen
LSP MYEOV FISH Probe	CytoOrange



Skin



# PDGFB Break Apart FISH Probe Kit

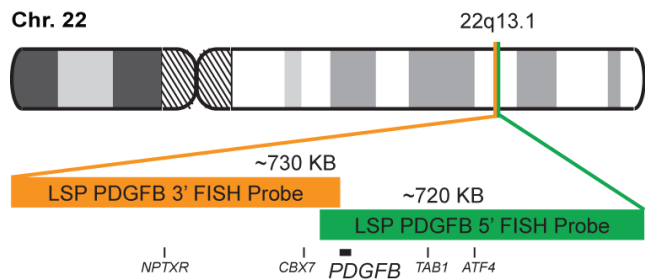


Cat. No. CT-PAC090-10-GO (100 µL)

## PDGFB Break Apart FISH Probe Kit

The PDGFB Break Apart FISH Probe Kit is designed to detect rearrangements in the human PDGFB gene located on chromosome band 22q13.1. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other PDGFB aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the PDGFB gene – also known as CRL2, TSLPR or CRLF2Y – have been observed in dermatofibrosarcoma protuberans (DFSP) and some other tumor types.

Cont.	Color
LSP PDGFB 5' FISH Probe LSP PDGFB 3' FISH Probe	CytoGreen CytoOrange



Skin

# IRF4/DUSP22 Break Apart FISH Probe Kit

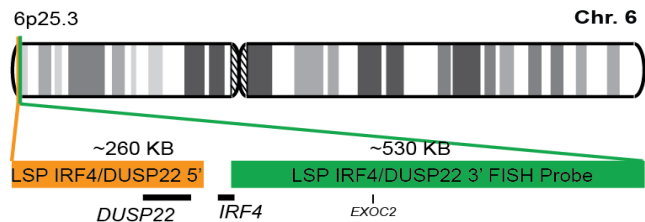


Cat. No. CT-PAC181-10-OG (100 µL)

## IRF4/DUSP22 Break Apart FISH Probe Kit

The IRF4/DUSP22 Break Apart FISH Probe Kit is designed to detect rearrangements in the human IRF4 and DUSP22 genes and the surrounding regions located on chromosome band 6p25.3. In addition to revealing breaks, which can lead to translocation of parts of the genes, inversion, or their fusion to other genes, the probe set can also be used to identify other IRF4 and DUSP22 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the IRF4 gene – also known as NF-EM5, MUM1, LSIRF or IRF-4 – and the DUSP22 gene – also called JKAP, JSP-1, JSP1, LMW-DSP2, LMWDSP2, MKP-x, MKPX or VHX – have been observed in multiple myeloma (MM) and other lymphoid malignancies, viral malignancies, skin cancer and lymphomatoid papulosis (LyP), a chronic papulonecrotic or papulonodular skin disease with

Cont.	Color
LSP IRF4/DUSP22 5' FISH Probe LSP IRF4/DUSP22 3' FISH Probe	CytoOrange CytoGreen



# COL1A1-PDGFB Fusion/Translocation FISH Probe Kit



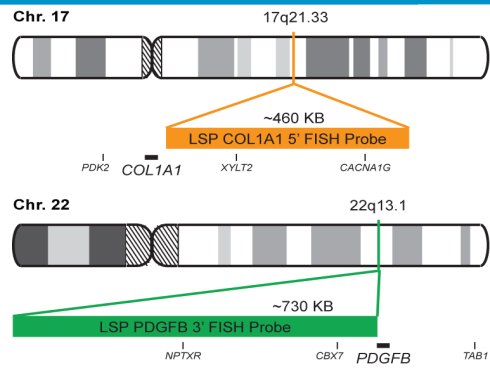
Cat. No. CT-PAC200-10-OG (100 µL)

## COL1A1-PDGFB Fusion/Translocation FISH Probe Kit

Skin

The COL1A1-PDGFB Single Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human COL1A1 and PDGFB genes located on chromosome bands 17q21.33 and 22q13.1, respectively. Rearrangements between the two genes, the COL1A1 gene – also known as OI4 – and the PDGFB gene – also called IBGC5, PDGF-2, PDGF2, SIS, SSV or c-sis, have been observed in dermatofibrosarcoma protuberans (DFSP) and some other tumor types.

Cont.	Color
LSP COL1A1 5' FISH Probe	CytoOrange
LSP PDGFB 3' FISH Probe	CytoGreen



# RB1/DLEU1/LAMP1 FISH Probe Kit



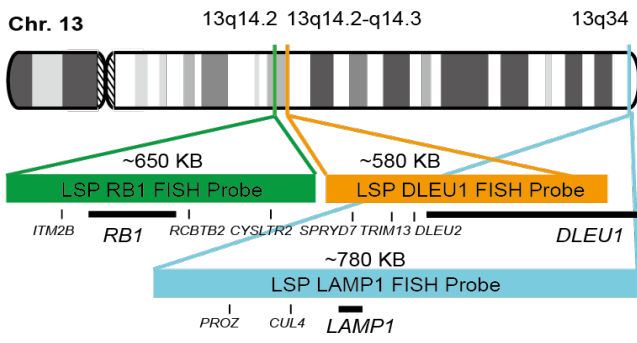
Cat. No. CT-PAC412-10-GOA (100 µL)

## RB1/DLEU1/LAMP1 FISH Probe Kit

The RB1/DLEU1/LAMP1 FISH Probe Kit is designed to simultaneously detect the human RB1, DLEU1 and LAMP1 genes, located on chromosome band 13q14.2.

Deletions of varying lengths and other abnormalities in the locus for these three genes have been observed in lymphoid and myeloid leukemias as well as a number of solid tumor types.

Cont.	Color
LSP RB1 FISH Probe	CytoGreen
LSP DLEU1 FISH Probe	CytoOrange
LSP LAMP1 FISH Probe	CytoAqua



## Lung

ALK Break Apart FISH Probe Kit	38
EML4-ALK Fusion/Translocation FISH Probe Kit	38
EGFR/CCP7 FISH Probe Kit	39
MYC/CCP8 FISH Probe Kit	39
ERBB3/CCP12 FISH Probe Kit	40
TFG Break Apart FISH Probe Kit	40
ROS1 Break Apart FISH Probe Kit	41
YWHAE Break Apart FISH Probe Kit	41
KIF5B-RET Fusion/Translocation FISH Probe Kit	42
PDGFRA Break Apart FISH Probe Kit	42
PDGFRA/CCP4 FISH Probe Kit	43
TNIK/CCP3 FISH Probe Kit	43
CSF1R/EGR1 FISH Probe Kit	44
KIF5B Break Apart FISH Probe Kit	44
CSF1R/EGR1/TERT FISH Probe Kit	45
TFG/CCP3 FISH Probe Kit	45



# ALK Break Apart FISH Probe Kit



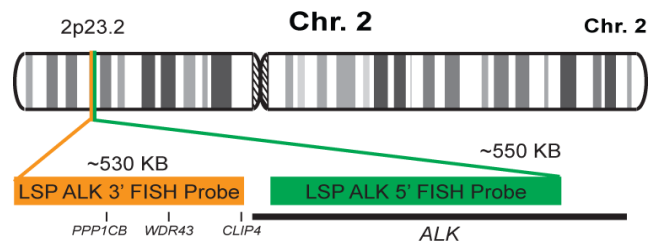
Cat. No. CT-PAC009-10-GO (100 µL)

## ALK Break Apart FISH Probe Kit

Lung

The ALK Break Apart FISH Probe Kit is designed to detect rearrangements in the human ALK gene located on chromosome band 2p23.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other ALK aberrations such as deletions or amplifications. Initially discovered in anaplastic large cell lymphoma (ALCL), rearrangements of ALK – also known as CD246 or NBLST3 – have since been found in many types of malignancies, including B- and T-cell lymphomas, plasmacytomas, neuroblastoma, esophageal, breast, kidney, colon thyroid, lung and other cancers. A significant percentage of non-small cell lung cancer (NSCLC) cases harbor ALK gene abnormalities.

Cont.	Color
LSP ALK 5' FISH Probe	CytoGreen
LSP ALK 3' FISH Probe	CytoOrange





## EGFR/CCP7 FISH Probe Kit

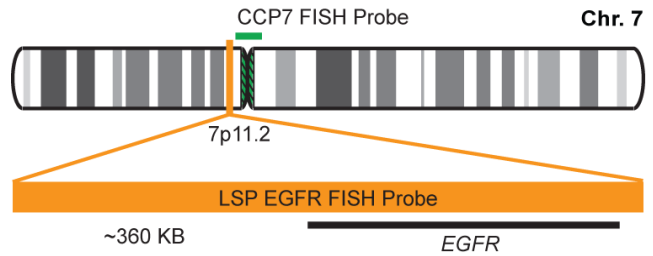


Cat. No. CT-PAC011-10-OG (100 µL)

### EGFR/CCP7 FISH Probe Kit

The EGFR/CCP7 FISH Probe Kit is designed to detect the human EGFR gene located on chromosome band 7p11.2, along with the number of chromosome 7 copies per cell. Abnormal expression of the EGFR gene – also known as TIS8, AT225, G0S30, NGFI-A, ZNF225, KROX-24 or ZIF-268 – has been observed in leukemia, fibrosarcoma, lung, breast, brain, liver, skin, prostate and other tumor types.

Cont.	Color
LSP EGFR FISH Probe CCP7 FISH Probe	CytoOrange CytoGreen



Lung

## MYC/CCP8 FISH Probe Kit

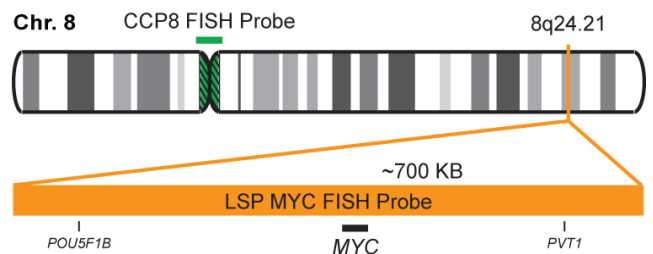


Cat. No. CT-PAC017-10-OG (100 µL)

### MYC/CCP8 FISH Probe Kit

The MYC/CCP8 FISH Probe Kit is designed to detect the human MYC gene located on chromosome band 8q24.21, along with the number of chromosome 8 copies per cell. Rearrangements and abnormal expression of the MYC gene – also known as EV MRTL, MYCC, c-Myc or bHLHe39 – have been observed in Burkitt's Lymphoma and other hematological malignancies, myeloma, as well as breast, cervical, colon, ovarian and other tumor types.

Cont.	Color
LSP MYC FISH Probe CCP8 FISH Probe	CytoOrange CytoGreen



## ERBB3/CCP12 FISH Probe Kit

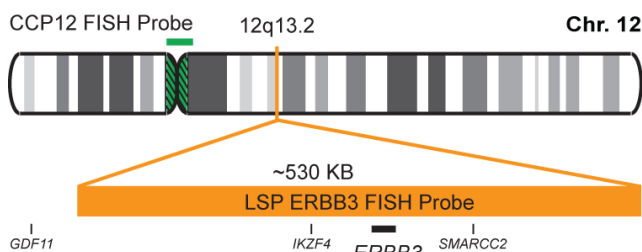


Cat. No. CT-PAC029-10-OG (100 µL)

### ERBB3/CCP12 FISH Probe Kit

The ERBB3/CCP12 FISH Probe Kit is designed to detect the human ERBB3 gene located on chromosome band 12q13.2, along with the number of chromosome 12 copies per cell. Abnormal expression of the ERBB3 gene – also known as HER3, LCCS2, ErbB-3, c-erbB3, erbB3-S, MDA-BF-1, c-erbB-3, p180-ErbB3, p45-sErbB3 or p85-sErbB3 – has been observed in breast, ovarian, prostate, pancreatic, lung and other cancers, and other conditions.

Cont.	Color
LSP ERBB3 FISH Probe CCP12 FISH Probe	CytoOrange CytoGreen



## TFG Break Apart FISH Probe Kit

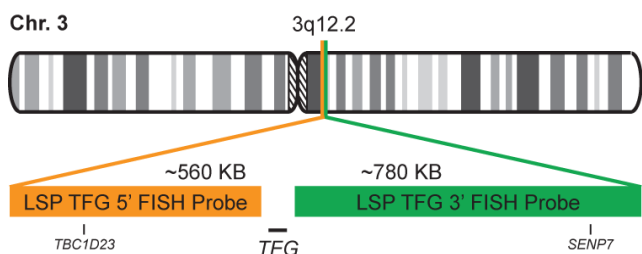


Cat. No. CT-PAC042-10-OG (100 µL)

### TFG Break Apart FISH Probe Kit

The TFG Break Apart FISH Probe Kit is designed to detect rearrangements in the human TFG gene located on chromosome band 3q12.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other TFG aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the TFG gene – also known as TF6, HMSNP, SPG57 or TRKT3 – have been observed in anaplastic large cell lymphoma, thyroid papillary carcinoma, extraskeletal myxoid chondrosarcoma, renal cell carcinoma and other cancer types.

Cont.	Color
LSP TFG 5' FISH Probe LSP TFG 3' FISH Probe	CytoOrange CytoGreen



# ROS1 Break Apart FISH Probe Kit

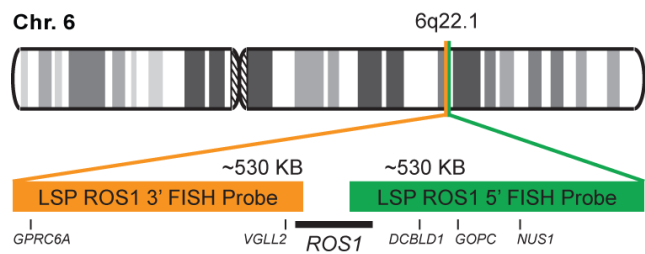


Cat. No. CT-PAC052-10-GO (100 µL)

## ROS1 Break Apart FISH Probe Kit

The ROS1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human ROS1 gene located on chromosome band 6q22.1. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other ROS1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the ROS1 gene – also known as ROS, MCF3 or c-ros-1 – have been observed in lung adenocarcinoma and various other tumor types.

Cont.	Color
LSP ROS1 5' FISH Probe LSP ROS1 3' FISH Probe	CytoGreen CytoOrange



Lung

# YWHAE Break Apart FISH Probe Kit

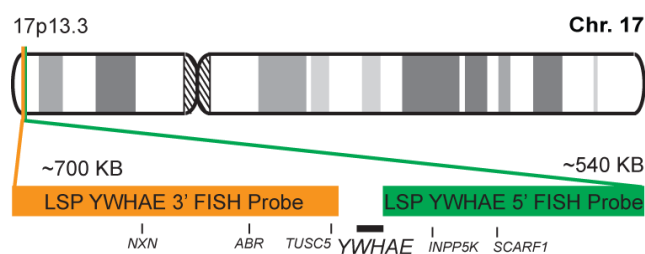


Cat. No. CT-PAC063-10-GO (100 µL)

## YWHAE Break Apart FISH Probe Kit

The YWHAE Break Apart FISH Probe Kit is designed to detect rearrangements in the human YWHAE gene located on chromosome band 17p13.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other YWHAE aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the YWHAE gene – also known as MDS, HEL2, MDCR, KCIP-1 or 14-3-3E – have been observed in lung adenocarcinoma, endometrial stromal sarcoma and other tumor types.

Cont.	Color
LSP YWHAE 5' FISH Probe LSP YWHAE 3' FISH Probe	CytoGreen CytoOrange



# KIF5B-RET Fusion/Translocation FISH Probe Kit

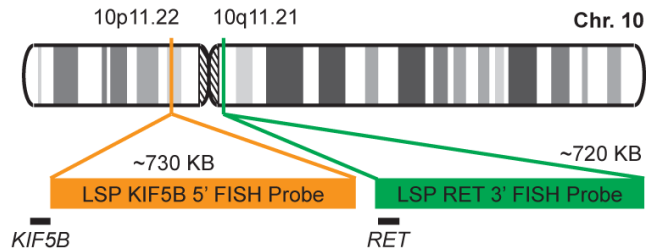


Cat. No. CT-PAC076-10-OG (100 µL)

## KIF5B-RET Fusion/Translocation FISH Probe Kit

The KIF5B-RET Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human KIF5B and RET genes located on chromosome bands 10p11.22 and 10q11.21, respectively. Rearrangements and abnormal expression of the KIF5B gene – also known as KNS, KINH, KNS1, UKHC or HEL-S-61 – and between the two genes have been observed in lung adenocarcinoma and other tumor types.

Cont.	Color
LSP KIF5B 5' FISH Probe	CytoOrange
LSP RET 3' FISH Probe	CytoGreen



# PDGFRA Break Apart FISH Probe Kit

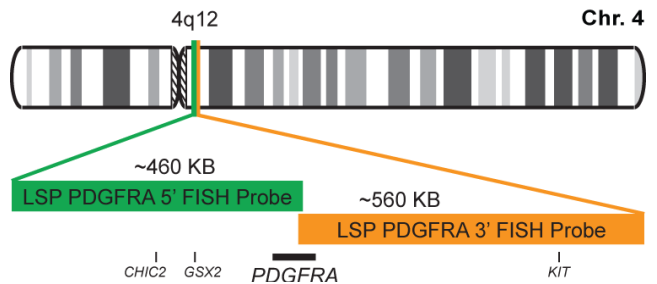


Cat. No. CT-PAC091-10-GO (100 µL)

## PDGFRA Break Apart FISH Probe Kit

The PDGFRA Break Apart FISH Probe Kit is designed to detect rearrangements in the human PDGFRA gene located on chromosome band 4q12. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other PDGFRA aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the PDGFRA gene – also known as CD140A, PDGFR2, PDGFR-2 or RHEPDGFRA – have been observed in gastrointestinal stromal tumors (GIST), lung adenocarcinoma and other hematologic and solid tissue disorders.

Cont.	Color
LSP PDGFRA 5' FISH Probe	CytoGreen
LSP PDGFRA 3' FISH Probe	CytoOrange



Lung



## PDGFRA/CCP4 FISH Probe Kit

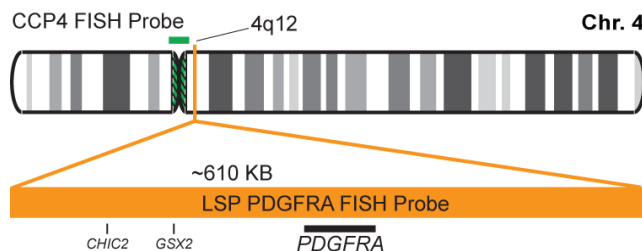


Cat. No. CT-PAC092-10-OG (100 µL)

### PDGFRA/CCP4 FISH Probe Kit

The PDGFRA/CCP4 FISH Probe Kit is designed to detect the human PDGFRA gene located on chromosome band 4q12, along with the number of chromosome 4 copies per cell. Rearrangements and abnormal expression of the PDGFRA gene – also known as CD140A, PDGFR2, PDGFR-2 or RHEPDGFRA – have been observed in gastrointestinal stromal tumors (GIST), lung adenocarcinoma and other hematologic and solid tissue disorders.

Cont.	Color
LSP PDGFRA FISH Probe CCP4 FISH Probe	CytoOrange CytoGreen



Lung

## TNIK/CCP3 FISH Probe Kit

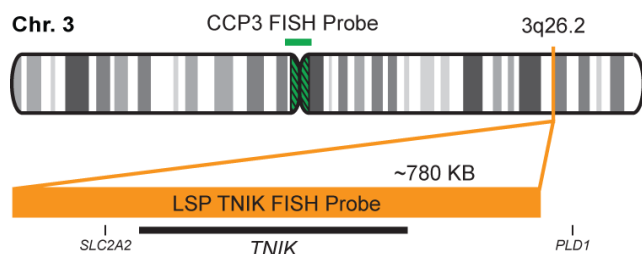


Cat. No. CT-PAC100-10-OG (100 µL)

### TNIK/CCP3 FISH Probe Kit

The TNIK/CCP3 FISH Probe Kit is designed to detect the human TNIK gene located on chromosome band 3q26.2, along with the number of chromosome 3 copies per cell. Abnormal expression of the TNIK gene has been observed in gastric, lung and other cancer types.

Cont.	Color
LSP TNIK FISH Probe CCP3 FISH Probe	CytoOrange CytoGreen



## CSF1R/EGR1 FISH Probe Kit



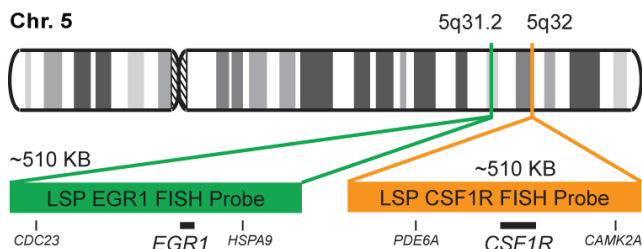
Cat. No. CT-PAC127-10-OG (100 µL)

### CSF1R/EGR1 FISH Probe Kit

Lung

The CSF1R/EGR1 FISH Probe Kit is designed to detect the human CSF1R gene, located on chromosome band 5q32, and the EGR1 gene on chromosome band 5q31.2. Abnormalities in CSF1R – also known as FMS, CSFR, FIM2, HDLS, C-FMS, CD115, CSF-1R or M-CSF-R – and abnormalities in EGR1 – also known as ERBB, HER1, mENA, ERBB1, PIG61 or NISBD2 – have been observed in myeloid malignancies, lung cancer and several other cancer types.

Cont.	Color
LSP CSF1R FISH Probe	CytoOrange
LSP EGR1 FISH Probe	CytoGreen



## KIF5B Break Apart FISH Probe Kit

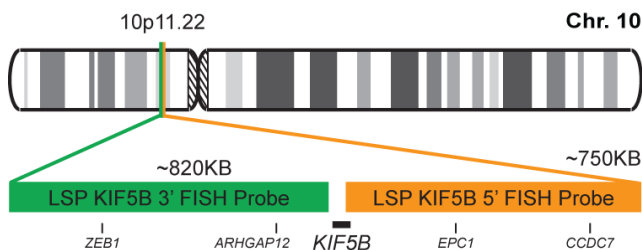


Cat. No. CT-PAC135-10-OG (100 µL)

### KIF5B Break Apart FISH Probe Kit

The KIF5B Break Apart FISH Probe Kit is designed to detect rearrangements in the human KIF5B gene located on chromosome band 10p11.22. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other KIF5B aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the CKIF5B gene – also known as KNS, KINH, KNS1, UKHC or HEL-S-61 – have been observed in lung adenocarcinoma and other tumor types.

Cont.	Color
LSP KIF5B 5' FISH Probe	CytoOrange
LSP KIF5B 3' FISH Probe	CytoGreen



# CSF1R/EGR1/TERT FISH Probe Kit

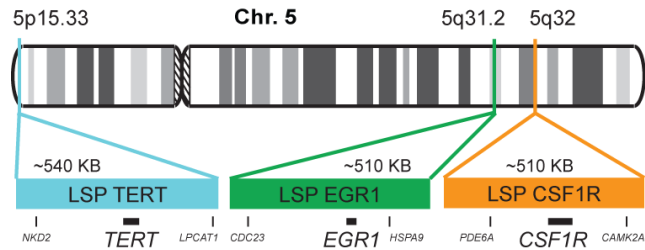


Cat. No. CT-PAC179-10-OGA (100 µL)

## CSF1R/EGR1/TERT FISH Probe Kit

The CSF1R/EGR1/TERT FISH Probe Kit is designed to detect the human CSF1R gene on chromosome band 5q32, the EGR1 gene on chromosome band 5q31.2, and the TERT gene on chromosome band 5p15.33. Abnormalities in CSF1R – also known as FMS, CSFR, FIM2, HDLS, C-FMS, CD115, CSF-1R or M-CSF-R – abnormalities in EGR1 – also known as ERBB, HER1, mENA, ERBB1, PIG61 or NISBD2 – and abnormalities in TERT – also known as TP2, TRT, CMM9, EST2, TCS1, hTRT, DKCA2, DKCB4, hEST2 or PFBMFT1 – have been observed in myeloid malignancies, lung cancer and several other cancer types.

Cont.	Color
LSP CSF1R FISH Probe	CytoOrange
LSP EGR1 FISH Probe	CytoGreen
LSP TERT FISH Probe	CytoAqua



Lung

# TFG/CCP3 FISH Probe Kit

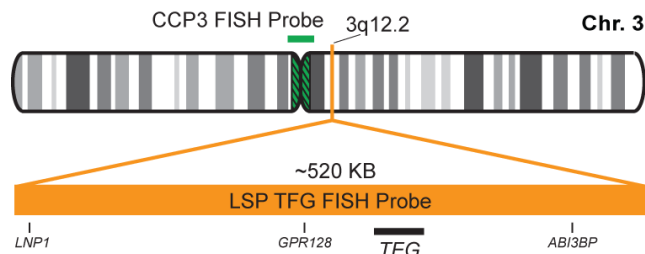


Cat. No. CT-PAC197-10-OG (100 µL)

## TFG/CCP3 FISH Probe Kit

The TFG/CCP3 FISH Probe Kit is designed to detect the human TFG gene located on chromosome band 3q12.2, along with the number of chromosome 3 copies per cell. Rearrangements and abnormal expression of the TFG gene – also known as TF6, HMSNP, SPG57 or TRKT3 – have been observed in anaplastic large cell lymphoma, thyroid papillary carcinoma, extraskeletal myxoid chondrosarcoma, renal cell carcinoma and other cancer types.

Cont.	Color
LSP TFG FISH Probe	CytoOrange
CCP3 FISH Probe	CytoGreen







## Prostate

FUS Break Apart FISH Probe Kit	48
PTEN/CCP10 FISH Probe Kit	48
NKX3-1/CCP8 FISH Probe Kit	49
CHD1/D5S23, D5S721 FISH Probe Kit	49
LSAMP/CCP3 FISH Probe Kit	50
CHD1/CCP5 FISH Probe Kit	50
ERG Break Apart FISH Probe Kit	51
ETV1 Break Apart FISH Probe Kit	51
ETV4 Break Apart FISH Probe Kit	52
TMPRSS2 Break Apart FISH Probe Kit	52
TMPRSS2-ERG Fusion/Translocation FISH Probe Kit	53
TMPRSS2-ETV1 Fusion/Translocation FISH Probe Kit	53
TMPRSS2-ETV4 Fusion/Translocation FISH Probe Kit	54
SMARCB1 Break Apart FISH Probe Kit	54
SMARCB1/CCP22 FISH Probe Kit	55
TMPRSS2-ERG Tri-color Fusion/Translocation FISH Probe Kit	55



# FUS Break Apart FISH Probe Kit

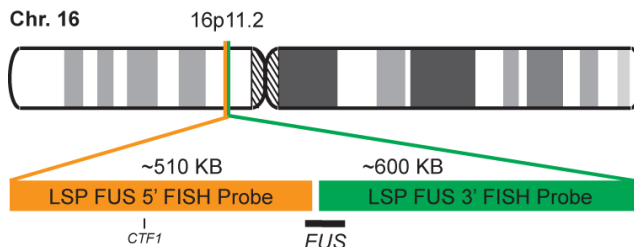


Cat. No. CT-PAC053-10-OG (100 µL)

## FUS Break Apart FISH Probe Kit

The FUS Break Apart FISH Probe Kit is designed to detect rearrangements in the human FUS gene located on chromosome band 16p11.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other FUS aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the FUS gene – also known as TLS, ALS6, ETM4, FUS1, POMP75 or HNRNPP2 – have been observed in alveolar rhabdomyosarcoma, prostate carcinoma and other tumor types.

Cont.	Color
LSP FUS 5' FISH Probe	CytoOrange
LSP FUS 3' FISH Probe	CytoGreen



Prostate

# PTEN/CCP10 FISH Probe Kit

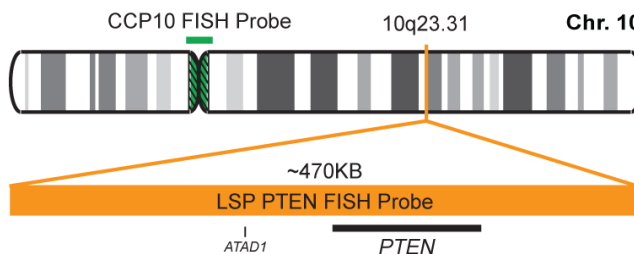


Cat. No. CT-PAC101-10-OG (100 µL)

## PTEN/CCP10 FISH Probe Kit

The PTEN/CCP10 FISH Probe Kit is designed to detect the human PTEN gene located on chromosome band 10q23.31, along with the number of chromosome 10 copies per cell. Loss or abnormal expression of the PTEN gene – also known as BZS, DEC, CWS1, GLM2, MHAM, TEP1, MMAC1, PTEN1 or 10q23del – is common in gliomas and prostate cancer and has been observed in a variety of other heritable and sporadic tumor types and conditions.

Cont.	Color
LSP PTEN FISH Probe	CytoOrange
CCP10 FISH Probe	CytoGreen



## NKX3-1/CCP8 FISH Probe Kit

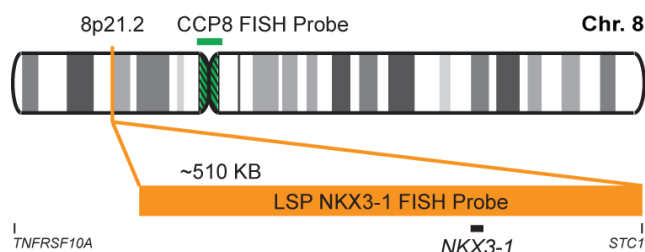


Cat. No. CT-PAC102-10-OG (100 µL)

### NKX3-1/CCP8 FISH Probe Kit

The NKX3-1/CCP8 FISH Probe Kit is designed to detect the human NKX3-1 gene located on chromosome band 8p21.2, along with the number of chromosome 8 copies per cell. Amplification and abnormal expression of the NKX3-1 gene – also known as NKX3, BAPX2, NKX3A or NKX3.1 – has been observed in prostate cancer.

Cont.	Color
LSP NKX3-1 FISH Probe CCP8 FISH Probe	CytoOrange CytoGreen



Prostate

## CHD1/D5S23, D5S721 FISH Probe Kit

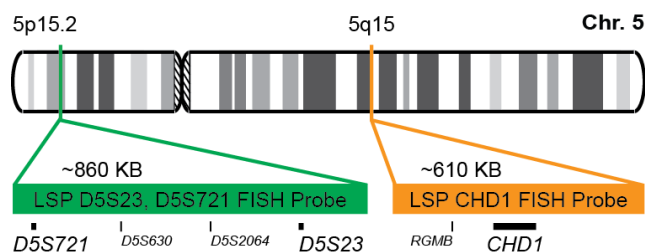


Cat. No. CT-PAC103-10-OG (100 µL)

### CHD1/D5S23, D5S721 FISH Probe Kit

The CHD1/D5S23, D5S721 FISH Probe Kit is designed to detect the human CHD1 gene located on chromosome band 5q15 and the D5S23-D5S721 marker region on chromosome band 5p15.2. Abnormalities in CHD1 occur in prostate cancer and other tumor types.

Cont.	Color
LSP CHD1 FISH Probe LSP D5S23, D5S721 FISH Probe	CytoOrange CytoGreen



# LSAMP/CCP3 FISH Probe Kit

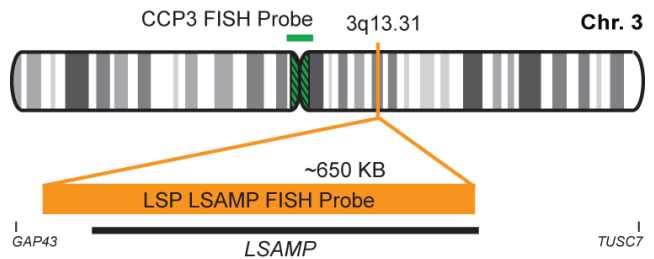


Cat. No. CT-PAC104-10-OG (100 µL)

## LSAMP/CCP3 FISH Probe Kit

The LSAMP/CCP3 FISH Probe Kit is designed to detect the human LSAMP gene located on chromosome band 3q13.31, along with the number of chromosome 3 copies per cell. Microdeletions and polymorphisms of the LSAMP genomic region have been reported during analyses of some rare congenital neuropsychiatric and behavioral disorders. Due to localized chromosomal aberrations identified in osteosarcoma cell lines, LSAMP is suspected to be a tumor suppressor gene in osteosarcoma. A novel recurrent deletion of the LSAMP locus has recently been described in African American men and found to be associated with aggressive disease progression.

Cont.	Color
LSP LSAMP FISH Probe	CytoOrange
CCP3 FISH Probe	CytoGreen



Prostate

# CHD1/CCP5 FISH Probe Kit

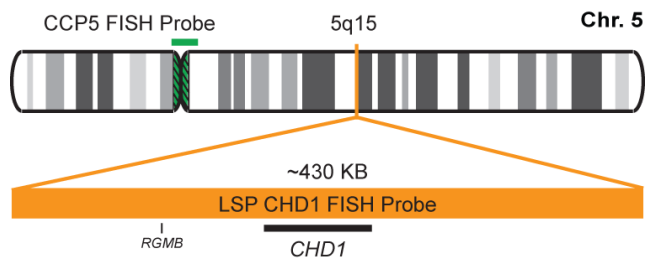


Cat. No. CT-PAC105-10-OG (100 µL)

## CHD1/CCP5 FISH Probe Kit

The CHD1/CCP5 FISH Probe Kit is designed to detect the human CHD1 gene located on chromosome band 5q15, along with the number of chromosome 5 copies per cell. Abnormalities in CHD1 gene occur in prostate cancer and other tumor types.

Cont.	Color
LSP CHD1 FISH Probe	CytoOrange
LSP D5S23,D5S721 FISH Probe	CytoGreen



## ERG Break Apart FISH Probe Kit

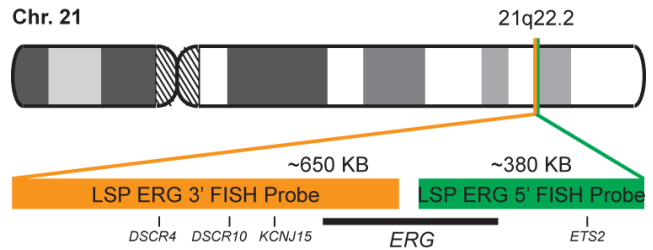


Cat. No. CT-PAC151-10-GO (100 µL)

### ERG Break Apart FISH Probe Kit

The ERG Break Apart FISH Probe Kit is designed to detect rearrangements in the human ERG gene located on chromosome band 21q22.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other ERG aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the ERG gene – also known as p55 or erg-3 – have been observed in Ewing’s sarcoma, acute myeloid leukemia (AML), prostate cancer and other tumor types.

Cont.	Color
LSP ERG 5' FISH Probe LSP ERG 3' FISH Probe	CytoGreen CytoOrange



Prostate

## ETV1 Break Apart FISH Probe Kit

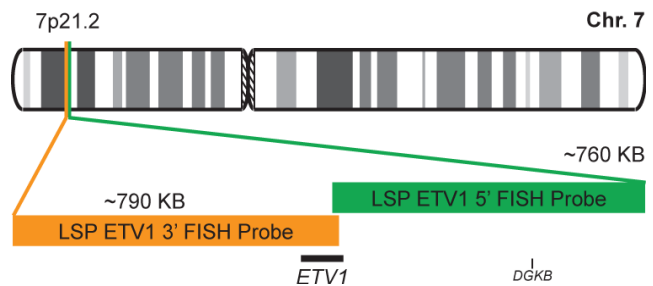


Cat. No. CT-PAC152-10-GO (100 µL)

### ETV1 Break Apart FISH Probe Kit

The ETV1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human ETV1 gene located on chromosome band 7p21.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other ETV1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the ETV1 gene – also known as ER81 – have been observed in Ewing’s sarcoma, melanoma, prostate cancer and other tumor types.

Cont.	Color
LSP ETV1 5' FISH Probe LSP ETV1 3' FISH Probe	CytoGreen CytoOrange



## ETV4 Break Apart FISH Probe Kit

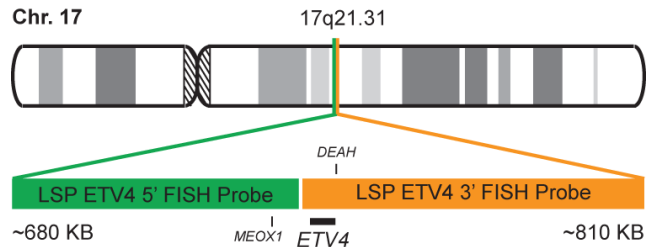


Cat. No. CT-PAC153-10-GO (100 µL)

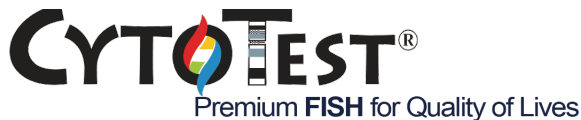
### ETV4 Break Apart FISH Probe Kit

The ETV4 Break Apart FISH Probe Kit is designed to detect rearrangements in the human ETV4 gene located on chromosome band 17q21.31. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other ETV4 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the ETV4 gene – also known as E1AF, PEA3, E1A-F or PEAS3 – have been observed in melanoma, breast, lung, prostate and other cancers.

Cont.	Color
LSP ETV4 5' FISH Probe	CytoGreen
LSP ETV4 3' FISH Probe	CytoOrange



## TMPRSS2 Break Apart FISH Probe Kit

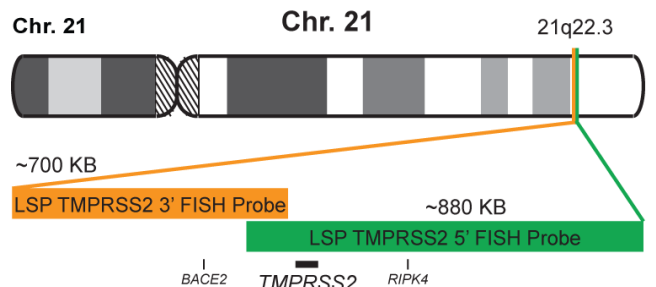


Cat. No. CT-PAC154-10-GO (100 µL)

### TMPRSS2 Break Apart FISH Probe Kit

The TMPRSS2 Break Apart FISH Probe Kit is designed to detect rearrangements in the human TMPRSS2 gene located on chromosome band 21q22.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other TMPRSS2 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the TMPRSS2 gene – also known as PP9284 or PRSS10 – have been observed in prostate cancer and other malignancies.

Cont.	Color
LSP TMPRSS2 5' FISH Probe	CytoGreen
LSP TMPRSS2 3' FISH Probe	CytoOrange



Prostate



# TMPRSS2-ERG Fusion/Translocation FISH Probe Kit

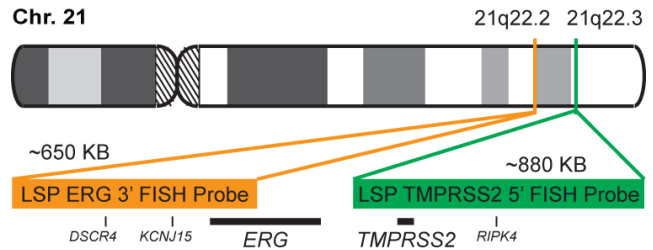


Cat. No. CT-PAC176-10-GO (100 µL)

## TMPRSS2-ERG Fusion/Translocation FISH Probe Kit

The TMPRSS2-ERG Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human TMPRSS2 and ERG genes located on chromosome bands 21q22.3 and 21q22.2, respectively. Rearrangements between the two genes have been observed in prostate cancer and other malignancies.

Cont.	Color
LSP TMPRSS2 5' FISH Probe LSP ERG 3' FISH Probe	CytoGreen CytoOrange



Prostate

# TMPRSS2-ETV1 Fusion/Translocation FISH Probe Kit

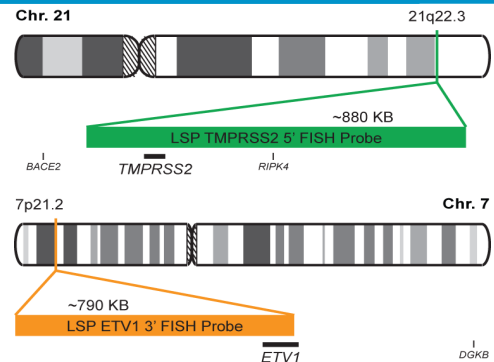


Cat. No. CT-PAC177-10-GO (100 µL)

## TMPRSS2-ETV1 Fusion/Translocation FISH Probe Kit

The TMPRSS2-ETV1 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human TMPRSS2 and ETV1 genes, located on chromosome bands 21q22.3 and 7p21.2, respectively. Rearrangements between the two genes have been observed in prostate cancer and other malignancies.

Cont.	Color
LSP TMPRSS2 5' FISH Probe LSP ETV1 3' FISH Probe	CytoGreen CytoOrange



# TMPRSS2-ETV4 Fusion/Translocation FISH Probe Kit



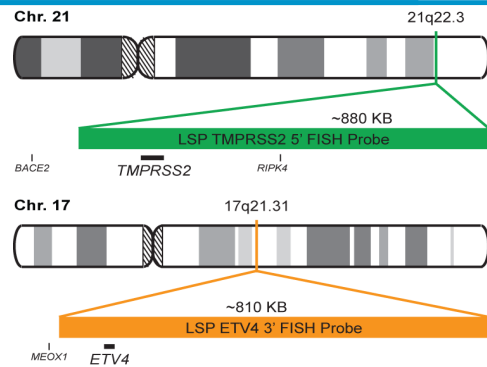
Premium FISH for Quality of Lives

Cat. No. CT-PAC178-10-GO (100 µL)

## TMPRSS2-ETV4 Fusion/Translocation FISH Probe Kit

The TMPRSS2-ETV4 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human TMPRSS2 and ETV4 genes, located on chromosome bands 21q22.3 and 17q21.31, respectively. Rearrangements between the two genes have been observed in prostate cancer and other malignancies.

Cont.	Color
LSP TMPRSS2 5' FISH Probe	CytoGreen
LSP ETV4 3' FISH Probe	CytoOrange



Prostate

# SMARCB1 Break Apart FISH Probe Kit



Premium FISH for Quality of Lives

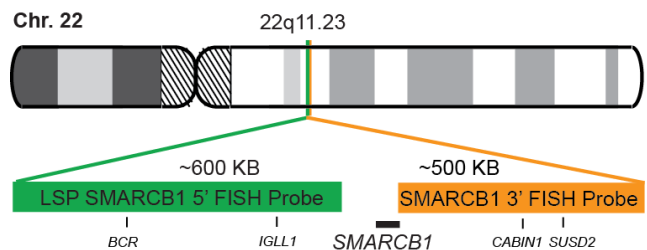
Cat. No. CT-PAC374-10-GO (100 µL)

## SMARCB1 Break Apart FISH Probe Kit

The SMARCB1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human SMARCB1 gene mapping to chromosome band 22q11.23. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other SMARCB1 aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the SMARCB1 gene – also known as RDT, CSS3, INI1, SNF5, Snr1, BAF47, MRD15, RTPS1, Sfh1p, hSNFS, SNF5L1, SWNTS1 or PPP1R144 - have been observed in rhabdoid tumors and other malignancies and neoplastic predisposition syndromes.

Cont.	Color
LSP SMARCB1 5' FISH Probe	CytoGreen
LSP SMARCB1 3' FISH Probe	CytoOrange





## SMARCB1/CCP22 FISH Probe Kit

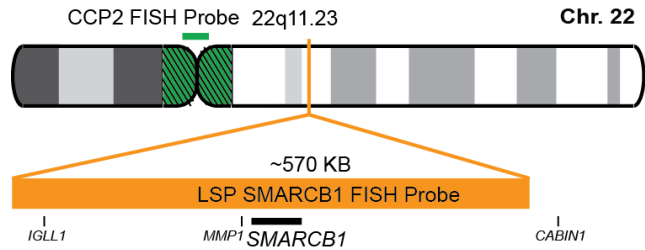


Cat. No. CT-PAC375-10-OG (100 µL)

### SMARCB1/CCP22 FISH Probe Kit

The SMARCB1/CCP22 FISH Probe Kit is designed to detect the human SMARCB1 gene located on chromosome band 22q11.23, along with the number of chromosome 22 copies per cell. Abnormalities in ATM – also known as RDT, CSS3, INI1, SNF5, Snr1, BAF47, MRD15, RTPS1, Sfh1p, hSNFS, SNF5L1, SWNTS1 or PPP1R144 - have been observed in rhabdoid tumors and other malignancies and neoplastic predisposition syndromes.

Cont.	Color
LSP SMARCB1 FISH Probe	CytoOrange
CCP22 (22q13) FISH Probe	CytoGreen



Prostate

## TMPRSS2-ERG Tri-color Fusion/Translocation FISH Probe Kit



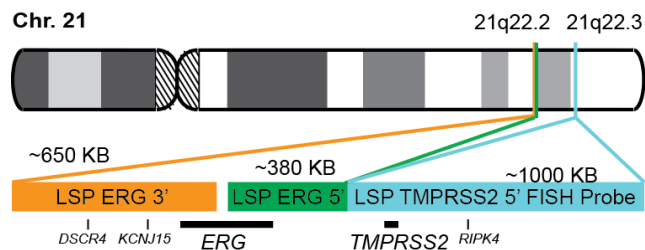
Cat. No. CT-PAC376-10-AGO (100 µL)

### TMPRSS2-ERG Tri-color Fusion/Translocation FISH Probe Kit

The TMPRSS2-ERG Tri-color Fusion/Translocation FISH Probe Kit is designed to detect rearrangements between the human TMPRSS2 and ERG genes, both located on the long arm of chromosome 21 (21q22.3 and 21q22.2, respectively).\*

Rearrangements between the two genes have been observed in prostate cancer and other malignancies.

Cont.	Color
LSP TMPRSS2 5' FISH Probe	CytoAqua
LSP ERG 5' FISH Probe	CytoGreen
LSP ERG 3' FISH Probe	CytoOrange



# Leukemia

FGFR1 Break Apart FISH Probe Kit	59
MECOM/CCP3 FISH Probe Kit	59
MECOM Break Apart FISH Probe Kit	60
RARA Break Apart FISH Probe Kit	60
TCL1A Break Apart FISH Probe Kit	61
TP53/ATM FISH Probe Kit	61
TRA Break Apart FISH Probe Kit	62
MNX1-ETV6 Dual Fusion/Traslocation FISH Probe Kit	62
DEK-NUP214 Dual Fusion/Translocation FISH Probe Kit	63
BCR-ABL1/ASS1 Tri-color Fusion/Translocation FISH Probe	63
ASS1/CCP9 FISH Probe Kit	64
ABL1 Break Apart FISH Probe Kit	64
CDK14/CCP7 FISH Probe Kit	65
CDK14/CUX1/CCP7 FISH Probe Kit	65
DEK/CCP6 FISH Probe Kit	66
KMT2A/CCP11 FISH Probe Kit	66
MCL1/CCP1 FISH Probe Kit	67
PTPRT/CCP20 FISH Probe Kit	67
RPN1/CCP3 FISH Probe Kit	68
SEC63/SMAD6 FISH Probe Kit	68
SMAD6/CCP15 FISH Probe Kit	69
TP53/CD37 FISH Probe Kit	69
DLEU1/ZBTB16 FISH Probe Kit	70
CCP7/CCP8 FISH Probe Kit	70
MECOM-RUNX1 Dual Fusion/Translocation FISH Probe Kit	71
ASS1/SMAD6 FISH Probe Kit	71
FIP1L1/CHIC2 FISH Probe Kit	72
FIP1L1-CHIC2-PDGFR A Tri-color FISH Probe Kit	72
JAK2 Break Apart FISH Probe Kit	73
TP53/MPO FISH Probe Kit	73
NUP98 Break Apart FISH Probe Kit	74
KMT2A-MLLT1 Dual Fusion/Translocation FISH Probe Kit	74



KMT2A-MLLT3 Dual Fusion/Translocation FISH Probe Kit	75
KMT2A-MLLT4 Dual Fusion/Translocation FISH Probe Kit	75
CCND3 Break Apart FISH Probe Kit	76
ZBTB16-RARA Dual Fusion/Translocation FISH Probe Kit	76
TLX1 Break Apart FISH Probe Kit	77
ZBTB16/CCP11 FISH Probe Kit	77
EPOR Break Apart FISH Probe Kit	78
TCF3 Break Apart FISH Probe Kit	78
PBX1 Break Apart FISH Probe Kit	79
MYC Break Apart FISH Probe Kit	79
CCND1 Break Apart FISH Probe Kit	80
MYH11 Break Apart FISH Probe Kit	80
MLLT1 Break Apart FISH Probe Kit	81
MLLT4 Break Apart FISH Probe Kit	81
PML-RARA Fusion/Translocation FISH Probe Kit	82
KMT2A-AFF1 Single Fusion/Translocation FISH Probe Kit	82
IGL Break Apart FISH Probe Kit	83
IGK Break Apart FISH Probe Kit	83
IGK-MYC Dual Fusion/Translocation LR FISH Probe Kit	84
IGL-MYC Dual Fusion/Translocation LR FISH Probe Kit	84
TCF3-PBX1 Fusion/Translocation FISH Probe Kit	85
MYH11/CCP16 FISH Probe Kit	85
DLEU1/TP53 FISH Probe Kit	86
IGH/CCP14 FISH Probe Kit	86
IGH-EPOR Dual Fusion/Translocation FISH Probe Kit	87
BCR-ABL1 Dual Fusion/Translocation FISH Probe Kit	87
RUNX1-RUNX1T1 Dual Fusion/Translocation FISH Probe Kit	88
PML-RARA Dual Fusion/Translocation FISH Probe Kit	88
ETV6-RUNX1 Dual Fusion/Translocation FISH Probe Kit	89
CBFB-MYH11 Dual Fusion/Translocation FISH Probe Kit	89
KMT2A-AFF1 Dual Fusion/Translocation FISH Probe Kit	90
TCF3-PBX1 Dual Fusion/Translocation FISH Probe Kit	90
KMT2A Break Apart FISH Probe Kit	91
KMT2A Break Apart FISH Probe Kit	91



ETV6 Break Apart FISH Probe Kit	92
CBFB Break Apart FISH Probe Kit	92
NUP214 Break Apart FISH Probe Kit	93
RBM15-MKL1 Dual Fusion/Translocation FISH Probe Kit	93
RBM15 Break Apart FISH Probe Kit	94
MKL1 Break Apart FISH Probe Kit	94
KAT6A Break Apart FISH Probe Kit	95
TP53/CCP17 FISH Probe Kit	95
ATM/CCP11 FISH Probe Kit	96
EGR1/D5S23, D5S721 FISH Probe Kit	96
RB1/LAMP1 FISH Probe Kit	97
CSF1R/D5S23, D5S721 FISH Probe Kit	97
AFF1 Break Apart FISH Probe Kit	98
D20S108/CCP8 FISH Probe Kit	98
D7S486/CCP7 FISH Probe Kit	99
D7S522/CCP7 FISH Probe Kit	99
NSD1/TERT FISH Probe Kit	100
NSD1/D5S23, D5S721 FISH Probe Kit	100



## FGFR1 Break Apart FISH Probe Kit

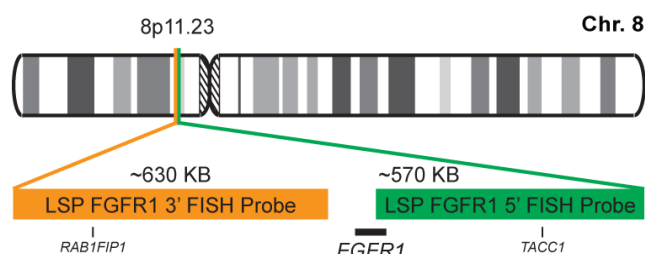


Cat. No. CT-PAC056-10-GO (100 µL)

### FGFR1 Break Apart FISH Probe Kit

The FGFR1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human FGFR1 gene located on chromosome band 8p11.23. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other FGFR1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the FGFR1 gene – also known as CEK, FLG, HH2, OGD, FLT2, KAL2, BFGFR, CD331, FGFR, FLT-2, HBGFR, N-SAM, FGFR-1, HRTFDS or bFGF-R-1 – have been observed in a large number of hematological and solid tumor types, and other conditions.

Cont.	Color
LSP FGFR1 5' FISH Probe LSP FGFR1 3' FISH Probe	CytoGreen CytoOrange



## MECOM/CCP3 FISH Probe Kit

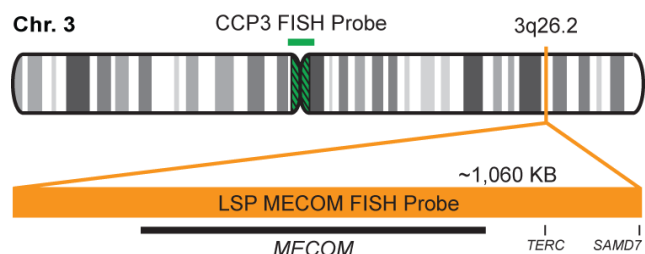


Cat. No. CT-PAC070-10-OG (100 µL)

### MECOM/CCP3 FISH Probe Kit

The MECOM/CCP3 FISH Probe Kit is designed to detect the human MECOM locus located on chromosome band 3q26.2, along with the number of chromosome 3 copies per cell. Rearrangements and abnormal expression of the MECOM gene – also known as EVI1, MDS1, PRDM3, MDS1-EVI1 or AML1-EVI-1 – have been observed in acute and chronic myelogenous leukemias, Myelodysplastic Syndrome (MDS) and other malignancies.

Cont.	Color
LSP MECOM FISH Probe CCP3 FISH Probe	CytoOrange CytoGreen



Leukemia



# MECOM Break Apart FISH Probe Kit

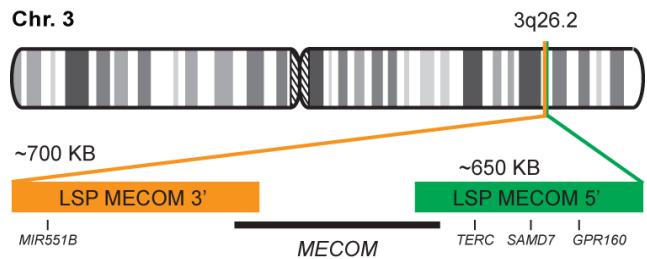


Cat. No. CT-PAC071-10-GO (100 µL)

## MECOM Break Apart FISH Probe Kit

The MECOM Break Apart FISH Probe Kit is designed to detect rearrangements in the human MECOM locus located on chromosome band 3q26.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other MECOM aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the MECOM gene – also known as EVI1, MDS1, PRDM3, MDS1-EVI1 or AML1-EVI-1 – have been observed in acute and chronic myelogenous leukemias, Myelodysplastic Syndrome (MDS) and other malignancies.

Cont.	Color
LSP MECOM 5' FISH Probe	CytoGreen
LSP MECOM 3' FISH Probe	CytoOrange



# RARA Break Apart FISH Probe Kit

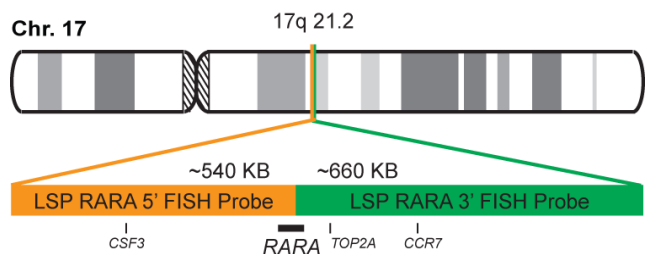


Cat. No. CT-PAC093-10-OG (100 µL)

## RARA Break Apart FISH Probe Kit

The RARA Break Apart FISH Probe Kit is designed to detect rearrangements in the human RARA gene located on chromosome band 17q21.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other RARA aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the RARA gene – also known as RAR or NR1B1 – have been observed in several acute promyelocytic leukemia types and other malignancies.

Cont.	Color
LSP RARA 5' FISH Probe	CytoOrange
LSP RARA 3' FISH Probe	CytoGreen



Leukemia



# TCL1A Break Apart FISH Probe Kit

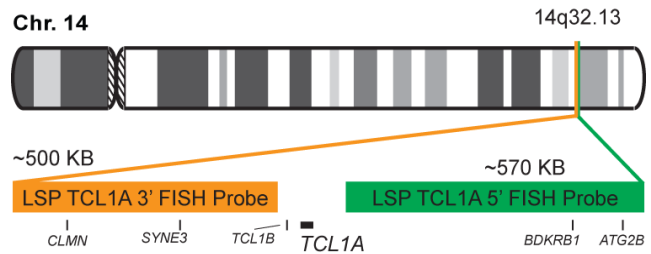


Cat. No. CT-PAC096-10-GO (100 µL)

## TCL1A Break Apart FISH Probe Kit

The TCL1A Break Apart FISH Probe Kit is designed to detect rearrangements in the human TCL1A gene located on chromosome band 14q32.13. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other TCL1A aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the TCL1A gene – also known as TCL1 – have been observed in T-cell leukemias and other malignancies.

Cont.	Color
LSP TCL1A 5' FISH Probe LSP TCL1A 3' FISH Probe	CytoGreen CytoOrange



# TP53/ATM FISH Probe Kit

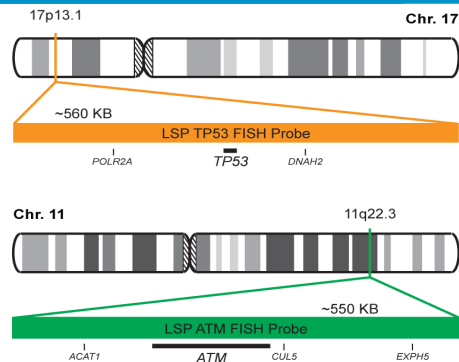


Cat. No. CT-PAC106-10-OG (100 µL)

## TP53/ATM FISH Probe Kit

The TP53/ATM FISH Probe Kit is designed to detect rearrangements involving the human TP53 and ATM genes, located on chromosome bands 17p13.1 and 11q22.3, respectively. Abnormalities in both genes, the TP53 gene – also known as P53, BCC7, LFS1 or TRP53 – and the ATM gene – also called AT1, ATA, ATC, ATD, ATE, ATDC, TEL1 or TELO1, have been reported in a number of leukemia types and other malignancies.

Cont.	Color
LSP TP53 FISH Probe LSP ATM FISH Probe	CytoOrange CytoGreen



Leukemia



# TRA Break Apart FISH Probe Kit

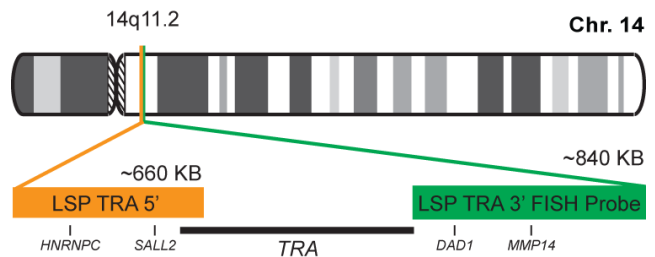


Cat. No. CT-PAC107-10-OG (100 µL)

## TRA Break Apart FISH Probe Kit

The TRA Break Apart FISH Probe Kit is designed to detect rearrangements in the human T cell receptor alpha (TRA) locus located on chromosome band 14q11.2. In addition to revealing breaks, which can lead to translocation of parts of the locus, inversion, or its fusion to other genes, the probe set can also be used to identify other TRA aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the TRA locus – also known as IMD7, TCRA, TCRD, TRA@ or TRAC – have been observed in a number of adult and pediatric T-cell leukemias and other malignancies.

Cont.	Color
LSP TRA 5' FISH Probe	CytoOrange
LSP TRA 3' FISH Probe	CytoGreen



## MNX1-ETV6 Dual Fusion/Traslocation FISH Probe Kit



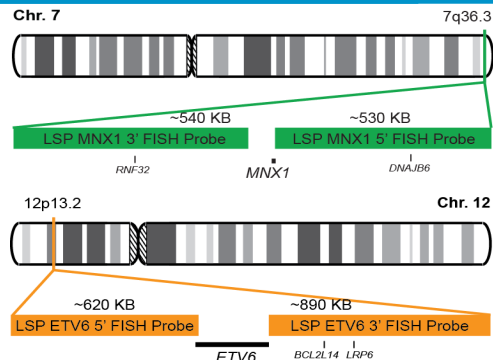
Cat. No. CT-PAC108-10-GO (100 µL)

## MNX1-ETV6 Dual Fusion/Traslocation FISH Probe Kit

The MNX1-ETV6 Dual Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human MNX1 and ETV6 genes, located on chromosome bands 7q36.3 and 15q25.3, respectively.

MNX1 is also known as HB9, HLXB9, SCRA1 or HOXHB9. ETV6 is also known as TEL, THC5 or TEL/ABL. Rearrangements involving portions of these two genes have been observed in acute myeloid leukemia (AML) and many other predominantly myeloproliferative neoplasms.

Cont.	Color
LSP MNX1 5'-3' FISH Probe	CytoGreen
LSP ETV6 5'-3' FISH Probe	CytoOrange



Leukemia





# DEK-NUP214 Dual Fusion/Translocation FISH Probe Kit

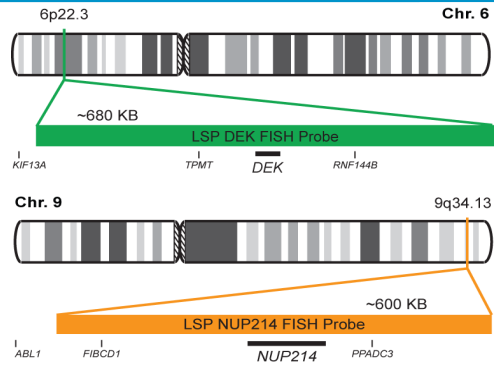


Cat. No. CT-PAC109-10-GO (100 µL)

## DEK-NUP214 Dual Fusion/Translocation FISH Probe Kit

The DEK-NUP214 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human DEK and NUP214 genes located on chromosome bands 6p22.3 and 9q34.13, respectively. Rearrangements involving portions of these two genes, the DEK gene – also known as D6S231E – and the NUP214 gene – also called CAN, CAIN, or D9S46E, have been observed in acute myeloid leukemia (AML), myelodysplastic syndrome (MDS) and many other hematological malignancies.

Cont.	Color
LSP DEK FISH Probe	CytoGreen
LSP NUP214 FISH Probe	CytoOrange



# BCR-ABL1/ASS1 Tri-color Fusion/Translocation FISH Probe Kit

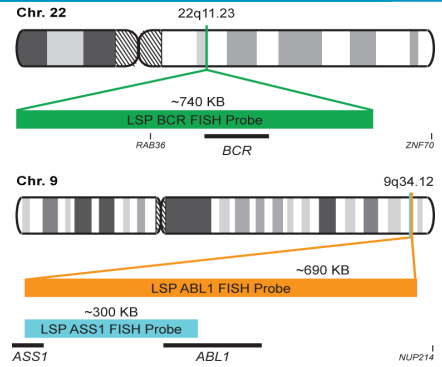


Cat. No. CT-PAC110-10-GOA (100 µL)

## BCR-ABL1/ASS1 Tri-color Fusion/Translocation FISH Probe Kit

The BCR-ABL1/ASS1 Tri-color Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human BCR, ABL1 and ASS1 genes located on chromosome bands 22q11.23, 9q34.12 and 9q34.11, respectively. A reciprocal translocation between the two regions is present in virtually all cases of chronic myelocytic leukemia (CML), but also occurs in a subset of pediatric and adult acute lymphocytic leukemias (ALL), acute myelogenous leukemia (AML) and other malignancies.

Cont.	Color
LSP BCR FISH Probe	CytoGreen
LSP ABL1 FISH Probe	CytoOrange
LSP ASS1 FISH Probe	CytoAqua



Leukemia



## ASS1/CCP9 FISH Probe Kit

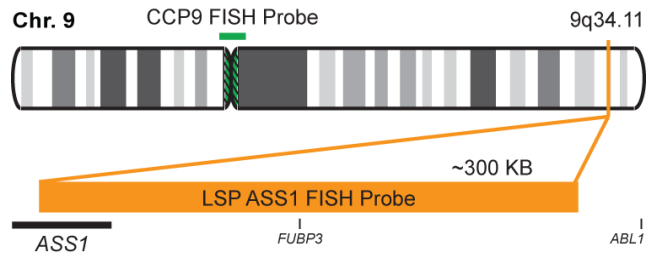


Cat. No. CT-PAC111-10-OG (100 µL)

### ASS1/CCP9 FISH Probe Kit

The ASS1/CCP9 FISH Probe Kit is designed to detect the human ASS1 gene located on chromosome band 9q34.11, along with the number of chromosome 9 copies per cell. Abnormalities in ASS1 – also called ASS or CTLN1 – occur in citrullinemia type I (CTLN1), also known as classic citrullinemia.

Cont.	Color
LSP ASS1 FISH Probe	CytoOrange
CCP9 (Pericentromeric) FISH Probe	CytoGreen



## ABL1 Break Apart FISH Probe Kit

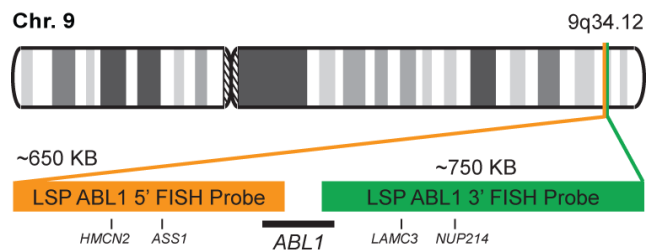


Cat. No. CT-PAC115-10-OG (100 µL)

### ABL1 Break Apart FISH Probe Kit

The ABL1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human ABL1 gene located on chromosome band 9q34.12. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other ABL1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the ABL1 gene – also known as v-abl, p150, c-ABL1, c-ABL, bcr/abl, JTK7 or ABL – have been observed in acute lymphoblastic leukemia (ALL), chronic myelogenous leukemia (CML), acute myeloid leukemia (AML) and other malignancies.

Cont.	Color
LSP ABL1 5' FISH Probe	CytoOrange
LSP ABL1 3' FISH Probe	CytoGreen



Leukemia



# CDK14/CCP7 FISH Probe Kit

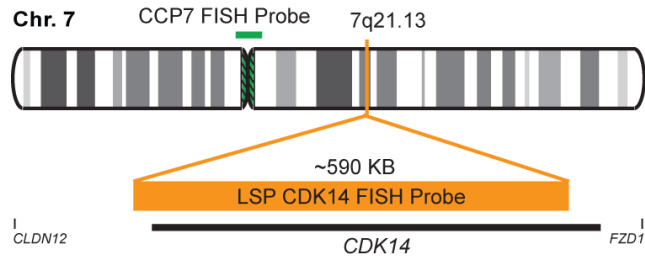


Cat. No. CT-PAC124-10-OG (100 µL)

## CDK14/CCP7 FISH Probe Kit

The CDK14/CCP7 FISH Probe Kit is designed to detect the human CDK14 gene located on chromosome bands 7q21.13, along with the number of chromosome 7 copies per cell. Abnormalities (typically chromosome 7 q-arm deletions) in CDK14 – also known as PFTK1 or PFTFAIRE1 – occur in malignant myeloid diseases (ex. CML, AML, etc.) and other malignancies.

Cont.	Color
LSP CDK14 FISH Probe CCP7 FISH Probe	CytoOrange CytoGreen



# CDK14/CUX1/CCP7 FISH Probe Kit

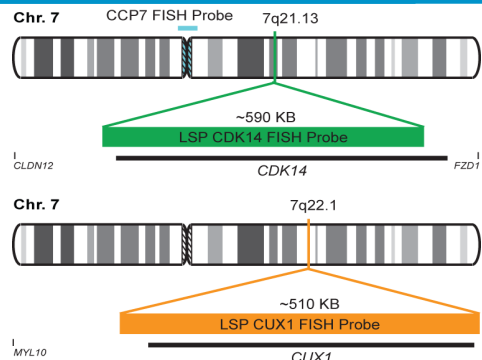


Cat. No. CT-PAC125-10-GOA (100 µL)

## CDK14/CUX1/CCP7 FISH Probe Kit

The CDK14/CUX1/CCP7 FISH Probe Kit is designed to detect the human CDK14 and CUX1 genes located on chromosome bands 7q21.13 and 7q22.1, respectively, along with the number of chromosome 7 copies per cell. Abnormalities (typically chromosome 7 q-arm deletions) in CDK14 – also known as PFTK1 or PFTFAIRE1 – and CUX1 – also called p75, p200, p110, Nbla10317, GOLIM6, FLJ31745, Cux/CDP, Clox, CUX, CUTL1, COY1, CDP1, CDP/Cut, CDP, or CASP – occur in malignant myeloid diseases (ex. CML, AML, etc.) and other malignancies.

Cont.	Color
LSP CDK14 FISH Probe LSP CUX1 FISH Probe CCP7 FISH Probe	CytoGreen CytoOrange CytoAqua



Leukemia



## DEK/CCP6 FISH Probe Kit

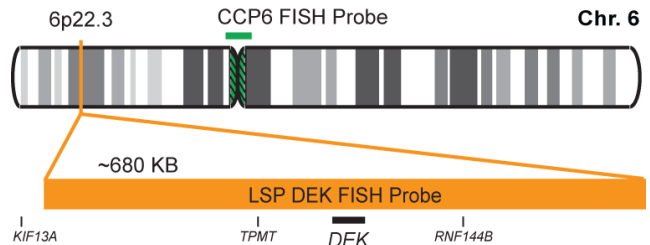


Cat. No. CT-PAC129-10-OG (100 µL)

### DEK/CCP6 FISH Probe Kit

The DEK/CCP6 FISH Probe Kit is designed to detect the human DEK gene located on chromosome band 6p22.3, along with the number of chromosome 6 copies per cell. Abnormalities in DEK – also known as D6S231E – have been found in acute myeloid leukemia (AML), myelodysplastic syndrome (MDS) and many other hematological malignancies.

Cont.	Color
LSP DEK FISH Probe CCP6 FISH Probe	CytoOrange CytoGreen



## KMT2A/CCP11 FISH Probe Kit

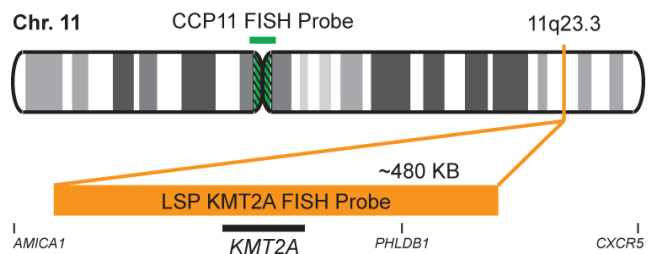


Cat. No. CT-PAC137-10-OG (100 µL)

### KMT2A/CCP11 FISH Probe Kit

The KMT2A/CCP11 FISH Probe Kit is designed to detect the human KMT2A gene located on chromosome band 11q23.3, along with the number of chromosome 11 copies per cell. Abnormal expression of the KMT2A gene – also known as HRX, MLL, MLL1, TRX1, ALL-1, CXXC7, HTRX1, MLL1A, WDSTS, MLL/GAS7 or TET1-MLL – have been observed in a large number of acute leukemias and other malignancies.

Cont.	Color
LSP KMT2A FISH Probe CCP11 FISH Probe	CytoOrange CytoGreen



Leukemia



# MCL1/CCP1 FISH Probe Kit

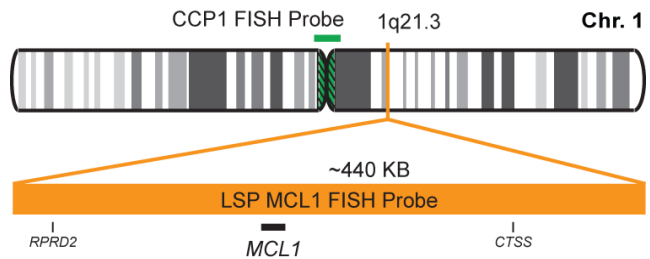


Cat. No. CT-PAC140-10-OG (100 µL)

## MCL1/CCP1 FISH Probe Kit

The MCL1/CCP1 FISH Probe Kit is designed to detect the human MCL1 gene located on chromosome band 1q21.3, along with the number of chromosome 1 copies per cell. Abnormal expression or rearrangements of the MCL1 gene – also known as mcl1/EAT, bcl2-L-3, TM, Mcl-1, MCL1S, MCL1L, MCL1-ES, EAT or BCL2L3 – have been observed in chronic myelogenous leukemia (CML), multiple myeloma (MM), B-cell non-Hodgkin's lymphomas and other malignancies.

Cont.	Color
LSP MCL1 FISH Probe	CytoOrange
CCP1 FISH Probe	CytoGreen



# PTPRT/CCP20 FISH Probe Kit

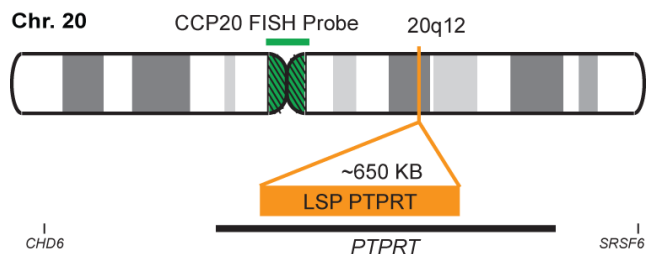


Cat. No. CT-PAC148-10-OG (100 µL)

## PTPRT/CCP20 FISH Probe Kit

The PTPRT/CCP20 FISH Probe Kit is designed to detect the human PTPRT gene located on chromosome band 20q12, along with the number of chromosome 20 copies per cell. Normal function of the PTPRT gene product - also called RPTPrho, PTPrho or PTPp – is frequently lost in human colon cancers. The gene likely serves as a tumor suppressor gene in colorectal, lung, skin and stomach cancers. The locus is also deleted in some acute leukemias and other myeloproliferative disorders.

Cont.	Color
LSP PTPRT FISH Probe	CytoOrange
CCP20 FISH Probe	CytoGreen



Leukemia



## RPN1/CCP3 FISH Probe Kit

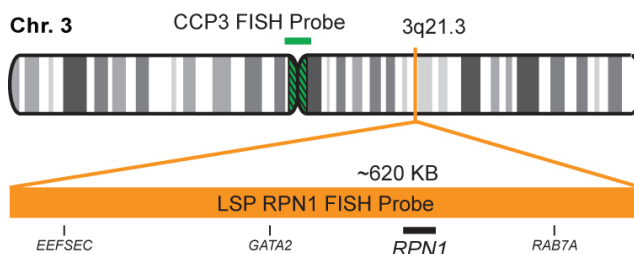


Cat. No. CT-PAC149-10-OG (100 µL)

### RPN1/CCP3 FISH Probe Kit

The RPN1/CCP3 FISH Probe Kit is designed to detect the human RPN1 gene located on chromosome band 3q21.3, along with the number of chromosome 3 copies per cell. Abnormalities in RPN1 – also known as RBPH1 or OST1 – have been observed in acute myeloid leukemias (AML), prostate tumors and other malignancies.

Cont.	Color
LSP RPN1 FISH Probe	CytoOrange
CCP3 FISH Probe	CytoGreen



## SEC63/SMAD6 FISH Probe Kit

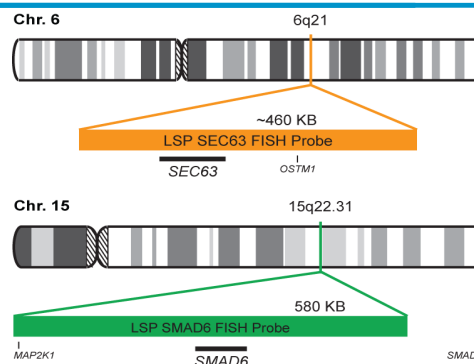


Cat. No. CT-PAC155-10-OG (100 µL)

### SEC63/SMAD6 FISH Probe Kit

The SEC63/SMAD6 FISH Probe Kit is designed to detect the human SEC63 gene located on chromosome band 6q21, and the SMAD6 gene on chromosome band 15q22.31. Abnormal expression of the SEC63 gene – also known as ERdj2, SEC63L, DNAJC23 or PRO2507 – has been observed in lymphoid malignancies such as chronic lymphocytic leukemia (CLL) and other cancers. Abnormalities in SMAD6 – also known as AOVD2, MADH6, MADH7 or HsT17432 – are associated with cardiac valve defects and developmental deficiencies. SMAD6 expression has been reported to promote cell survival in lung cancer and other tumor types.

Cont.	Color
LSP SEC63 FISH Probe	CytoOrange
LSP SMAD6 FISH Probe	CytoGreen



Leukemia



# SMAD6/CCP15 FISH Probe Kit

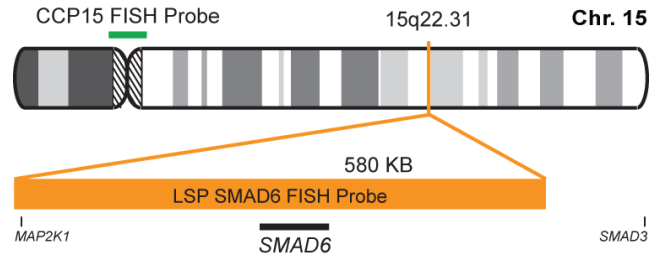


Cat. No. CT-PAC156-10-OG (100 µL)

## SMAD6/CCP15 FISH Probe Kit

The SMAD6/CCP15 FISH Probe Kit is designed to detect the human SMAD6 gene located on chromosome bands 15q22.31, along with the number of chromosome 15 copies per cell. Abnormalities in SMAD6 – also known as MADH7, MADH6, HsT17432, or AOVD2 – are associated with cardiac valve defects, developmental deficiencies, lung neoplasms and other malignancies.

Cont.	Color
LSP SMAD6 FISH Probe	CytoOrange
CCP15 FISH Probe	CytoGreen



# TP53/CD37 FISH Probe Kit

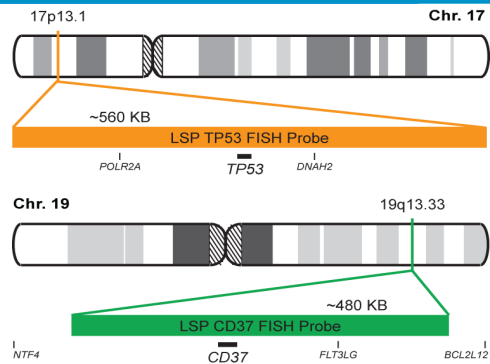


Cat. No. CT-PAC157-10-OG (100 µL)

## TP53/CD37 FISH Probe Kit

The TP53/CD37 FISH Probe Kit is designed to detect rearrangements involving the human TP53 and CD37 genes located on chromosome bands 17p13.1 and 19q13.33, respectively. Abnormal expression of the TP53 gene – also known as P53, BCC7, LFS1 or TRP53 – has been observed in a large number of tumor types and some other conditions. The CD37 gene – also called GP52-40 or TSPAN26 – is upregulated in Burkitt's lymphoma and other B-cell malignancies, and expressed in a number of solid tumor types as well.

Cont.	Color
LSP TP53 FISH Probe	CytoOrange
LSP CD37 FISH Probe	CytoGreen



Leukemia



# DLEU1/ZBTB16 FISH Probe Kit

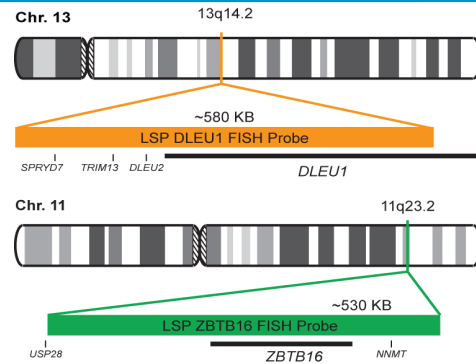


Cat. No. CT-PAC161-10-OG (100 µL)

## DLEU1/ZBTB16 FISH Probe Kit

The DLEU1/ZBTB16 FISH Probe Kit is designed to detect the human DLEU1 gene, located on chromosome band 13q14.2, and the ZBTB16 gene on chromosome band 11q23.2. Rearrangements and abnormal expression of the DLEU1 gene region – also known as BCMS, DLB1, LEU1, LEU2, XTP6, BCMS1, DLEU2, LINC00021 or NCRNA00021 – have been observed in B-cell chronic lymphocytic leukemia (CLL), multiple myeloma (MM) and other malignancies. Fusions and aberrant expression of the ZBTB16 gene – also known as PLZF or ZNF145 – have been reported in acute promyelocytic leukemia and other neoplasias.

Cont.	Color
LSP DLEU1 FISH Probe	CytoOrange
LSP ZBTB16 FISH Probe	CytoGreen



Leukemia

# CCP7/CCP8 FISH Probe Kit

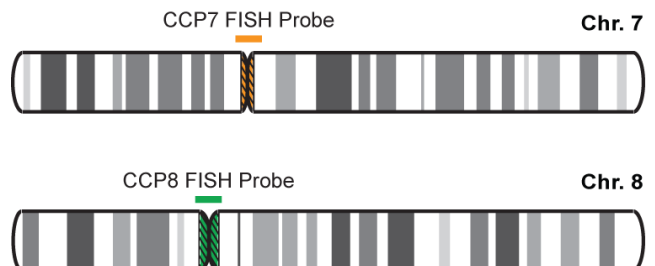


Cat. No. CT-PAC164-10-OG (100 µL)

## CCP7/CCP8 FISH Probe Kit

The CCP7/CCP8 FISH Probe Kit is designed to detect the human chromosome 7 and 8. Aneusomies of chromosomes 7 and 8 have been reported in breast, gastric and other tumors, and in chronic and acute leukemias and other hematological disorders, respectively.

Cont.	Color
CCP7 FISH Probe	CytoOrange
CCP8 FISH Probe	CytoGreen





# MECOM-RUNX1 Dual Fusion/Translocation FISH Probe Kit

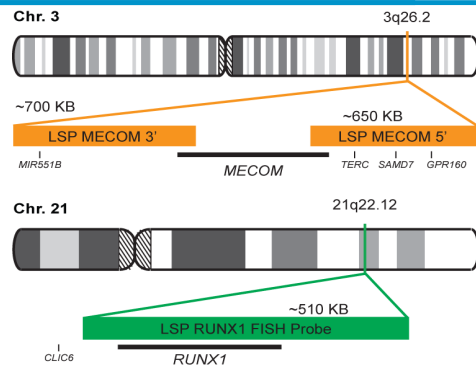


Cat. No. CT-PAC170-10-OG (100 µL)

## MECOM-RUNX1 Dual Fusion/Translocation FISH Probe Kit

The MECOM-RUNX1 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human MECOM and RUNX1 genes located on chromosome bands 3q26.2 and 21q22.12, respectively. Fusion of MECOM – also known as EVI1, MDS1, PRDM3, MDS1-EVI1 or AML1-EVI-1 – with the RUNX1 gene – also known as AML1, AML1-EVI-1, AMLCR1, CBFA2, EVI-1 or PEBP2aB – has been observed in chronic myelogenous leukemia (CML), myelodysplastic syndrome (MDS), acute myeloid leukemia (AML) and other malignancies.

Cont.	Color
LSP MECOM 5'-3' FISH Probe LSP RUNX1 FISH Probe	CytoOrange CytoGreen



## ASS1/SMAD6 FISH Probe Kit

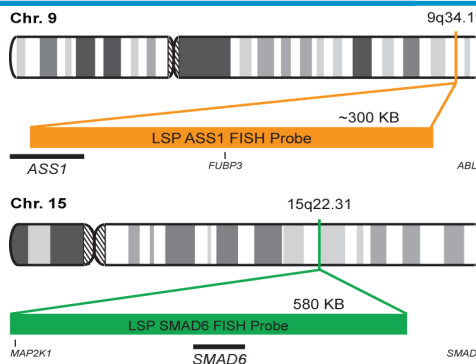


Cat. No. CT-PAC171-10-OG (100 µL)

## ASS1/SMAD6 FISH Probe Kit

The ASS1/SMAD6 FISH Probe Kit is designed to detect the human ASS1 gene located on chromosome band 9q34.11, and the SMAD6 gene on chromosome band 15q22.31. Abnormal expression of the ASS1 gene – also called ASS or CTLN1 – occur in citrullinemia type I (CTLN1), also known as classic citrullinemia. Abnormalities in SMAD6 – also known as AOVD2, MADH6, MADH7 or HsT17432 – are associated with cardiac valve defects and developmental deficiencies. SMAD6 expression has been reported to promote cell survival in lung cancer and other tumor types.

Cont.	Color
LSP ASS1 FISH Probe LSP SMAD6 FISH Probe	CytoOrange CytoGreen



Leukemia



# FIP1L1/CHIC2 FISH Probe Kit

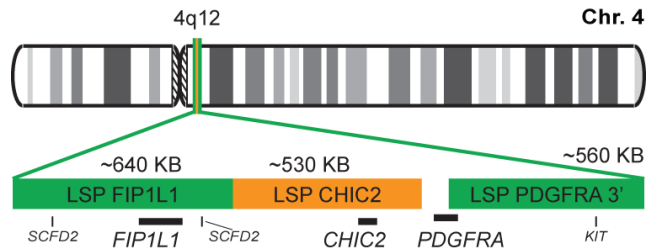


Cat. No. CT-PAC172-10-GO (100 µL)

## FIP1L1/CHIC2 FISH Probe Kit

The FIP1L1/CHIC2 FISH Probe Kit is designed to detect rearrangements in a region involving the human FIP1L1 and CHIC2 genes located on chromosome band 4q12. Rearrangements around the FIP1L1 gene region with an interstitial deletion at the CHIC2 gene region have been observed in diverse eosinophilia-associated hematologic disorders like hyperseosinophilic syndrome (HES), systemic mastocytosis (SM) and chronic eosinophilic leukemia (CEL).

Cont.	Color
LSP FIP1L1 FISH Probe	CytoGreen
LSP CHIC2 FISH Probe	CytoOrange



## FIP1L1-CHIC2-PDGFR A Tri-color FISH Probe Kit

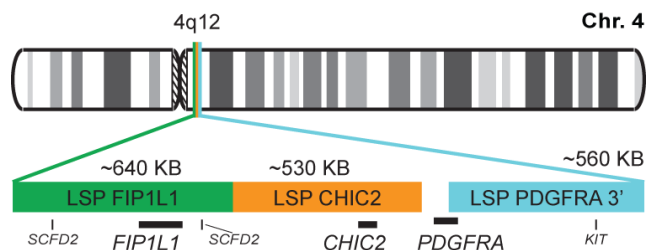


Cat. No. CT-PAC173-10-GOA (100 µL)

## FIP1L1-CHIC2-PDGFR A Tri-color FISH Probe Kit

The FIP1L1-CHIC2-PDGFR A Tri-color FISH Probe Kit is designed to detect rearrangements involving the human FIP1L1, CHIC2 and PDGFRA genes located on chromosome band 4q12. Rearrangements between the FIP1L1 and PDGFRA genes with an interstitial deletion at the CHIC2 gene region have been observed in diverse eosinophilia-associated hematologic disorders like hyperseosinophilic syndrome (HES), systemic mastocytosis (SM) and chronic eosinophilic leukemia (CEL).

Cont.	Color
LSP FIP1L1 FISH Probe	CytoGreen
LSP CHIC2 FISH Probe	CytoOrange
LSP PDGFRA 3' FISH Probe	CytoAqua



Leukemia



## JAK2 Break Apart FISH Probe Kit

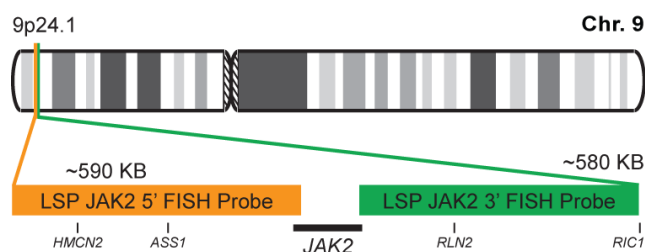


Cat. No. CT-PAC174-10-OG (100 µL)

### JAK2 Break Apart FISH Probe Kit

The JAK2 Break Apart FISH Probe Kit is designed to detect rearrangements in the human JAK2 gene located on chromosome band 9p24.1. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other JAK2 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the JAK2 gene – also known as THCYT3 or JTK10 – have been observed in acute myeloid and lymphoid leukemias and other malignancies.

Cont.	Color
LSP JAK2 5' FISH Probe LSP JAK2 3' FISH Probe	CytoOrange CytoGreen



## TP53/MPO FISH Probe Kit

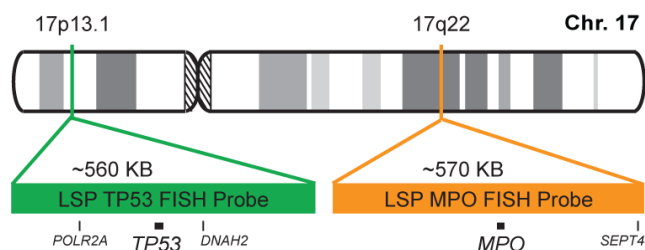


Cat. No. CT-PAC175-10-GO (100 µL)

### TP53/MPO FISH Probe Kit

The TP53/MPO FISH Probe Kit is designed to detect rearrangements involving the human TP53 and MPO genes, located on chromosome bands 17p13.1 and 17q22, respectively. Abnormalities in both genes, the TP53 gene – also known as P53, BCC7, LFS1 or TRP53 – and the MPO gene, have been reported in a number of leukemia types and other malignancies.

Cont.	Color
LSP TP53 FISH Probe LSP MPO FISH Probe	CytoGreen CytoOrange



Leukemia



# NUP98 Break Apart FISH Probe Kit

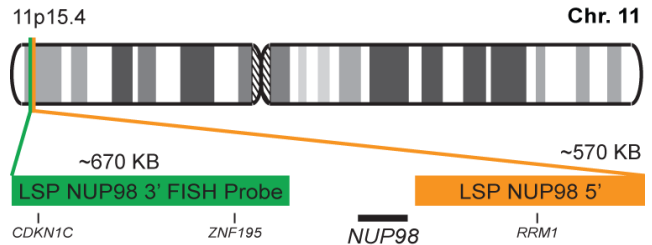


Cat. No. CT-PAC180-10-OG (100 µL)

## NUP98 Break Apart FISH Probe Kit

The NUP98 Break Apart FISH Probe Kit is designed to detect rearrangements in the human NUP98 gene located on chromosome band 11p15.4. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other NUP98 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the NUP98 gene – also known as NUP96, NUP196 or ADIR2 – have been observed in acute lymphoblastic leukemia (ALL), acute myeloid leukemia (AML), myelodysplastic syndrome (MDS) and other malignancies.

Cont.	Color
LSP NUP98 5' FISH Probe	CytoOrange
LSP NUP98 3' FISH Probe	CytoGreen



Leukemia

## KMT2A-MLLT1 Dual Fusion/Translocation FISH Probe Kit

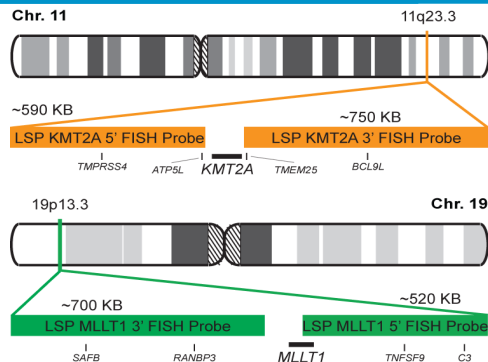


Cat. No. CT-PAC182-10-OG (100 µL)

## KMT2A-MLLT1 Dual Fusion/Translocation FISH Probe Kit

The KMT2A-MLLT1 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human KMT2A and MLLT1 genes located on chromosome bands 11q23.3 and 19p13.3, respectively. Rearrangements between the two genes, the KMT2A gene – also known as HRX, MLL, MLL1, TRX1, ALL-1, CXXC7, HTRX1, MLL1A, WDSTS, MLL/GAS7 or TET1-MLL – and the MLLT1 gene – also called ENL, LTG19 or YEATS1, have been observed in acute myeloid leukemia (AML), acute lymphoblastic leukemia (ALL) and other malignancies.

Cont.	Color
LSP KMT2A 5'-3' FISH Probe	CytoOrange
LSP MLLT1 5'-3' FISH Probe	CytoGreen



# KMT2A-MLLT3 Dual Fusion/Translocation FISH Probe Kit

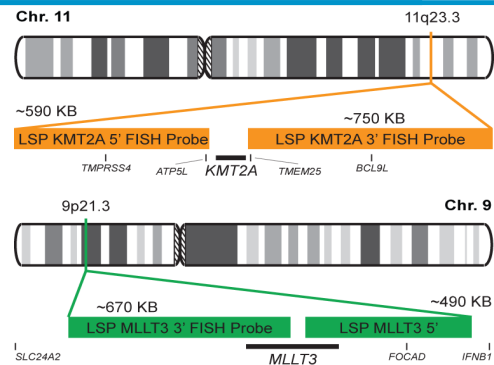


Cat. No. CT-PAC183-10-OG (100 µL)

## KMT2A-MLLT3 Dual Fusion/Translocation FISH Probe Kit

The KMT2A-MLLT3 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human KMT2A and MLLT3 genes located on chromosome bands 11q23.3 and 9p21.3, respectively. Rearrangements between the two genes, the KMT2A gene – also known as HRX, MLL, MLL1, TRX1, ALL-1, CXXC7, HTRX1, MLL1A, WDSTS, MLL/GAS7 or TET1-MLL – and the MLLT3 gene – also called AF9 or YEATS3, have been observed in acute myeloid leukemia (AML) and other malignancies.

Cont.	Color
LSP KMT2A 5'-3' FISH Probe	CytoOrange
LSP MLLT3 5'-3' FISH Probe	CytoGreen



# KMT2A-MLLT4 Dual Fusion/Translocation FISH Probe Kit

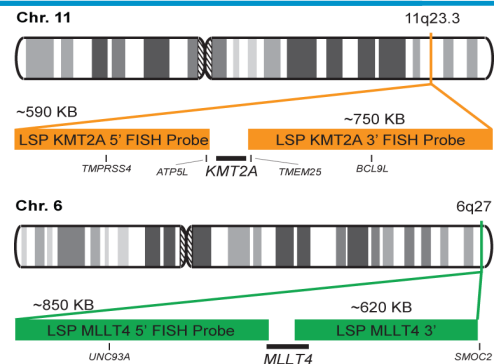


Cat. No. CT-PAC184-10-OG (100 µL)

## KMT2A-MLLT4 Dual Fusion/Translocation FISH Probe Kit

The KMT2A-MLLT4 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human KMT2A and MLLT4 genes located on chromosome bands 11q23.3 and 6q27, respectively. Rearrangements between the two genes, the KMT2A gene – also known as HRX, MLL, MLL1, TRX1, ALL-1, CXXC7, HTRX1, MLL1A, WDSTS, MLL/GAS7 or TET1-MLL – and the MLLT4 gene – also called AF6 or MLL-AF6, have been observed in acute myeloid leukemia (AML) and other malignancies.

Cont.	Color
LSP KMT2A 5'-3' FISH Probe	CytoOrange
LSP MLLT4 5'-3' FISH Probe	CytoGreen



Leukemia



# CCND3 Break Apart FISH Probe Kit

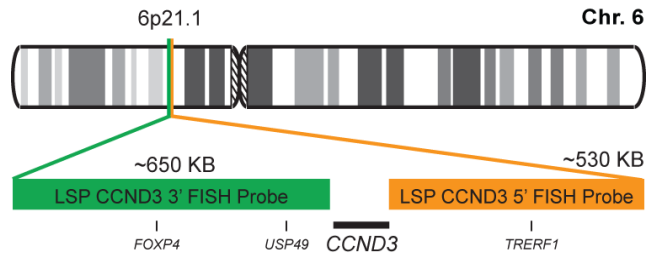


Cat. No. CT-PAC187-10-OG (100 µL)

## CCND3 Break Apart FISH Probe Kit

The CCND3 Break Apart FISH Probe Kit is designed to detect rearrangements in the human CCND3 gene located on chromosome band 6p21.1. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other CCND3 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the CCND3 gene have been observed in several types of hematological malignancies such as multiple myeloma (MM), chronic lymphocytic leukemia (CLL), acute lymphoblastic leukemia (ALL), acute myeloid leukemia (AML) and others.

Cont.	Color
LSP CCND3 5' FISH Probe	CytoOrange
LSP CCND3 3' FISH Probe	CytoGreen



## ZBTB16-RARA Dual Fusion/Translocation FISH Probe Kit

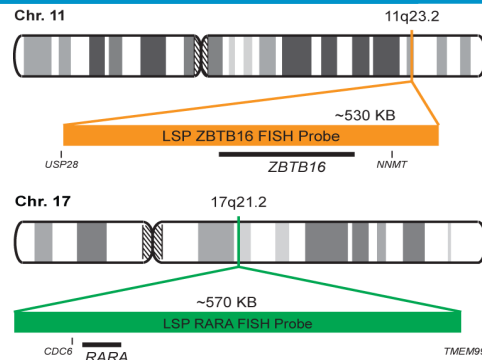


Cat. No. CT-PAC192-10-OG (100 µL)

## ZBTB16-RARA Dual Fusion/Translocation FISH Probe Kit

The ZBTB16-RARA Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human ZBTB16 and RARA genes located on chromosome bands 11q23.3 and 17q21.2, respectively. Rearrangements between the two genes, the ZBTB16 gene – also known as PLZF or ZNF145 – and the RARA gene – also called RAR or NR1B1, have been observed in acute promyelocytic leukemia (APL, the M3 subtype of acute myelogenous leukemia) and other malignancies.

Cont.	Color
LSP ZBTB16 FISH Probe	CytoOrange
LSP RARA FISH Probe	CytoGreen



Leukemia



## TLX1 Break Apart FISH Probe Kit

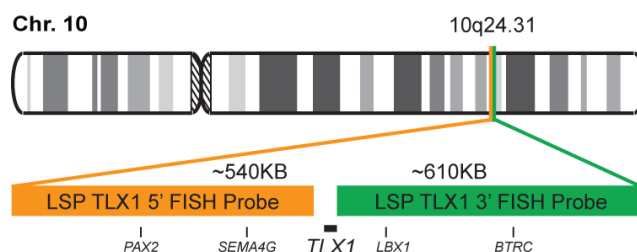


Cat. No. CT-PAC194-10-OG (100 µL)

### TLX1 Break Apart FISH Probe Kit

The TLX1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human TLX1 gene located on chromosome band 10q24.31. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other TLX1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the TLX1 gene – also known as TCL3 or HOX11 – have been observed in acute lymphoblastic leukemia (ALL), non-Hodgkin lymphoma (NHL) and other malignancies.

Cont.	Color
LSP TLX1 5' FISH Probe	CytoOrange
LSP TLX1 3' FISH Probe	CytoGreen



## ZBTB16/CCP11 FISH Probe Kit

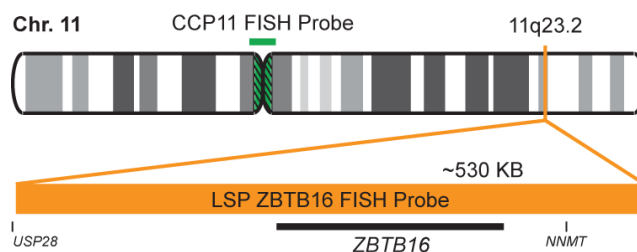


Cat. No. CT-PAC196-10-OG (100 µL)

### ZBTB16/CCP11 FISH Probe Kit

The ZBTB16/CCP11 FISH Probe Kit is designed to detect the human ZBTB16 gene located on chromosome band 11q23.2, along with the number of chromosome 11 copies per cell. Rearrangements and abnormal expression of the ZBTB16 gene – also known as PLZF or ZNF145 – have been reported in acute promyelocytic leukemia and other neoplasias.

Cont.	Color
LSP ZBTB16 FISH Probe	CytoOrange
CCP11 FISH Probe	CytoGreen



Leukemia



# EPOR Break Apart FISH Probe Kit

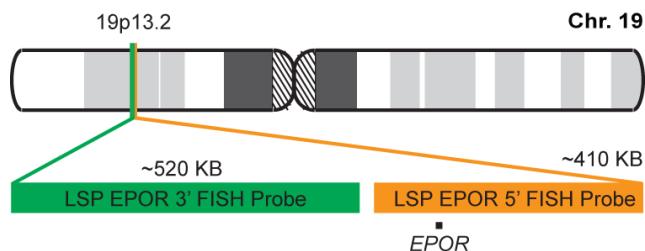


Cat. No. CT-PAC203-10-OG (100 µL)

## EPOR Break Apart FISH Probe Kit

The EPOR Break Apart FISH Probe Kit is designed to detect rearrangements in the human EPOR gene located on chromosome band 19p13.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other EPOR aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the EPOR gene – also known as EPO-R – have been observed in B-cell acute lymphoblastic leukemia (B-ALL).

Cont.	Color
LSP EPOR 5' FISH Probe	CytoOrange
LSP EPOR 3' FISH Probe	CytoGreen



# TCF3 Break Apart FISH Probe Kit

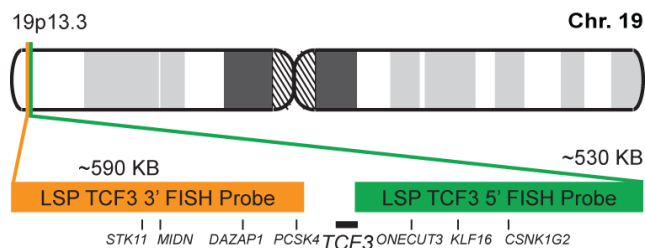


Cat. No. CT-PAC204-10-GO (100 µL)

## TCF3 Break Apart FISH Probe Kit

The TCF3 Break Apart FISH Probe Kit is designed to detect rearrangements in the human TCF3 gene located on chromosome band 19p13.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other TCF3 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the TCF3 gene – also known as E2A, E47, ITF1, VDIR, TCF-3 or bHLHb21 – have been observed in adult and pediatric B-cell leukemias and other tumor types.

Cont.	Color
LSP TCF3 5' FISH Probe	CytoGreen
LSP TCF3 3' FISH Probe	CytoOrange



Leukemia





## PBX1 Break Apart FISH Probe Kit

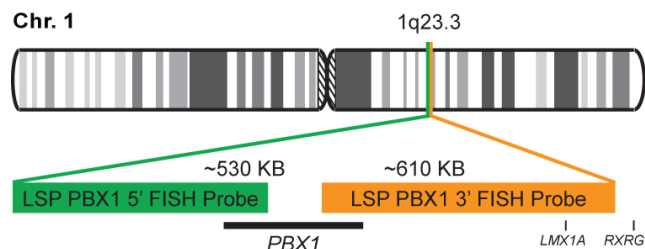


Cat. No. CT-PAC205-10-GO (100 µL)

### PBX1 Break Apart FISH Probe Kit

The PBX1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human PBX1 gene located on chromosome band 1q23.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other PBX1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the PBX1 gene – also known as PRL – have been observed in B-cell acute lymphoblastic leukemias (B-ALL) and other tumor types.

Cont.	Color
LSP PBX1 5' FISH Probe LSP PBX1 3' FISH Probe	CytoGreen CytoOrange



## MYC Break Apart FISH Probe Kit

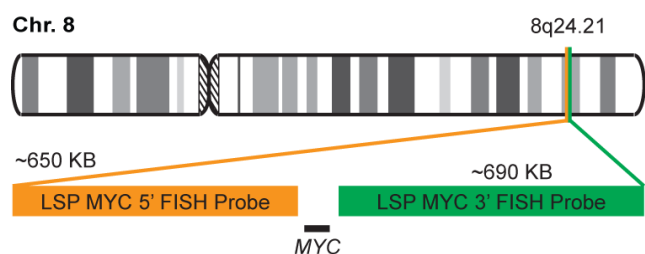


Cat. No. CT-PAC208-10-OG (100 µL)

### MYC Break Apart FISH Probe Kit

The MYC Break Apart FISH Probe Kit is designed to detect rearrangements in the human MYC gene located on chromosome band 8q24.21. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other MYC aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the MYC gene – also known as MRTL, MYCC, c-Myc or bHLHe39 – have been observed in Burkitt's Lymphoma and other hematological malignancies, myeloma, as well as breast, cervical, colon, ovarian and other tumor types.

Cont.	Color
LSP MYC 5' FISH Probe LSP MYC 3' FISH Probe	CytoOrange CytoGreen



Leukemia



## CCND1 Break Apart FISH Probe Kit

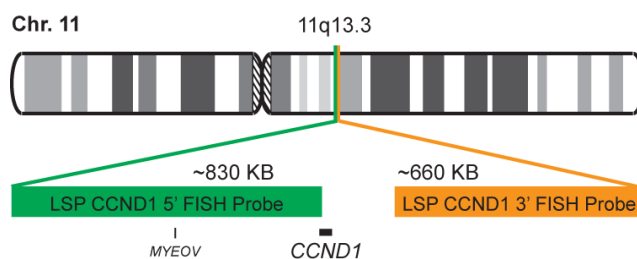


Cat. No. CT-PAC209-10-GO (100 µL)

### CCND1 Break Apart FISH Probe Kit

The CCND1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human CCND1 gene located on chromosome band 11q13.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other CCND1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the CCND1 gene – also known as BCL1, PRAD1, U21B31 or D11S287E – have been observed in several types of hematological malignancies.

Cont.	Color
LSP CCND1 5' FISH Probe	CytoGreen
LSP CCND1 3' FISH Probe	CytoOrange



## MYH11 Break Apart FISH Probe Kit

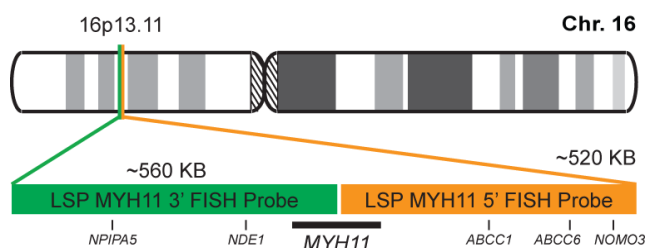


Cat. No. CT-PAC211-10-OG (100 µL)

### MYH11 Break Apart FISH Probe Kit

The MYH11 Break Apart FISH Probe Kit is designed to detect rearrangements in the human MYH11 gene located on chromosome band 16p13.11. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other MYH11 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the MYH11 gene – also known as AAT4, FAA4, SMHC or SMMHC – have been observed in acute non-lymphocytic leukemias and other malignancies.

Cont.	Color
LSP MYH11 5' FISH Probe	CytoOrange
LSP MYH11 3' FISH Probe	CytoGreen



Leukemia



## MLLT1 Break Apart FISH Probe Kit



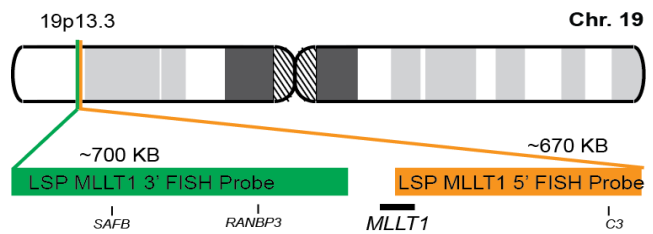
Cat. No. CT-PAC215-10-OG (100 µL)

### MLLT1 Break Apart FISH Probe Kit

The MLLT1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human MLLT1 gene mapping to chromosome band 19p13.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other MLLT1 aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the MLLT1 gene – also known as ENL, LTG19 or YEATS1 - have been observed in acute leukemias and other tumor types.

Cont.	Color
LSP MLLT1 5' FISH Probe LSP MLLT1 3' FISH Probe	CytoOrange CytoGreen



## MLLT4 Break Apart FISH Probe Kit



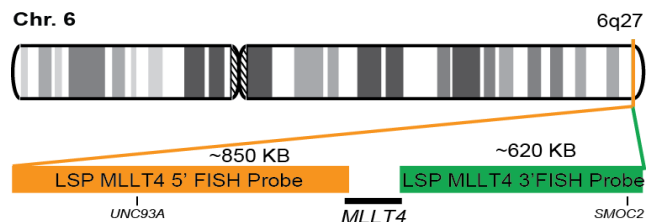
Cat. No. CT-PAC217-10-OG (100 µL)

### MLLT4 Break Apart FISH Probe Kit

The MLLT4 Break Apart FISH Probe Kit is designed to detect rearrangements in the human MLLT4 gene mapping to chromosome band 6q27. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other MLLT4 aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the MLLT4 gene – also known as AF6, AFDN, MLL-AF6 or I-afadin - have been observed in acute myeloid leukemia (AML) and other tumor types.

Cont.	Color
LSP MLLT4 5' FISH Probe LSP MLLT4 3' FISH Probe	CytoOrange CytoGreen



Leukemia



# PML-RARA Fusion/Translocation FISH Probe Kit

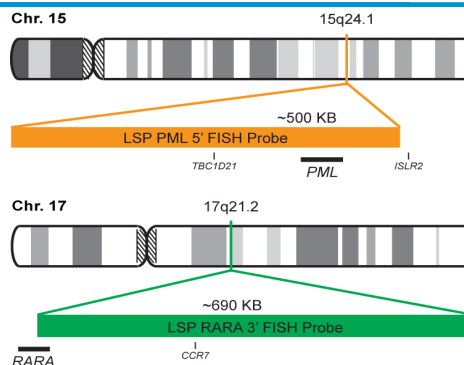


Cat. No. CT-PAC219-10-OG (100 µL)

## PML-RARA Fusion/Translocation FISH Probe Kit

The PML-RARA Single Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human PML and RARA genes, located on chromosome bands 15q24.1 and 17q21.2, respectively. Rearrangements between the two genes have been observed in acute promyelocytic leukemia and other malignancies.

Cont.	Color
LSP PML 5' FISH Probe	CytoOrange
LSP RARA 3' FISH Probe	CytoGreen



Leukemia

# KMT2A-AFF1 Single Fusion/Translocation FISH Probe Kit

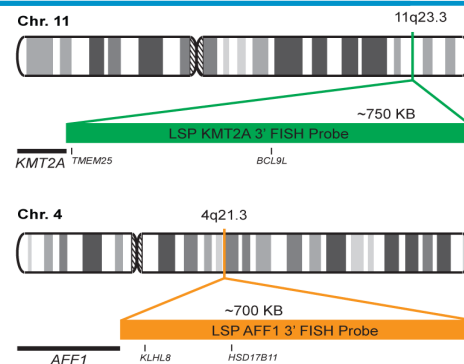


Cat. No. CT-PAC220-10-OG (100 µL)

## KMT2A-AFF1 Single Fusion/Translocation FISH Probe Kit

The KMT2A-AFF1 Single Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human KMT2A and AFF1 genes located on chromosome bands 11q23.3 and 4q21.3, respectively. Rearrangements between the two genes, the KMT2A gene – also known as HRX, MLL, MLL1, TRX1, ALL-1, CXXC7, HTRX1, MLL1A, WDSTS, MLL/GAS7 or TET1-MLL – and the AFF1 gene – also called AF4, PBM1 or MLLT2, have been observed in acute leukemias and other malignancies.

Cont.	Color
LSP KMT2A 5' FISH Probe	CytoOrange
LSP AFF1 3' FISH Probe	CytoGreen



# IGL Break Apart FISH Probe Kit

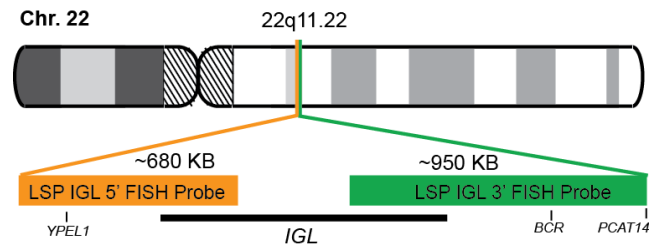


Cat. No. CT-PAC229-10-OG (100 µL)

## IGL Break Apart FISH Probe Kit

The IGL Break Apart FISH Probe Kit is designed to detect rearrangements in the human IGL locus mapping to chromosome band 22q11.22. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other IGL aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the IGL gene – also known as IGL@ or IGLC6 - have been observed in various B-cell lymphoma subtypes and other malignancies.

Cont.	Color
LSP IGL 5' FISH Probe LSP IGL 3' FISH Probe	CytoOrange CytoGreen



# IGK Break Apart FISH Probe Kit

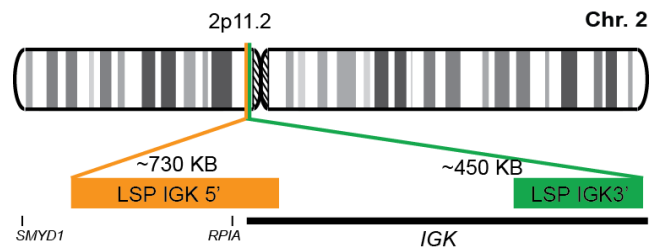


Cat. No. CT-PAC230-10-OG (100 µL)

## IGK Break Apart FISH Probe Kit

The IGK Break Apart FISH Probe Kit is designed to detect rearrangements in the human IGK locus mapping to chromosome band 2p11.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other IGK aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the IGK gene – also known as IGK@ - have been observed in various B-cell lymphoma subtypes and other malignancies.

Cont.	Color
LSP IGK 5' FISH Probe LSP IGK 3' FISH Probe	CytoOrange CytoGreen



Leukemia



# IGK-MYC Dual Fusion/Translocation LR FISH Probe Kit

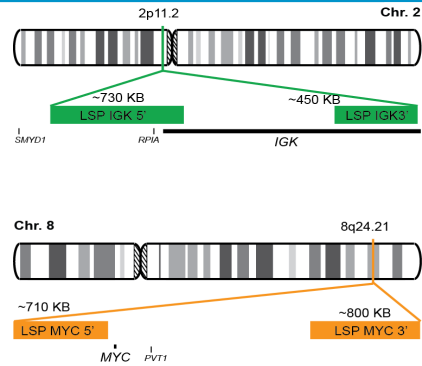


Cat. No. CT-PAC231-10-GO (100 µL)

## IGK-MYC Dual Fusion/Translocation LR FISH Probe Kit

The IGK-MYC Dual Fusion/Translocation LR (long-range) FISH Probe Kit is designed to detect rearrangements involving the human IGK and MYC genes, located on chromosome bands 2p11.2 and 8q24.21, respectively. IGK is also known as IGK@. MYC is also known as MRTL, MYCC, c-Myc or bHLHe39. Rearrangements involving portions of these two genes have been observed in several B-cell lymphoma subtypes, especially Burkitt lymphoma, and other malignancies.

Cont.	Color
LSP IGK 5'-3' FISH Probe	CytoGreen
LSP MYC 5'-3' LR FISH Probe	CytoOrange



Leukemia

# IGL-MYC Dual Fusion/Translocation LR FISH Probe Kit

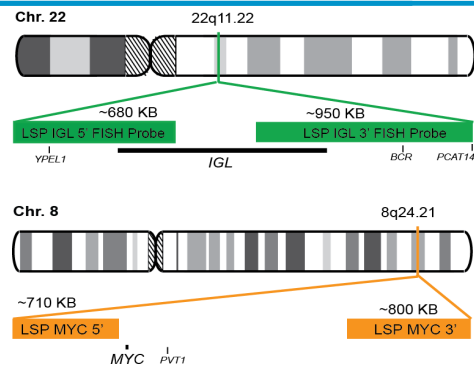


Cat. No. CT-PAC232-10-GO (100 µL)

## IGL-MYC Dual Fusion/Translocation LR FISH Probe Kit

The IGL-MYC Dual Fusion/Translocation LR (long-range) FISH Probe Kit is designed to detect rearrangements involving the human IGL and MYC genes, located on chromosome bands 22q11.22 and 8q24.21, respectively. IGL is also known as IGL@ or IGLC6. MYC is also known as MRTL, MYCC, c-Myc or bHLHe39. Rearrangements involving portions of these two genes have been observed in several B-cell lymphoma subtypes, especially Burkitt lymphoma, and other malignancies.

Cont.	Color
LSP IGL 5'-3' FISH Probe	CytoGreen
LSP MYC 5'-3' LR FISH Probe	CytoOrange



# TCF3-PBX1 Fusion/Translocation FISH Probe Kit

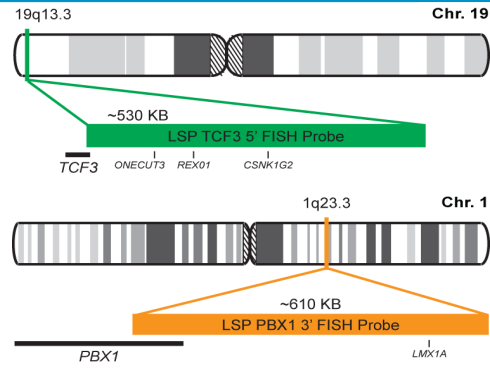


Cat. No. CT-PAC234-10-GO (100 µL)

## TCF3-PBX1 Fusion/Translocation FISH Probe Kit

The TCF3-PBX1 Single Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human TCF3 and PBX1 genes located on chromosome bands 19p13.3 and 1q23.3, respectively. Rearrangements between the two genes, the TCF3 gene – also known as E2A, E47, ITF1, VDIR, TCF-3 or bHLHb21, have been observed in B-cell acute lymphoblastic leukemias (B-ALL) and other tumor types.

Cont.	Color
LSP TCF3 5' FISH Probe	CytoGreen
LSP PBX1 3' FISH Probe	CytoOrange



# MYH11/CCP16 FISH Probe Kit

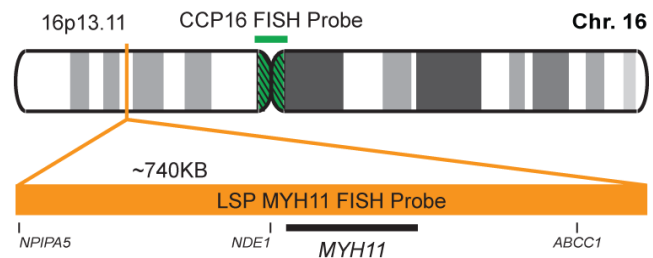


Cat. No. CT-PAC254-10-OG (100 µL)

## MYH11/CCP16 FISH Probe Kit

The MYH11/CCP16 FISH Probe Kit is designed to detect the human MYH11 gene located on chromosome band 16p13.11 along with the number of chromosome 16 copies per cell. Rearrangements and abnormal expression of the MYH11 gene – also known as AAT4, FAA4, SMHC or SMMHC – have been observed in acute non-lymphocytic leukemias and other malignancies.

Cont.	Color
LSP MYH11 FISH Probe	CytoOrange
CCP16 (Pericentromeric) FISH Probe	CytoGreen



Leukemia



# DLEU1/TP53 FISH Probe Kit

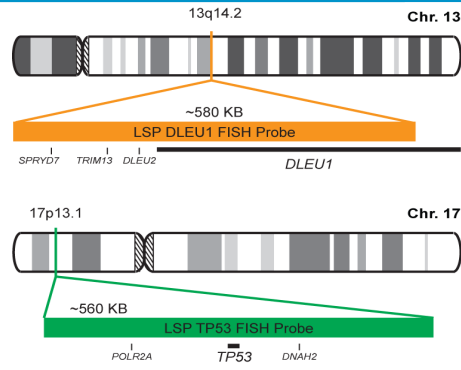


Cat. No. CT-PAC255-10-OG (100 µL)

## DLEU1/TP53 FISH Probe Kit

The DLEU1/TP53 FISH Probe Kit is designed to detect the human DLEU1 and TP53 genes located on chromosome bands 13q14.2 and 17p13.1, respectively. Rearrangements and abnormal expression of the DLEU1 gene region – also known as BCMS, DLB1, LEU1, LEU2, XTP6, BCMS1, DLEU2, LINC00021 or NCRNA00021 – and the TP53 gene – also known as P53, BCC7, LFS1 or TRP53 – have been observed in B-cell chronic lymphocytic leukemia (CLL) and other malignancies.

Cont.	Color
LSP DLEU1 FISH Probe	CytoOrange
LSP TP53 FISH Probe	CytoGreen



Leukemia

# IGH/CCP14 FISH Probe Kit



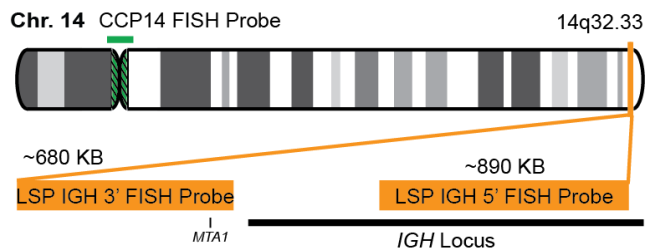
Cat. No. CT-PAC279-10-OG (100 µL)

## IGH/CCP14 FISH Probe Kit

The IGH/CCP14 FISH Probe Kit is designed to detect the human IGH gene located on chromosome band 14q32.33, along with the number of chromosome 14 copies per cell.

Abnormal expression, mutations or rearrangements of the IGH gene – also known as IGD1, IGH@, IGHJ, IGHV, IGHD@, IGHJ@, IGHV@, IGH.1@ or IGHDY1 - has been observed in many acute and chronic hematological malignancies.

Cont.	Color
LSP IGH 5'-3' FISH Probe	CytoOrange
CCP14 (Pericentromeric) FISH Probe	CytoGreen





# IGH-EPOR Dual Fusion/Translocation FISH Probe Kit

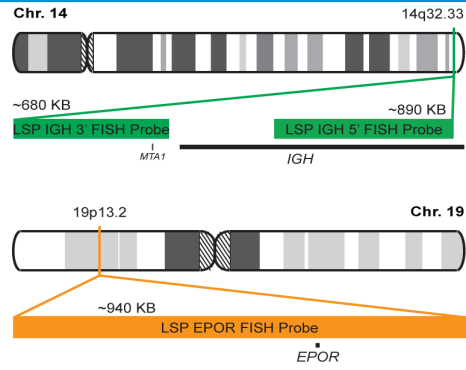


Cat. No. CT-PAC301-10-GO (100 µL)

## IGH-EPOR Dual Fusion/Translocation FISH Probe Kit

The IGH-EPOR Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human IGH locus and EPOR gene, located on chromosome bands 14q32.33 and 19p13.2, respectively. Rearrangements between the two regions have been observed in B-cell acute lymphoblastic leukemia (B-ALL).

Cont.	Color
LSP IGH 5'-3' FISH Probe LSP EPOR FISH Probe	CytoGreen CytoOrange



# BCR-ABL1 Dual Fusion/Translocation FISH Probe Kit

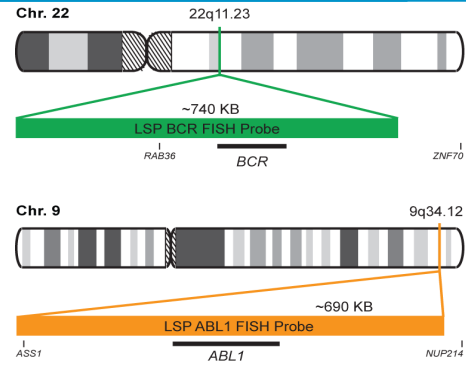


Cat. No. CT-PAC302-10-GO (100 µL)

## BCR-ABL1 Dual Fusion/Translocation FISH Probe Kit

The BCR-ABL1 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human BCR and ABL1 genes located on chromosome bands 22q11.23 and 9q34.12, respectively. A reciprocal translocation between the two genes is present in virtually all cases of chronic myelocytic leukemia (CML), but also occurs in a subset of pediatric and adult acute lymphocytic leukemias (ALL), acute myelogenous leukemia (AML) and other malignancies.

Cont.	Color
LSP BCR FISH Probe LSP ABL1 FISH Probe	CytoGreen CytoOrange



Leukemia



# RUNX1-RUNX1T1 Dual Fusion/Translocation FISH Probe Kit

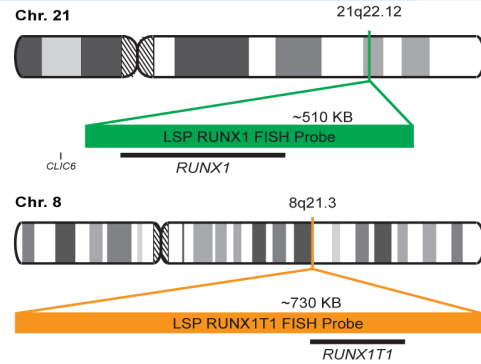


Cat. No. CT-PAC303-10-GO (100 µL)

## RUNX1-RUNX1T1 Dual Fusion/Translocation FISH Probe Kit

The RUNX1-RUNX1T1 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human RUNX1 and RUNX1T1 genes located on chromosome bands 21q22.12 and 8q21.3, respectively. Rearrangements involving portions of these two genes, the RUNX1 gene – also known as AML1, AML1-EVI-1, AMLCR1, CBFA2, EVI-1 or PEBP2aB – and the RUNX1T1 gene – also called AML1-MTG8, AML1T1, CBFA2T1, CDR, ETO, MTG8 or ZMYND2, have been observed in acute non-lymphocytic leukemia and many other hematological malignancies.

Cont.	Color
LSP RUNX1 FISH Probe	CytoGreen
LSP RUNX1T1 FISH Probe	CytoOrange



Leukemia

# PML-RARA Dual Fusion/Translocation FISH Probe Kit

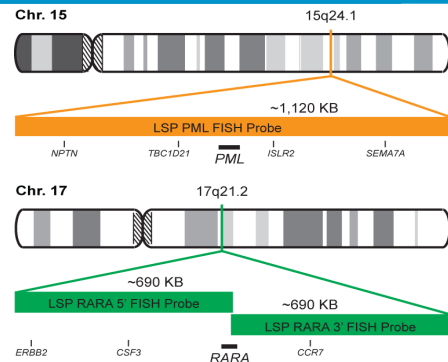


Cat. No. CT-PAC304-10-OG (100 µL)

## PML-RARA Dual Fusion/Translocation FISH Probe Kit

The PML-RARA Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human PML and RARA genes, located on chromosome bands 15q24.1 and 17q21.2, respectively. Rearrangements between the two genes have been observed in acute promyelocytic leukemia and other malignancies.

Cont.	Color
LSP PML FISH Probe	CytoOrange
LSP RARA FISH Probe	CytoGreen



# ETV6-RUNX1 Dual Fusion/Translocation FISH Probe Kit

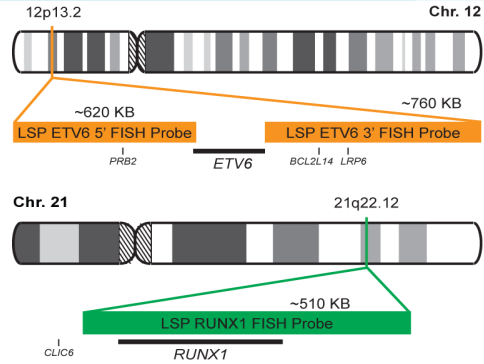


Cat. No. CT-PAC305-10-OG (100 µL)

## ETV6-RUNX1 Dual Fusion/Translocation FISH Probe Kit

The ETV6-RUNX1 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human ETV6 and RUNX1 genes located on chromosome bands 12p13.2 and 21q22.12, respectively. Rearrangements between the two genes, the ETV6 gene – also called TEL, THC5 or TEL/ABL – and the RUNX1 gene – also known as AML1, AML1-EVI-1, AMLCR1, CBFA2, EVI-1 or PEBP2aB, have been observed in B-cell acute lymphocytic leukemia (ALL) and other malignancies.

Cont.	Color
LSP ETV6 5'-3' FISH Probe	CytoOrange
LSP RUNX1 FISH Probe	CytoGreen



# CBFB-MYH11 Dual Fusion/Translocation FISH Probe Kit

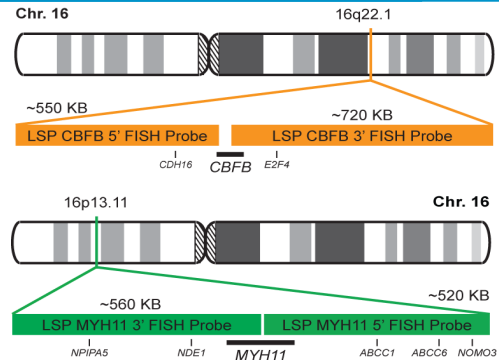


Cat. No. CT-PAC306-10-OG (100 µL)

## CBFB-MYH11 Dual Fusion/Translocation FISH Probe Kit

The CBFB-MYH11 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human CBFB and MYH11 genes located on chromosome bands 16q22.1 and 16p13.11, respectively. Rearrangements between the two genes, the CBFB gene – also known as CBFb or PEBP2B – and the MYH11 gene – also called AAT4, FAA4, SMHC or SMMHC, have been observed in acute myeloid leukemia (AML) and other hematological malignancies.

Cont.	Color
LSP CBFB 5'-3' FISH Probe	CytoOrange
LSP MYH11 5'-3' FISH Probe	CytoGreen



Leukemia



# KMT2A-AFF1 Dual Fusion/Translocation FISH Probe Kit

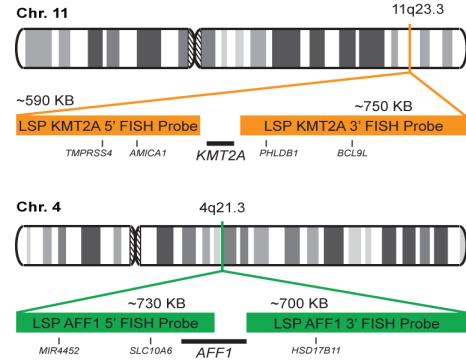


Cat. No. CT-PAC307-10-OG (100 µL)

## KMT2A-AFF1 Dual Fusion/Translocation FISH Probe Kit

The KMT2A-AFF1 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human KMT2A and AFF1 genes located on chromosome bands 11q23.3 and 4q21.3, respectively. Rearrangements between the two genes, the KMT2A gene – also known as HRX, MLL, MLL1, TRX1, ALL-1, CXXC7, HTRX1, MLL1A, WDSTS, MLL/GAS7 or TET1-MLL – and the AFF1 gene – also called AF4, PBM1 or MLLT2, have been observed in acute leukemias and other malignancies.

Cont.	Color
LSP KMT2A 5'-3' FISH Probe	CytoOrange
LSP AFF1 5'-3' FISH Probe	CytoGreen



Leukemia

# TCF3-PBX1 Dual Fusion/Translocation FISH Probe Kit

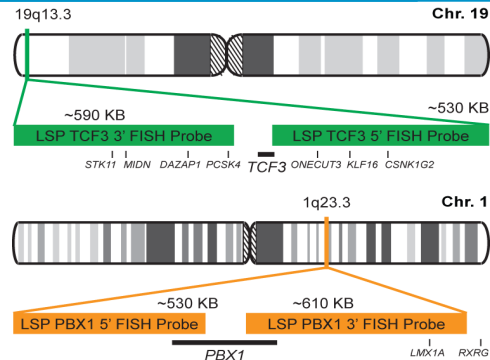


Cat. No. CT-PAC308-10-GO (100 µL)

## TCF3-PBX1 Dual Fusion/Translocation FISH Probe Kit

The TCF3-PBX1 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human TCF3 and PBX1 genes located on chromosome bands 19p13.3 and 1q23.3, respectively. Rearrangements between the two genes, the TCF3 gene – also known as E2A, E47, ITF1, VDIR, TCF-3 or bHLHb21, have been observed in B-cell acute lymphoblastic leukemias (B-ALL) and other tumor types.

Cont.	Color
LSP TCF3 5'-3' FISH Probe	CytoGreen
LSP PBX1 5'-3' FISH Probe	CytoOrange



## KMT2A Break Apart FISH Probe Kit

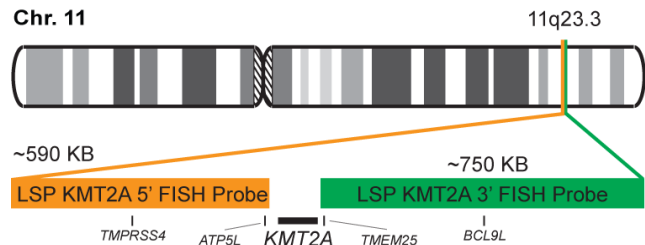


Cat. No. CT-PAC326-10-GO (100 µL)

### KMT2A Break Apart FISH Probe Kit

The KMT2A Break Apart FISH Probe Kit is designed to detect rearrangements in the human KMT2A gene located on chromosome band 11q23.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other KMT2A aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the KMT2A gene – also known as HRX, MLL, MLL1, TRX1, ALL-1, CXXC7, HTRX1, MLL1A, WDSTS, MLL/GAS7 or TET1-MLL – have been observed in a large number of acute leukemias and other malignancies. Nearly 80 fusion partner genes have been identified to date.

Cont.	Color
LSP KMT2A 5' FISH Probe LSP KMT2A 3' FISH Probe	CytoGreen CytoOrange



## KMT2A Break Apart FISH Probe Kit

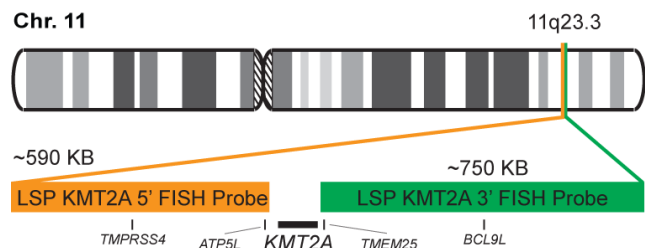


Cat. No. CT-PAC326-10-OG (100 µL)

### KMT2A Break Apart FISH Probe Kit

The KMT2A Break Apart FISH Probe Kit is designed to detect rearrangements in the human KMT2A gene located on chromosome band 11q23.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other KMT2A aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the KMT2A gene – also known as HRX, MLL, MLL1, TRX1, ALL-1, CXXC7, HTRX1, MLL1A, WDSTS, MLL/GAS7 or TET1-MLL – have been observed in a large number of acute leukemias and other malignancies. Nearly 80 fusion partner genes have been identified to date.

Cont.	Color
LSP KMT2A 5' FISH Probe LSP KMT2A 3' FISH Probe	CytoOrange CytoGreen



Leukemia



# ETV6 Break Apart FISH Probe Kit

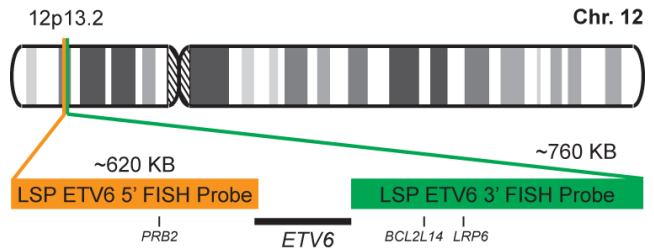


Cat. No. CT-PAC327-10-OG (100 µL)

## ETV6 Break Apart FISH Probe Kit

The ETV6 Break Apart FISH Probe Kit is designed to detect rearrangements in the human ETV6 gene located on chromosome band 12p13.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other ETV6 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the ETV6 gene – also known as TEL, THC5 or TEL/ABL – have been observed in a large number of acute as well as chronic, lymphoid and myeloid malignancies.

Cont.	Color
LSP ETV6 5' FISH Probe	CytoOrange
LSP ETV6 3' FISH Probe	CytoGreen



# CBFB Break Apart FISH Probe Kit

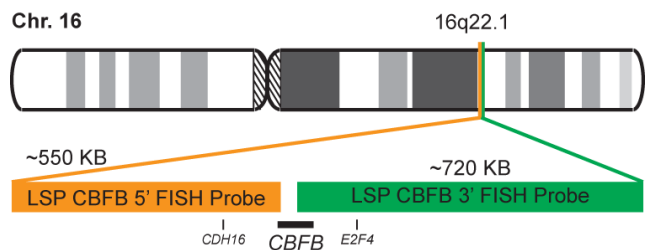


Cat. No. CT-PAC328-10-OG (100 µL)

## CBFB Break Apart FISH Probe Kit

The CBFB Break Apart FISH Probe Kit is designed to detect rearrangements in the human CBFB gene located on chromosome band 16q22.1. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other CBFB aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the CBFB gene – also known as CBFb or PEBP2B – have been observed in acute myeloid leukemia (AML) and other hematological malignancies.

Cont.	Color
LSP CBFB 5' FISH Probe	CytoOrange
LSP CBFB 3' FISH Probe	CytoGreen



Leukemia



# NUP214 Break Apart FISH Probe Kit

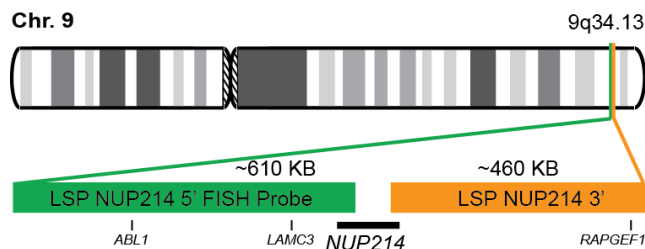


Cat. No. CT-PAC332-10-GO (100 µL)

## NUP214 Break Apart FISH Probe Kit

The NUP214 Break Apart FISH Probe Kit is designed to detect rearrangements in the human NUP214 gene located on chromosome band 9q34.13. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other NUP214 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the NUP214 gene – also called CAN, CAIN, or D9S46E – have been observed in childhood and adult acute and chronic leukemias, in myelodysplastic syndrome (MDS) and many other hematological malignancies.

Cont.	Color
LSP NUP214 5' FISH Probe LSP NUP214 3' FISH Probe	CytoGreen CytoOrange



## RBM15-MKL1 Dual Fusion/Translocation FISH Probe Kit



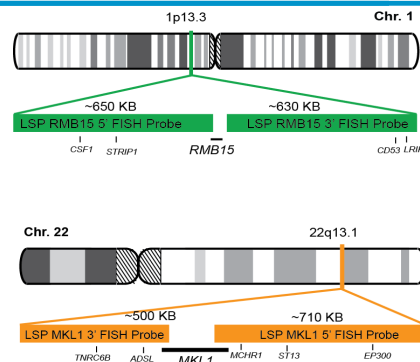
Cat. No. CT-PAC334-10-GO (100 µL)

## RBM15-MKL1 Dual Fusion/Translocation FISH Probe Kit

The RBM15-MKL1 Dual Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human RBM15 and MKL1 genes, located on chromosome bands 1p13.3 and 22q13.1, respectively.

RBM15 is also known as OTT, OTT1 or SPEN. MKL1 is also known as KIAA1438, MAL, MKL, BSAC or MRTF-A. Rearrangements involving portions of both genes have been observed in acute megakaryocytic leukemia and other hematological and solid tumor types.

Cont.	Color
LSP RBM15 5'-3' FISH Probe LSP MKL1 5'-3' FISH Probe	CytoGreen CytoOrange



Leukemia



# RBM15 Break Apart FISH Probe Kit



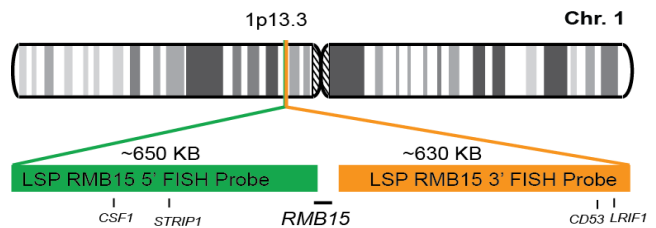
Cat. No. CT-PAC337-10-GO (100 µL)

## RBM15 Break Apart FISH Probe Kit

The RBM15 Break Apart FISH Probe Kit is designed to detect rearrangements in the human RBM15 gene mapping to chromosome band 1p13.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other RBM15 aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the RBM15 gene – also known as OTT, OTT1 or SPEN - have been observed in acute megakaryocytic leukemia (AML) and other tumor types.

Cont.	Color
LSP RBM15 5' FISH Probe	CytoGreen
LSP RBM15 3' FISH Probe	CytoOrange



# MKL1 Break Apart FISH Probe Kit



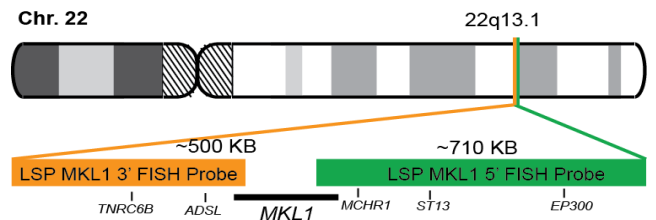
Cat. No. CT-PAC338-10-GO (100 µL)

## MKL1 Break Apart FISH Probe Kit

The MKL1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human MKL1 gene mapping to chromosome band 22q13.1. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other MKL1 aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the MKL1 gene – also known as KIAA1438, MAL, MKL, BSAC or MRTF-A - have been observed in acute megakaryocytic leukemia and other hematological and solid tumor types.

Cont.	Color
LSP MKL1 5' FISH Probe	CytoGreen
LSP MKL1 3' FISH Probe	CytoOrange



Leukemia





# KAT6A Break Apart FISH Probe Kit



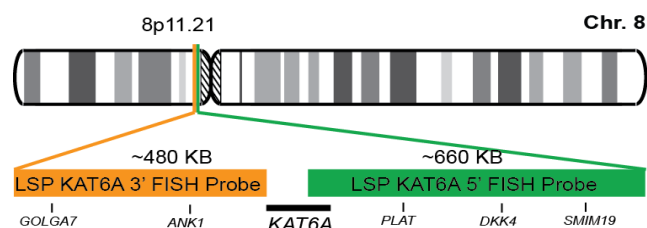
Cat. No. CT-PAC339-10-GO (100 µL)

## KAT6A Break Apart FISH Probe Kit

The KAT6A Break Apart FISH Probe Kit is designed to detect rearrangements in the human KAT6A gene mapping to chromosome band 8p11.21. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other KAT6A aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the KAT6A gene – also known as MOZ, MRD32, MYST3, MYST-3, ZNF220, RUNXBP2 or ZC2HC6A - have been observed in acute non-lymphocytic (AML) and monocytic leukemias, myelodysplastic syndrome and other cancer types.

Cont.	Color
LSP KAT6A 5' FISH Probe	CytoGreen
LSP KAT6A 3' FISH Probe	CytoOrange



Leukemia

# TP53/CCP17 FISH Probe Kit

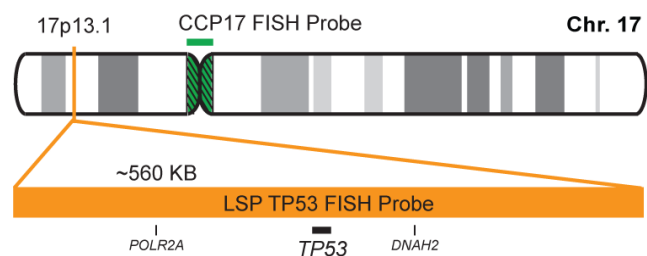


Cat. No. CT-PAC351-10-OG (100 µL)

## TP53/CCP17 FISH Probe Kit

The TP53/CCP17 FISH Probe Kit is designed to detect the human TP53 gene located on chromosome band 17p13.1, along with the number of chromosome 17 copies per cell. Abnormal expression of the TP53 gene – also known as P53, BCC7, LFS1 or TRP53 – has been observed in a large number of tumor types and some other conditions.

Cont.	Color
LSP TP53 FISH Probe	CytoOrange
CCP17 FISH Probe	CytoGreen



# ATM/CCP11 FISH Probe Kit

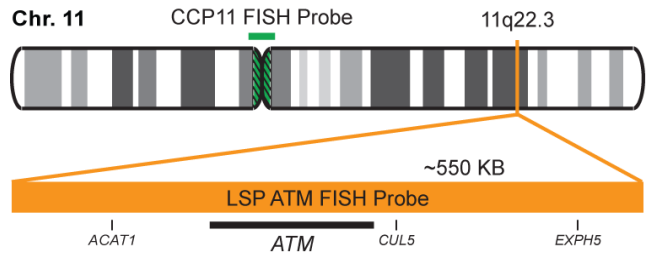


Cat. No. CT-PAC352-10-OG (100 µL)

## ATM/CCP11 FISH Probe Kit

The ATM/CCP11 FISH Probe Kit is designed to detect the human ATM gene located on chromosome band 11q22.3, along with the number of chromosome 11 copies per cell. Abnormalities in ATM – also known as AT1, ATA, ATC, ATD, ATE, ATDC, TEL1 or TELO1 – occur in ataxia telangiectasia, and have also been observed in chronic lymphocytic leukemia (CLL) and other malignancies.

Cont.	Color
LSP ATM FISH Probe	CytoOrange
CCP11 FISH Probe	CytoGreen



Leukemia

# EGR1/D5S23, D5S721 FISH Probe Kit

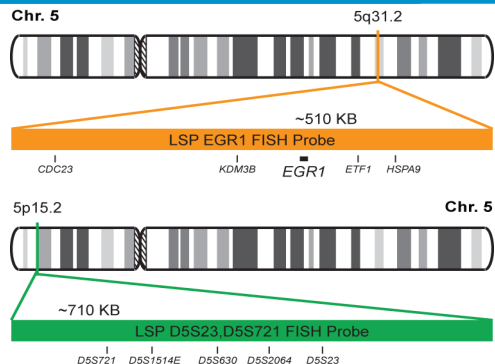


Cat. No. CT-PAC353-10-OG (100 µL)

## EGR1/D5S23, D5S721 FISH Probe Kit

The EGR1/D5S23, D5S721 FISH Probe Kit is designed to detect the human EGR1 gene, located on chromosome band 5q31.2, and the D5S23-D5S721 STS marker region on chromosome band 5p15.2. Abnormal expression of the EGR1 gene – also known as ERBB, HER1, mENA, ERBB1, PIG61 or NISBD2 – has been observed in lung cancer and many other solid tumor types.

Cont.	Color
LSP EGR1 FISH Probe	CytoOrange
LSP D5S23,D5S721 FISH Probe	CytoGreen



## RB1/LAMP1 FISH Probe Kit

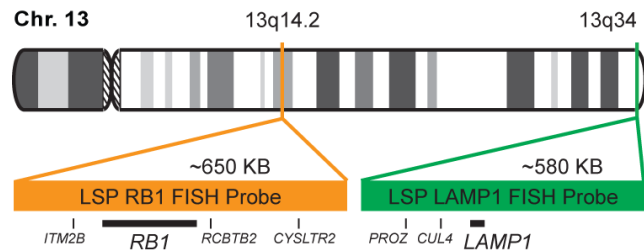


Cat. No. CT-PAC354-10-OG (100 µL)

### RB1/LAMP1 FISH Probe Kit

The RB1/LAMP1 FISH Probe Kit is designed to detect the human RB1 and LAMP1 genes located on chromosome bands 13q14.2 and 13q34, respectively. Abnormal expression of the RB1 gene – also known as RB, pRb, OSRC, pp110, p105-Rb or PPP1R130 – has been observed in retinoblastoma, sarcomas and various other heritable and somatic tumor types.

Cont.	Color
LSP RB1 FISH Probe	CytoOrange
LSP LAMP1 FISH Probe	CytoGreen



## CSF1R/D5S23, D5S721 FISH Probe Kit

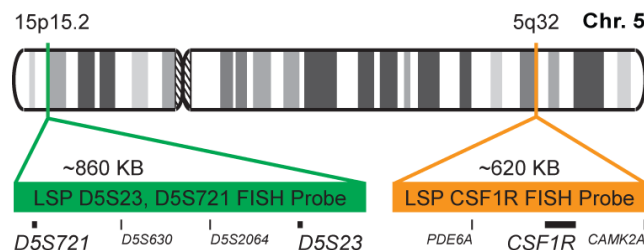


Cat. No. CT-PAC355-10-OG (100 µL)

### CSF1R/D5S23, D5S721 FISH Probe Kit

The CSF1R/D5S23, D5S721 FISH Probe Kit is designed to detect the human CSF1R gene, located on chromosome band 5q32, and the D5S721-D5S23 marker region on chromosome band 5p15.2. Abnormalities in CSF1R – also known as FMS, CSFR, FIM2, HDLS, C-FMS, CD115, CSF-1R or M-CSF-R – have been observed in myeloid malignancies and several other cancer types.

Cont.	Color
LSP CSF1R FISH Probe	CytoOrange
LSP D5S23, D5S721 FISH Probe	CytoGreen



Leukemia



# AFF1 Break Apart FISH Probe Kit

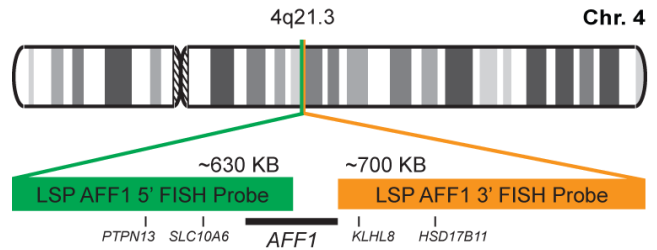


Cat. No. CT-PAC330-10-GO (100 µL)

## AFF1 Break Apart FISH Probe Kit

The AFF1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human AFF1 gene located on chromosome band 4q21.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other AFF1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the AFF1 gene – also known as AF4, PBM1 or MLLT2 – have been observed in B-cell acute lymphocytic leukemias and numerous other hematological malignancies.

Cont.	Color
LSP AFF1 5' FISH Probe	CytoGreen
LSP AFF1 3' FISH Probe	CytoOrange



Leukemia

# D20S108/CCP8 FISH Probe Kit

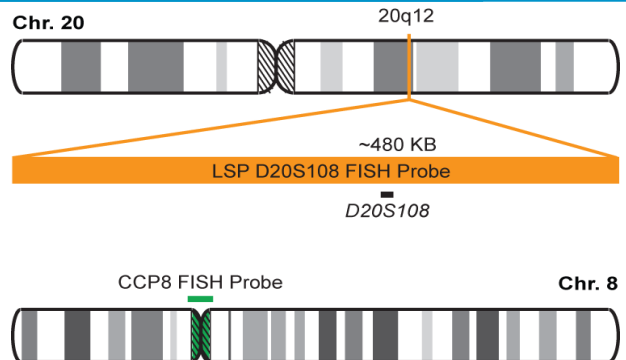


Cat. No. CT-PAC356-10-OG (100 µL)

## D20S108/CCP8 FISH Probe Kit

The D20S108/CCP8 FISH Probe Kit is designed to detect the human D20S108 STS marker regions located on chromosome band 20q12, along with the number of chromosome 8 copies per cell. Abnormalities in the D20S108 region are frequently found in myelodysplastic syndrome (MDS), acute myeloid leukemia (AML) and other myeloid disorders. Trisomy 8 is frequently reported in myeloid and lymphoid neoplasias.

Cont.	Color
LSP D20S108 FISH Probe	CytoOrange
CCP8 FISH Probe	CytoGreen



## D7S486/CCP7 FISH Probe Kit

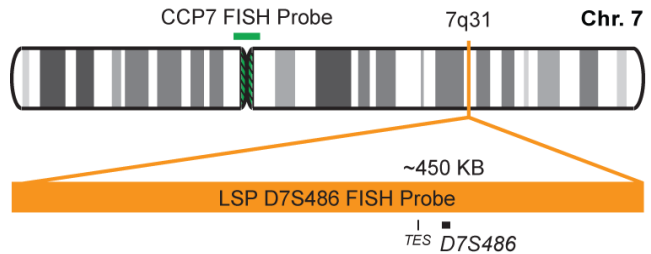


Cat. No. CT-PAC357-10-OG (100 µL)

### D7S486/CCP7 FISH Probe Kit

The D7S486/CCP7 FISH Probe Kit is designed to detect the human D7S486 STS marker region located on chromosome band 7q31.2 along with the number of chromosome 7 copies per cell. Abnormalities in the D7S486 region are frequently found in myelodysplastic syndrome (MDS), acute myeloid leukemia (AML) and other malignancies.

Cont.	Color
LSP D7S486 FISH Probe CCP7 FISH Probe	CytoOrange CytoGreen



## D7S522/CCP7 FISH Probe Kit

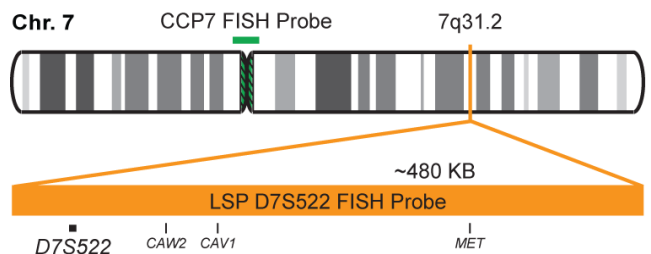


Cat. No. CT-PAC358-10-OG (100 µL)

### D7S522/CCP7 FISH Probe Kit

The D7S522/CCP7 FISH Probe Kit is designed to detect the human D7S522 STS marker region located on chromosome band 7q31.2, along with the number of chromosome 7 copies per cell. Abnormalities in the D7S522 STS marker region are frequently found in myelodysplastic syndrome (MDS), acute myeloid leukemia (AML) and other myeloid disorders.

Cont.	Color
LSP D7S522 FISH Probe CCP7 FISH Probe	CytoOrange CytoGreen



Leukemia



## NSD1/TERT FISH Probe Kit



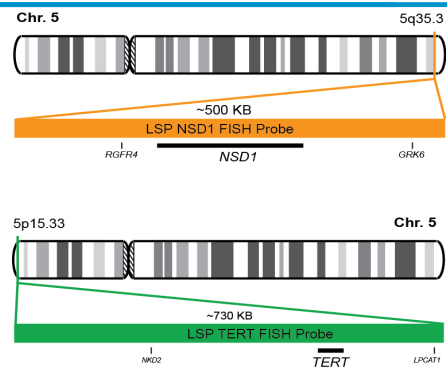
Cat. No. CT-PAC371-10-OG (100 µL)

### NSD1/TERT FISH Probe Kit

The NSD1/TERT FISH Probe Kit is designed to detect the human NSD1 gene located on chromosome band 5q35.3, along with the human TERT gene on chromosome band 5p15.33.

Gains and losses of portions of the TERT gene – also known as TP2, TRT, CMM9, EST2, TCS1, hTRT, DKCA2, DKCB4, hEST2 or PFBMFT1 – have been reported in a variety of tumor types. Abnormal expression or rearrangements of the NSD1 gene – also known as STO, KMT3B, SOTOS, ARA267 or SOTOS1 - has been observed in acute myeloid leukemia (AML), other neoplasms and some inherited defects such as Sotos syndrome and Weaver syndrome.

Cont.	Color
LSP NSD1 FISH Probe	CytoOrange
LSP TERT FISH Probe	CytoGreen



Leukemia

## NSD1/D5S23, D5S721 FISH Probe Kit



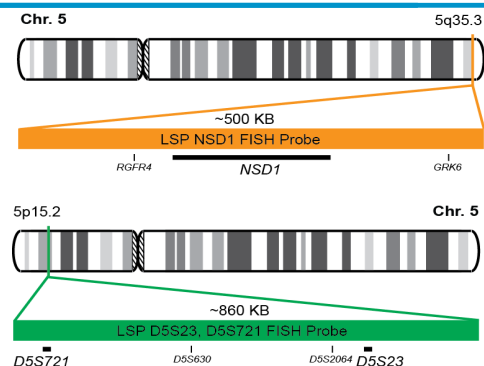
Cat. No. CT-PAC372-10-OG (100 µL)

### NSD1/D5S23, D5S721 FISH Probe Kit

The NSD1/D5S23,D5S721 FISH Probe Kit is designed to detect the human NSD1 gene located on chromosome band 5q35.3, along with the human D5S23, D5S721 region located on chromosome band 5p15.2.

Abnormal expression or rearrangements of the NSD1 gene – also known as STO, KMT3B, SOTOS, ARA267 or SOTOS1 - have been observed in acute myeloid leukemia (AML), other neoplasms and some inherited defects such as Sotos syndrome and Weaver syndrome.

Cont.	Color
LSP NSD1 FISH Probe	CytoOrange
LSP D5S23,D5S721 FISH Probe	CytoGreen



## Pancreatic

NTRK1 Break Apart FISH Probe Kit	102
NTRK2 Break Apart FISH Probe Kit	102
EGFR/CCP7 FISH Probe Kit	103
TGFBR3-MGEA5 Dual Fusion/Translocation FISH Probe Kit	103
RREB1/MYB/CCP6/CCND1 FISH Probe Kit	104
RREB1/CCP6 FISH Probe Kit	104
CUX1/CCP7 FISH Probe Kit	105
FGFR4/D5S23, D5S721 FISH Probe Kit	105
FGFR4 Break Apart FISH Probe Kit	106
KRAS/CCP12 FISH Probe Kit	106
CUX1/VIPR2/CCP7 FISH Probe Kit	107
CUX1/VIPR2 FISH Probe Kit	107
ERBB3/CCP12 FISH Probe Kit	108
PTGS2/CCP1 FISH Probe Kit	108



## NTRK1 Break Apart FISH Probe Kit

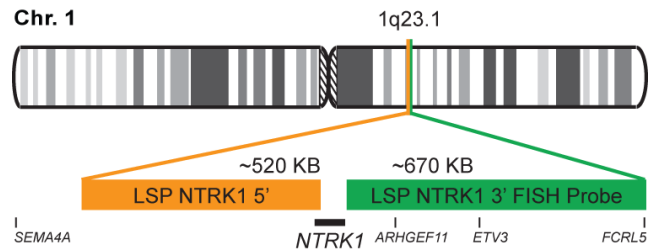


Cat. No. CT-PAC143-10-OG (100 µL)

### NTRK1 Break Apart FISH Probe Kit

The NTRK1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human NTRK1 gene located on chromosome band 1q23.1. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other NTRK1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the NTRK1 gene – also known as MTC, TRK, TRK1, TRKA, Trk-A or p140-TrkA – have been observed in papillary thyroid carcinoma and other malignancies.

Cont.	Color
LSP NTRK1 5' FISH Probe	CytoOrange
LSP NTRK1 3' FISH Probe	CytoGreen



## NTRK2 Break Apart FISH Probe Kit



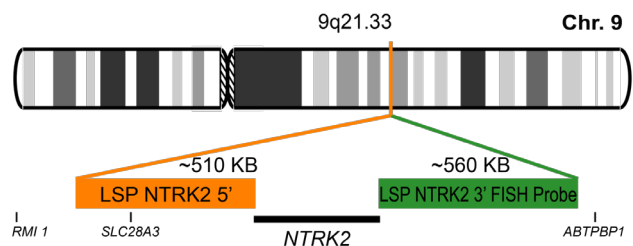
Cat. No. CT-PAC396-10-OG (100 µL)

### NTRK2 Break Apart FISH Probe Kit

The NTRK2 Break Apart FISH Probe Kit is designed to detect rearrangements in the human NTRK2 gene located on chromosome band 9q21.33. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other NTRK2 aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the NTRK2 gene – also known as OBHD, TRKB, trk-B, EIEE58 or GP145-TrkB - has been observed in neuroblastoma, pancreatic ductal adenocarcinoma, Wilms' tumors and colorectal cancer, and a number of developmental and metabolic disorders.

Cont.	Color
LSP NTRK2 5' FISH Probe	CytoOrange
LSP NTRK2 3' FISH Probe	CytoGreen



Pancreatic





# EGFR/CCP7 FISH Probe Kit

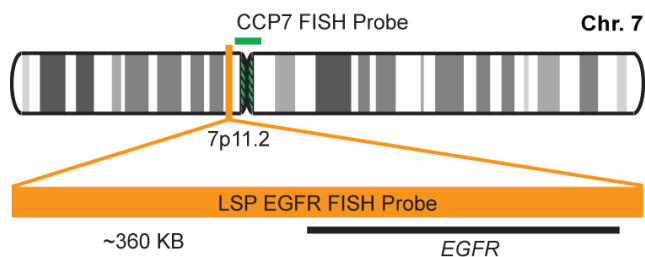


Cat. No. CT-PAC011-10-OG (100 µL)

## EGFR/CCP7 FISH Probe Kit

The EGFR/CCP7 FISH Probe Kit is designed to detect the human EGFR gene located on chromosome band 7p11.2, along with the number of chromosome 7 copies per cell. Abnormal expression of the EGFR gene – also known as TIS8, AT225, G0S30, NGFI-A, ZNF225, KROX-24 or ZIF-268 – has been observed in leukemia, fibrosarcoma, lung, breast, brain, liver, skin, prostate and other tumor types.

Cont.	Color
LSP EGFR FISH Probe CCP7 FISH Probe	CytoOrange CytoGreen



## TGFBR3-MGEA5 Dual Fusion/Translocation FISH Probe Kit



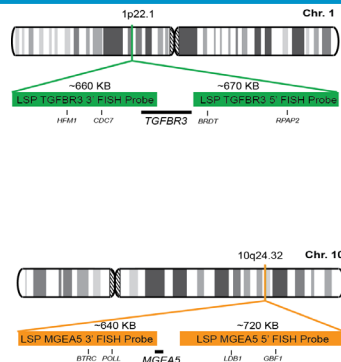
Cat. No. CT-PAC248-10-GO (100 µL)

## TGFBR3-MGEA5 Dual Fusion/Translocation FISH Probe Kit

The TGFBR3-MGEA5 Dual Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human TGFBR3 and MGEA5 genes, located on chromosome bands 1p22.1 and 10q24.32, respectively. TGFBR3 is also known as BGCAN or betaglycan. MGEA5 is also known as OGA, MEA5 or NCOAT.

Rearrangements involving portions of both genes are frequent in some fibroblastic and fibrolipomatous sarcomas and are also found in multiple myeloma and many other malignancies, including breast, colorectal, hepatocellular, oral, lung, prostate, ovarian, pancreatic and other cancers.

Cont.	Color
LSP TGFBR3 5'-3' FISH Probe LSP MGEA5 5'-3' FISH Probe	CytoGreen CytoOrange



Pancreatic



# RREB1/MYB/CCP6/CCND1 FISH Probe Kit

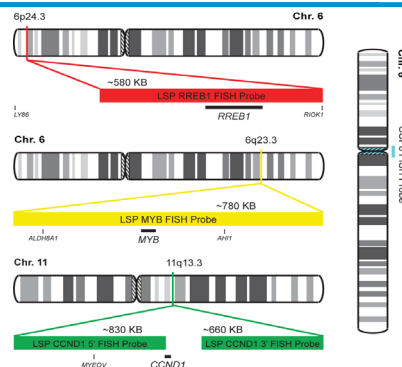


Cat. No. CT-PAC249-10-RYAG (100 µL)

## RREB1/MYB/CCP6/CCND1 FISH Probe Kit

The RREB1/MYB/CCP6/CCND1 FISH Probe Kit is designed to detect the human RREB1, MYB and CCND1 genes located on chromosome bands 6p24.3, 6q23,3 and 11q13.3, respectively, along with the number of chromosome 6 copies per cell. Abnormal expression of the RREB1 gene – also known as Zep-1, RREB-1, LZ321, HNT or FINB –, the MYB gene – also called efg, Cmyb, c-myb or c-myb\_CDS – and the CCND1 gene – also recognized as BCL1, D11S287E, PRAD1 or U21B31 – have been observed in colorectal and pancreatic cancer, melanoma and other malignancies.

Cont.	Color
LSP RREB1 FISH Probe	CytoRed
LSP MYB FISH Probe	CytoGold
CCP6 FISH Probe	CytoAqua
LSP CCND1 5'-3' FISH Probe	CytoGreen



Pancreatic

## RREB1/CCP6 FISH Probe Kit

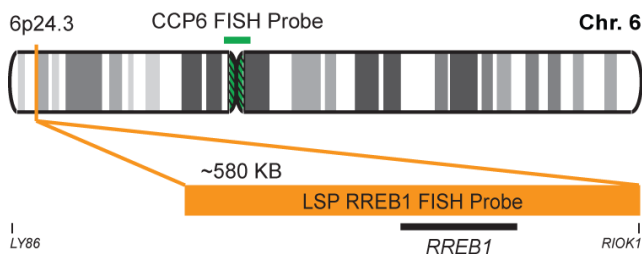


Cat. No. CT-PAC150-10-OG (100 µL)

## RREB1/CCP6 FISH Probe Kit

The RREB1/CCP6 FISH Probe Kit is designed to detect the human RREB1 gene located on chromosome band 6p24.3, along with the number of chromosome 6 copies per cell. Abnormalities in RREB1 – also known as Zep-1, RREB-1, LZ321, HNT, or FINB – have been observed in colorectal cancer, prostate adenocarcinoma, pancreatic cancer and other malignancies.

Cont.	Color
LSP RREB1 FISH Probe	CytoOrange
CCP6 FISH Probe	CytoGreen



# CUX1/CCP7 FISH Probe Kit

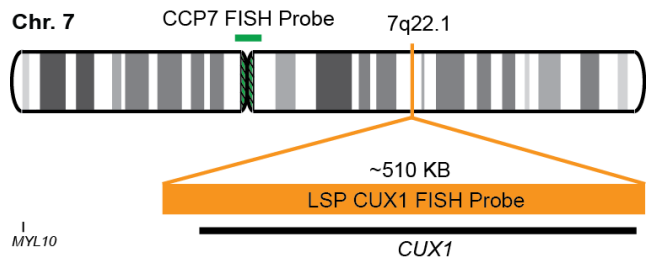


Cat. No. CT-PAC128-10-OG (100 µL)

## CUX1/CCP7 FISH Probe Kit

The CUX1/CCP7 FISH Probe Kit is designed to detect the human CUX1 gene located on chromosome bands 7q22.1, along with the number of chromosome 7 copies per cell. Abnormalities in CUX1 – also known as p75, p200, p110, Nbla10317, GOLIM6, FLJ31745, Cux/CDP, Clox, CUX, CUTL1, COY1, CDP1, CDP/Cut, CDP, or CASP – has been observed elevated in pancreatic, breast and other cancers.

Cont.	Color
LSP CUX1 FISH Probe CCP7 FISH Probe	CytoOrange CytoGreen



# FGFR4/D5S23, D5S721 FISH Probe Kit

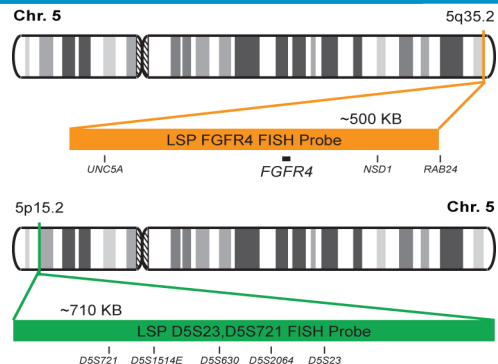


Cat. No. CT-PAC132-10-OG (100 µL)

## FGFR4/D5S23, D5S721 FISH Probe Kit

The FGFR4/D5S23, D5S721 FISH Probe Kit is designed to detect the human FGFR4 gene located on chromosome band 5q35.2 and the D5S23-D5S721 marker region on chromosome band 5p15.2. Abnormalities in FGFR4 – also known as CD334, JTK2 or TKF – have been observed in various cancer types such as prostate cancer, melanoma, hepatocellular carcinoma, lung cancer, breast cancer, gastric cancer, colorectal cancer, pancreatic cancer and others.

Cont.	Color
LSP FGFR4 FISH Probe LSP D5S23,D5S721 FISH Probe	CytoOrange CytoGreen



Pancreatic



## FGFR4 Break Apart FISH Probe Kit

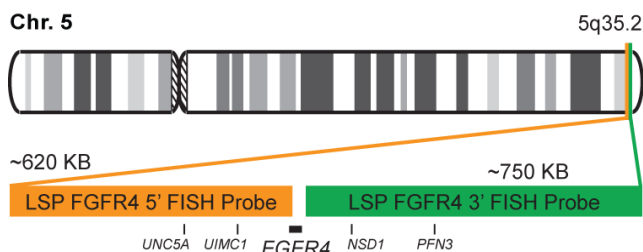


Cat. No. CT-PAC133-10-OG (100 µL)

### FGFR4 Break Apart FISH Probe Kit

The FGFR4 Break Apart FISH Probe Kit is designed to detect rearrangements in the human FGFR4 gene located on chromosome band 5q35.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other FGFR4 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the FGFR4 gene – also known as CD334, JTK2 or TKF – have been observed in various cancer types such as prostate cancer, melanoma, hepatocellular carcinoma, lung cancer, breast cancer, gastric cancer, colorectal cancer, pancreatic cancer and others.

Cont.	Color
LSP FGFR4 5' FISH Probe	CytoOrange
LSP FGFR4 3' FISH Probe	CytoGreen



## KRAS/CCP12 FISH Probe Kit

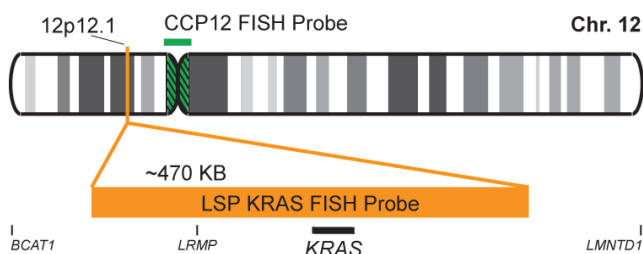


Cat. No. CT-PAC138-10-OG (100 µL)

### KRAS/CCP12 FISH Probe Kit

The KRAS/CCP12 FISH Probe Kit is designed to detect the human KRAS gene located on chromosome band 12p12.1, along with the number of chromosome 12 copies per cell. Abnormal expression or rearrangements of the KRAS gene – also known as K-RAS or c-Ki-ras 2 – has been observed in various tumor types such as pancreas, colon and rectum, lung, thyroid, prostate, kidney and others. Aberrations of the gene have also been spotted in acute non lymphocytic leukemia and myelodysplasia.

Cont.	Color
LSP KRAS FISH Probe	CytoOrange
CCP12 FISH Probe	CytoGreen



Pancreatic



## CUX1/VIPR2/CCP7 FISH Probe Kit

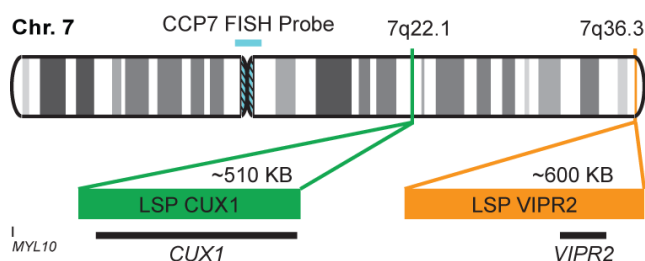


Cat. No. CT-PAC163-10-GOA (100 µL)

### CUX1/VIPR2/CCP7 FISH Probe Kit

The CUX1/VIPR2/CCP7 FISH Probe Kit is designed to detect the human CUX1 gene located on chromosome band 7q22.1, and the VIPR2 gene on chromosome band 7q36.3, along with the number of chromosome 7 copies per cell. Expression of the CUX1 gene – also known as CDP, CUX, p75, CASP, CDP1, COY1, Clox, p100, p110, p200, CUTL1, GOLIM6, CDP/Cut, Cux/CDP or Nbla10317 – has been observed elevated in pancreatic, breast and other cancers. Duplications and other anomalies in the region of the VIPR2 gene – also called VPAC2, VPAC2R, VIP-R-2, VPCAP2R, PACAP-R3, DUP7q36.3, PACAP-R-3 or C16DUPq36.3 – are associated with schizophrenia, prenatal malformations and some intestinal malignancies.

Cont.	Color
LSP CUX1 FISH Probe	CytoGreen
LSP VIPR2 FISH Probe	CytoOrange
CCP7 FISH Probe	CytoAqua



## CUX1/VIPR2 FISH Probe Kit

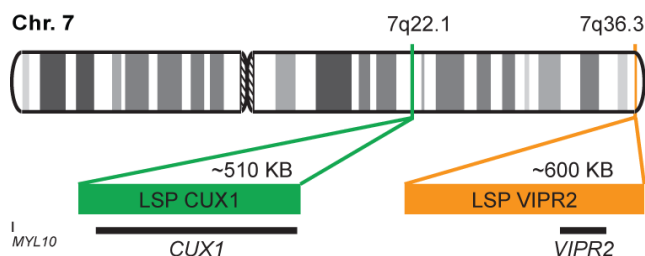


Cat. No. CT-PAC162-10-GO (100 µL)

### CUX1/VIPR2 FISH Probe Kit

The CUX1/VIPR2 FISH Probe Kit is designed to detect the human CUX1 gene located on chromosome band 7q22.1 and the VIPR2 gene on chromosome band 7q36.3. Expression of the CUX1 gene – also known as CDP, CUX, p75, CASP, CDP1, COY1, Clox, p100, p110, p200, CUTL1, GOLIM6, CDP/Cut, Cux/CDP or Nbla10317 – has been observed elevated in pancreatic, breast and other cancers. Duplications and other anomalies in the region of the VIPR2 gene – also called VPAC2, VPAC2R, VIP-R-2, VPCAP2R, PACAP-R3, DUP7q36.3, PACAP-R-3, C16DUPq36.3 – are associated with schizophrenia, prenatal malformations and some intestinal malignancies.

Cont.	Color
LSP CUX1 FISH Probe	CytoGreen
LSP VIPR2 FISH Probe	CytoOrange



Pancreatic



# ERBB3/CCP12 FISH Probe Kit

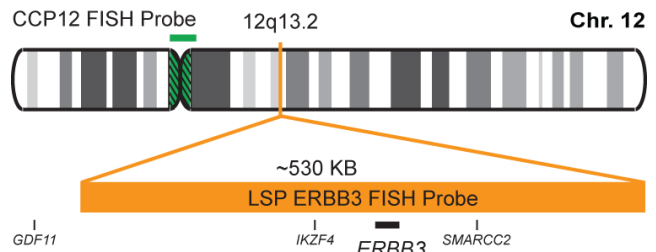


Cat. No. CT-PAC029-10-OG (100 µL)

## ERBB3/CCP12 FISH Probe Kit

The ERBB3/CCP12 FISH Probe Kit is designed to detect the human ERBB3 gene located on chromosome band 12q13.2, along with the number of chromosome 12 copies per cell. Abnormal expression of the ERBB3 gene – also known as HER3, LCCS2, ErbB-3, c-erbB3, erbB3-S, MDA-BF-1, c-erbB-3, p180-ErbB3, p45-sErbB3 or p85-sErbB3 – has been observed in breast, ovarian, prostate, pancreatic, lung and other cancers, and other conditions.

Cont.	Color
LSP ERBB3 FISH Probe CCP12 FISH Probe	CytoOrange CytoGreen



Pancreatic

# PTGS2/CCP1 FISH Probe Kit

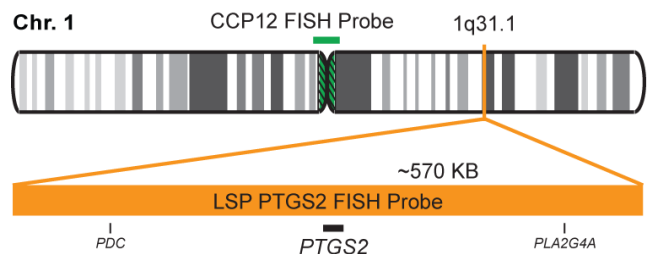


Cat. No. CT-PAC006-10-OG (100 µL)

## PTGS2/CCP1 FISH Probe Kit

The PTGS2/CCP1 FISH Probe Kit is designed to detect the human PTGS2 gene located on chromosome band 1q31.1, along with the number of chromosome 1 copies per cell. Abnormal expression of the PTGS2 gene – also known as COX2, COX-2, PHS-2, PGG/HS, PGHS-2, hCox-2 or GRIPGHS – has been observed in colorectal, lung, uterine, ovarian, pancreatic and many other tumor types.

Cont.	Color
LSP PTGS2 FISH Probe CCP1 FISH Probe	CytoOrange CytoGreen



## CNS & Brain

BRAF-KIAA1549 Dual Fusion/Translocation FISH Probe Kit	110
SOX2/CCP3 FISH Probe Kit	110
TERT/EGR1 FISH Probe Kit	111
KIAA1549 Break Apart FISH Probe Kit	111
MNX1 Break Apart FISH Probe Kit	112
PIK3CA/CCP3 FISH Probe Kit	112
IGH-EPOR Dual Fusion/Translocation FISH Probe Kit	113
ALK Break Apart FISH Probe Kit	113



# BRAF-KIAA1549 Dual Fusion/Translocation FISH Probe Kit



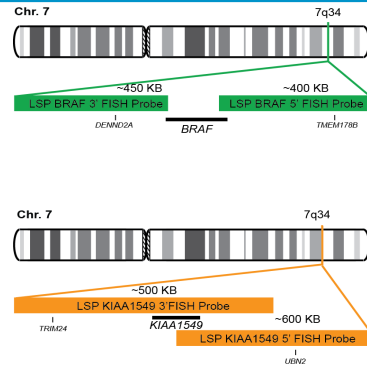
Cat. No. CT-PAC325-10-GO (100 µL)

## BRAF-KIAA1549 Dual Fusion/Translocation FISH Probe Kit

The KIAA1549-BRAF Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human BRAF and KIAA1549 genes, both located on chromosome band 7q34.

Fusions of BRAF – also known as v-raf murine sarcoma viral oncogene homolog B1, BRAF1 or RAFB1 – with KIAA1549 have been found in many cases of pilocytic astrocytoma, as well as other malignancies.

Cont.	Color
LSP BRAF 5'-3' FISH Probe	CytoGreen
LSP KIAA1549 5'-3' FISH Probe	CytoOrange



CNS & Brain

## SOX2/CCP3 FISH Probe Kit

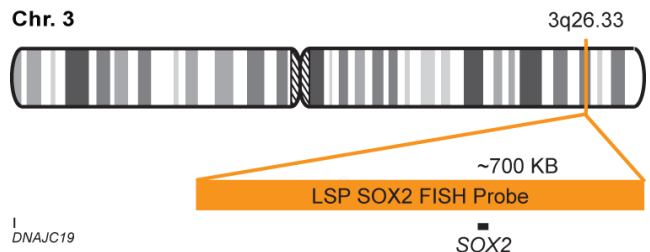


Cat. No. CT-PAC032-10-OG (100 µL)

## SOX2/CCP3 FISH Probe Kit

The SOX2/CCP3 FISH Probe Kit is designed to detect the human SOX2 gene located on chromosome band 3q26.33, along with the number of chromosome 3 copies per cell. Abnormal expression of the SOX2 gene – also known as ANOP3 or MCOPS – has been observed in glioma, lung, gastric, breast, colorectal and other cancer types.

Cont.	Color
LSP SOX2 FISH Probe	CytoOrange
CCP3 FISH Probe	CytoGreen





# TERT/EGR1 FISH Probe Kit



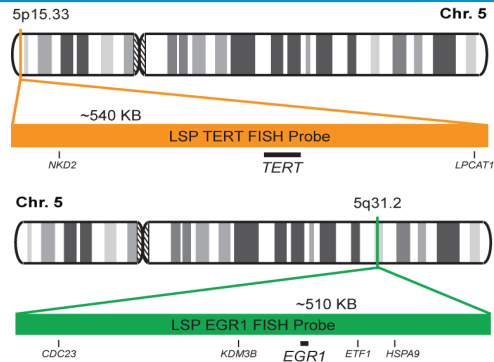
Cat. No. CT-PAC167-10-OG (100 µL)

## TERT/EGR1 FISH Probe Kit

The TERT/EGR1 FISH Probe Kit is designed to detect the human TERT gene on chromosome band 5p15.33, and the EGR1 gene on chromosome band 5q31.2.

Abnormalities in TERT – also known as TP2, TRT, CMM9, EST2, TCS1, hTRT, DKCA2, DKCB4, hEST2 or PFBMFT1 – and abnormalities in EGR1 – also known as ERBB, HER1, mENA, ERBB1, PIG61 or NISBD2 – have been observed in myeloid malignancies, fibrosarcoma, lung, brain, breast, skin, prostate liver and various other cancer types.

Cont.	Color
LSP TERT FISH Probe	CytoOrange
LSP EGR1 FISH Probe	CytoGreen



# KIAA1549 Break Apart FISH Probe Kit



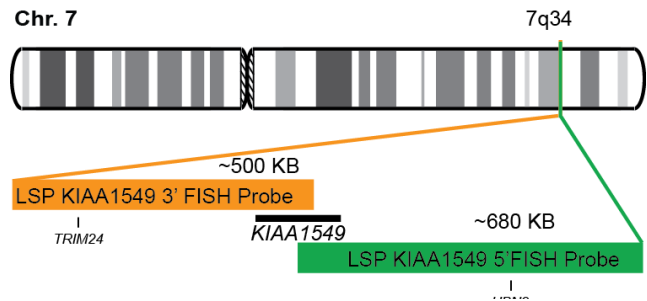
Cat. No. CT-PAC336-10-GO (100 µL)

## KIAA1549 Break Apart FISH Probe Kit

The KIAA1549 Break Apart FISH Probe Kit is designed to detect rearrangements in the human KIAA1549 locus mapping to chromosome band 7q34. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other KIAA1549 aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the KIAA1549 gene have been observed in astrocytomas and other solid tumor types.

Cont.	Color
LSP KIAA1549 5' FISH Probe	CytoGreen
LSP KIAA1549 3' FISH Probe	CytoOrange



CNS & Brain



# MNX1 Break Apart FISH Probe Kit



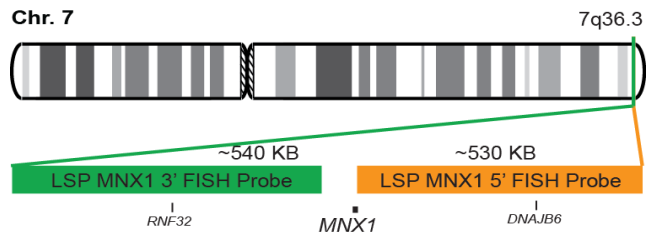
Cat. No. CT-PAC040-10-OG (100 µL)

## MNX1 Break Apart FISH Probe Kit

The MNX1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human MNX1 gene mapping to chromosome band 7q36.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other MNX1 aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the MNX1 gene – also known as HB9, HLXB9, SCRA1 or HOXHB9 - have been observed in acute myeloid leukemia (AML) and other tumor types.

Cont.	Color
LSP MNX1 5' FISH Probe LSP MNX1 3' FISH Probe	CytoOrange CytoGreen



CNS & Brain

# PIK3CA/CCP3 FISH Probe Kit

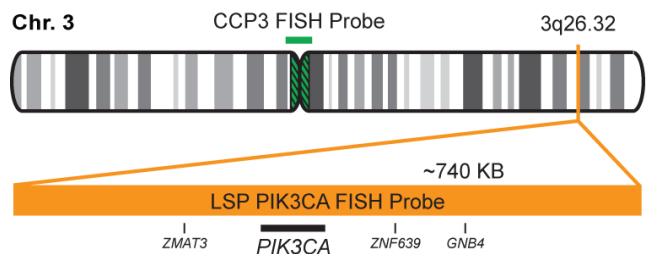


Cat. No. CT-PAC012-10-OG (100 µL)

## PIK3CA/CCP3 FISH Probe Kit

The PIK3CA/CCP3 FISH Probe Kit is designed to detect the human PIK3CA gene located on chromosome band 3q26.32, along with the number of chromosome 3 copies per cell. Abnormal expression of the PIK3CA gene – also known as MCM, CWS5, MCAP, PI3K, CLOVE, MCMTTC or p110-alpha – has been observed in a variety of human cancers, including colon, breast, ovarian, brain, lung, stomach and other tumors.

Cont.	Color
LSP PIK3CA FISH Probe CCP3 FISH Probe	CytoOrange CytoGreen



# IGH-EPOR Dual Fusion/Translocation FISH Probe Kit

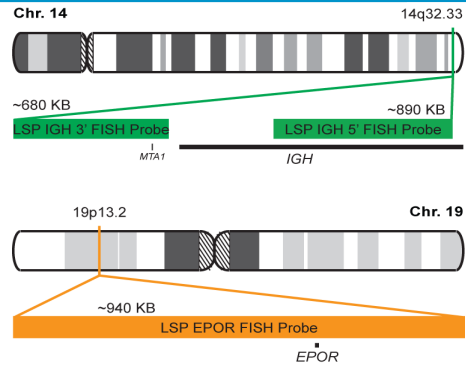


Cat. No. CT-PAC301-10-GO (100 µL)

## IGH-EPOR Dual Fusion/Translocation FISH Probe Kit

The IGH-EPOR Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human IGH locus and EPOR gene, located on chromosome bands 14q32.33 and 19p13.2, respectively. Rearrangements between the two regions have been observed in B-cell acute lymphoblastic leukemia (B-ALL).

Cont.	Color
LSP IGH 5'-3' FISH Probe LSP EPOR FISH Probe	CytoGreen CytoOrange



# ALK Break Apart FISH Probe Kit

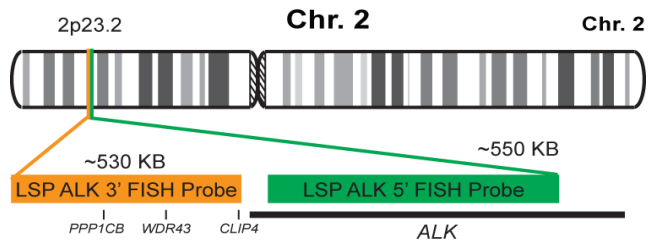


Cat. No. CT-PAC009-10-GO (100 µL)

## ALK Break Apart FISH Probe Kit

The ALK Break Apart FISH Probe Kit is designed to detect rearrangements in the human ALK gene located on chromosome band 2p23.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other ALK aberrations such as deletions or amplifications. Initially discovered in anaplastic large cell lymphoma (ALCL), rearrangements of ALK – also known as CD246 or NBLST3 – have since been found in many types of malignancies, including B- and T-cell lymphomas, plasmacytomas, neuroblastoma, esophageal, breast, kidney, colon thyroid, lung and other cancers. A significant percentage of non-small cell lung cancer (NSCLC) cases harbor ALK gene abnormalities.

Cont.	Color
LSP ALK 5' FISH Probe LSP ALK 3' FISH Probe	CytoGreen CytoOrange



CNS & Brain



# Lymphoma

TFG Break Apart FISH Probe Kit	116
BIRC3-MALT1 Dual Fusion/Translocation FISH Probe Kit	116
NPM1-ALK Fusion/Translocation FISH Probe Kit	117
CD37/ZNF443 FISH Probe Kit	117
CDK12/CCP17 FISH Probe Kit	118
CSF1R/EGR1 FISH Probe Kit	118
MCL1/CCP1 FISH Probe Kit	119
TERT/EGR1 FISH Probe Kit	119
IRF4/DUSP22 Break Apart FISH Probe Kit	120
IGH-CCND3 Dual Fusion/Translocation FISH Probe Kit	120
CCND1/CCP11 FISH Probe Kit	121
TLX1 Break Apart FISH Probe Kit	121
IGH-MYC/CCP8 Tri-color Fusion/Translocation FISH Probe Kit	122
IGH Break Apart FISH Probe Kit	122
MALT1 Break Apart FISH Probe Kit	123
BCL2 Break Apart FISH Probe Kit	123
BCL6 Break Apart FISH Probe Kit	124
PDGFRB Break Apart FISH Probe Kit	124
IGH-BCL2 Dual Fusion/Translocation FISH Probe Kit	125

Lymphoma



IGH-CCND1 Dual Fusion/Translocation FISH Probe Kit	125
IGH-MYC Dual Fusion/Translocation FISH Probe Kit	126
IGH-BCL6 Dual Fusion/Translocation FISH Probe Kit	126
MYC Break Apart LR FISH Probe Kit	127
IGL Break Apart FISH Probe Kit	127
IGK Break Apart FISH Probe Kit	128
IGK-MYC Dual Fusion/Translocation LR FISH Probe Kit	128
IGL-MYC Dual Fusion/Translocation LR FISH Probe Kit	129
TP63/CCP3 FISH Probe Kit	129
DLEU1/TP53 FISH Probe Kit	130
IGH/CCP14 FISH Probe Kit	130
IGH-MYC Dual Fusion/Translocation LR FISH Probe Kit	131
CSF1R Break Apart FISH Probe Kit	131



# TFG Break Apart FISH Probe Kit

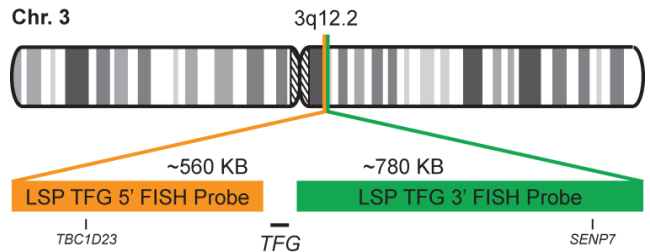


Cat. No. CT-PAC042-10-OG (100 µL)

## TFG Break Apart FISH Probe Kit

The TFG Break Apart FISH Probe Kit is designed to detect rearrangements in the human TFG gene located on chromosome band 3q12.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other TFG aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the TFG gene – also known as TF6, HMSNP, SPG57 or TRKT3 – have been observed in anaplastic large cell lymphoma, thyroid papillary carcinoma, extraskelatal myxoid chondrosarcoma, renal cell carcinoma and other cancer types.

Cont.	Color
LSP TFG 5' FISH Probe	CytoOrange
LSP TFG 3' FISH Probe	CytoGreen



Lymphoma

## BIRC3-MALT1 Dual Fusion/Translocation FISH Probe Kit

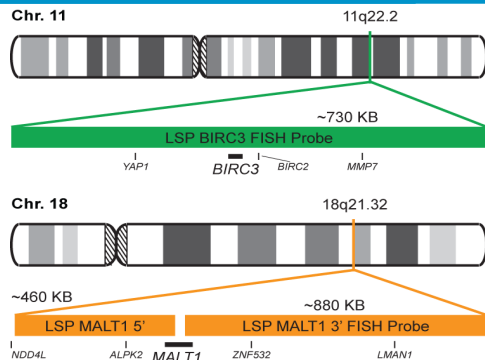


Cat. No. CT-PAC062-10-GO (100 µL)

## BIRC3-MALT1 Dual Fusion/Translocation FISH Probe Kit

The BIRC3-MALT1 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human BIRC3 and MALT1 genes located on chromosome bands 11q22.2 and 18q21.32, respectively. Rearrangements involving portions of these two genes, the BIRC3 gene – also known as AIP1, API2, CIAP2, HAIP1, HIAP1, MALT2, MIHC, RNF49 or c-IAP2 – and the MALT1 gene – also called IMD12, MLT or MLT1, have been observed in mucosa-associated lymphoid tissue (MALT) and other lymphoma types.

Cont.	Color
LSP BIRC3 FISH Probe	CytoGreen
LSP MALT1 5'-3' FISH Probe	CytoOrange



# NPM1-ALK Fusion/Translocation FISH Probe Kit

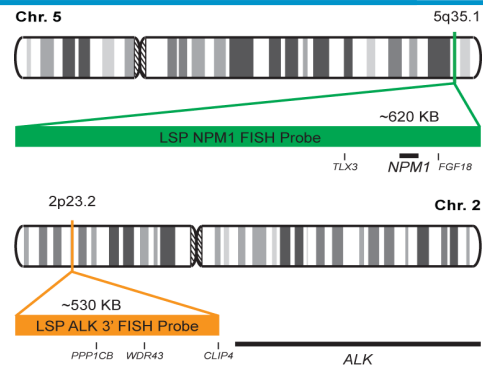


Cat. No. CT-PAC075-10-GO (100 µL)

## NPM1-ALK Fusion/Translocation FISH Probe Kit

The NPM1-ALK Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human NPM1 and ALK genes located on chromosome bands 5q35.1 and 2p23.2, respectively. Rearrangements between the two genes, the NPM1 gene – also called B23 or NPM – and the ALK gene – also known as CD246 or NBLST3, have been observed in anaplastic large cell lymphoma and other myeloid malignancies.

Cont.	Color
LSP NPM1 FISH Probe LSP ALK 3' FISH Probe	CytoGreen CytoOrange



## CD37/ZNF443 FISH Probe Kit

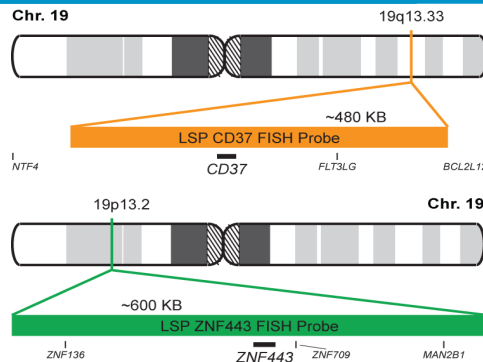


Cat. No. CT-PAC122-10-OG (100 µL)

## CD37/ZNF443 FISH Probe Kit

The CD37/ZNF443 FISH Probe Kit is designed to detect rearrangements involving the human CD37 gene located on chromosome band 19q13.33, along with the region around ZNF443 gene located on chromosome band 19p13.2 measuring the integrity of chromosome 19. Abnormal expression of the CD37 gene – also called GP52-40 or TSPAN26 – is upregulated in Burkitt's lymphoma and other B-cell malignancies, and expressed in a number of solid tumor types as well.

Cont.	Color
LSP CD37 FISH Probe LSP ZNF443 FISH Probe	CytoOrange CytoGreen



Lymphoma



# CDK12/CCP17 FISH Probe Kit

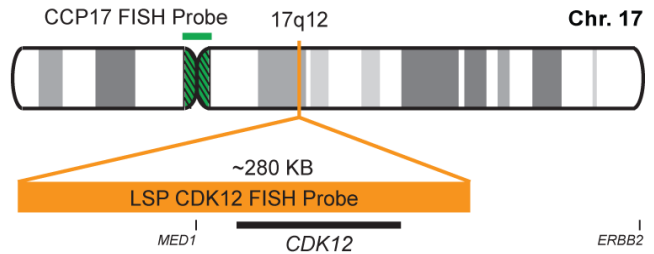


Cat. No. CT-PAC123-10-OG (100 µL)

## CDK12/CCP17 FISH Probe Kit

The CDK12/CCP17 FISH Probe Kit is designed to detect the human CDK12 gene located on chromosome band 17q12, along with the number of chromosome 17 copies per cell. Rearrangements and abnormal expression of the CDK12 gene – also known as CRK7, CRKR or CRKRS – have been reported in gastric cancer, ovarian cancer and other malignancies.

Cont.	Color
LSP CDK12 FISH Probe CCP17 FISH Probe	CytoOrange CytoGreen



Lymphoma

# CSF1R/EGR1 FISH Probe Kit

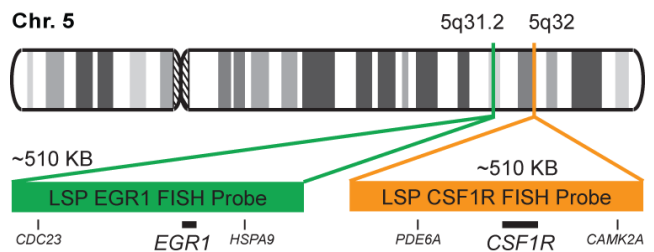


Cat. No. CT-PAC127-10-OG (100 µL)

## CSF1R/EGR1 FISH Probe Kit

The CSF1R/EGR1 FISH Probe Kit is designed to detect the human CSF1R gene, located on chromosome band 5q32, and the EGR1 gene on chromosome band 5q31.2. Abnormalities in CSF1R – also known as FMS, CSFR, FIM2, HDLS, C-FMS, CD115, CSF-1R or M-CSF-R – and abnormalities in EGR1 – also known as ERBB, HER1, mENA, ERBB1, PIG61 or NISBD2 – have been observed in myeloid malignancies, lung cancer and several other cancer types.

Cont.	Color
LSP CSF1R FISH Probe LSP EGR1 FISH Probe	CytoOrange CytoGreen





# MCL1/CCP1 FISH Probe Kit

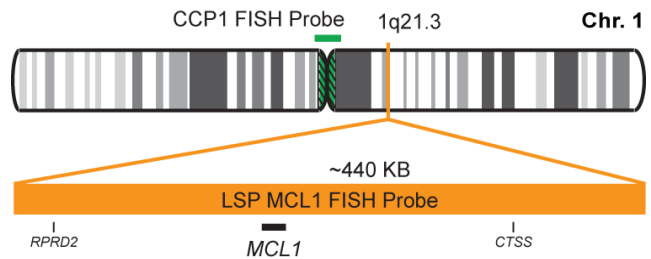


Cat. No. CT-PAC140-10-OG (100 µL)

## MCL1/CCP1 FISH Probe Kit

The MCL1/CCP1 FISH Probe Kit is designed to detect the human MCL1 gene located on chromosome band 1q21.3, along with the number of chromosome 1 copies per cell. Abnormal expression or rearrangements of the MCL1 gene – also known as mcl1/EAT, bcl2-L-3, TM, Mcl-1, MCL1S, MCL1L, MCL1-ES, EAT or BCL2L3 – have been observed in chronic myelogenous leukemia (CML), multiple myeloma (MM), B-cell non-Hodgkin's lymphomas and other malignancies.

Cont.	Color
LSP MCL1 FISH Probe	CytoOrange
CCP1 FISH Probe	CytoGreen



# TERT/EGR1 FISH Probe Kit



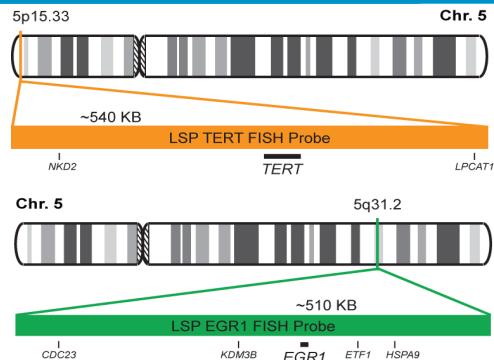
Cat. No. CT-PAC167-10-OG (100 µL)

## TERT/EGR1 FISH Probe Kit

The TERT/EGR1 FISH Probe Kit is designed to detect the human TERT gene on chromosome band 5p15.33, and the EGR1 gene on chromosome band 5q31.2.

Abnormalities in TERT – also known as TP2, TRT, CMM9, EST2, TCS1, hTRT, DKCA2, DKCB4, hEST2 or PFBMFT1 – and abnormalities in EGR1 – also known as ERBB, HER1, mENA, ERBB1, PIG61 or NISBD2 – have been observed in myeloid malignancies, fibrosarcoma, lung, brain, breast, skin, prostate liver and various other cancer types.

Cont.	Color
LSP TERT FISH Probe	CytoOrange
LSP EGR1 FISH Probe	CytoGreen



Lymphoma



# IRF4/DUSP22 Break Apart FISH Probe Kit

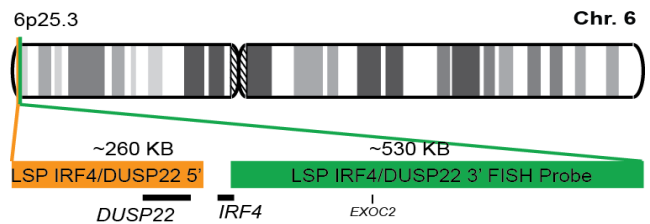


Cat. No. CT-PAC181-10-OG (100 µL)

## IRF4/DUSP22 Break Apart FISH Probe Kit

The IRF4/DUSP22 Break Apart FISH Probe Kit is designed to detect rearrangements in the human IRF4 and DUSP22 genes and the surrounding regions located on chromosome band 6p25.3. In addition to revealing breaks, which can lead to translocation of parts of the genes, inversion, or their fusion to other genes, the probe set can also be used to identify other IRF4 and DUSP22 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the IRF4 gene – also known as NF-EM5, MUM1, LSIRF or IRF-4 – and the DUSP22 gene – also called JKAP, JSP-1, JSP1, LMW-DSP2, LMWDSP2, MKP-x, MKPX or VHX – have been observed in multiple myeloma (MM) and other lymphoid malignancies, viral malignancies, skin cancer and lymphomatoid papulosis (LyP), a chronic papulonecrotic or papulonodular skin disease with

Cont.	Color
LSP IRF4/DUSP22 5' FISH Probe	CytoOrange
LSP IRF4/DUSP22 3' FISH Probe	CytoGreen



Lymphoma

## IGH-CCND3 Dual Fusion/Translocation FISH Probe Kit

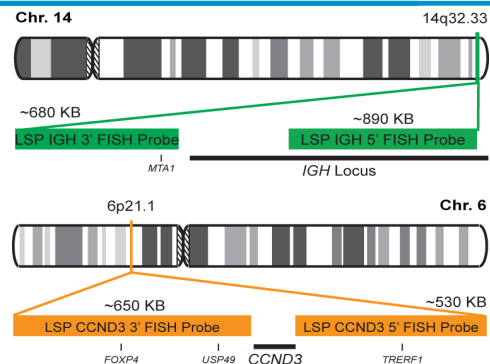


Cat. No. CT-PAC188-10-GO (100 µL)

## IGH-CCND3 Dual Fusion/Translocation FISH Probe Kit

The IGH-CCND3 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human IGH locus and the CCND3 gene located on chromosome bands 14q32.33 and 6p21.1, respectively. Rearrangements between the two regions have been observed in several types of hematological malignancies.

Cont.	Color
LSP IGH 5'-3' FISH Probe	CytoGreen
LSP CCND3 5'-3' FISH Probe	CytoOrange



## CCND1/CCP11 FISH Probe Kit

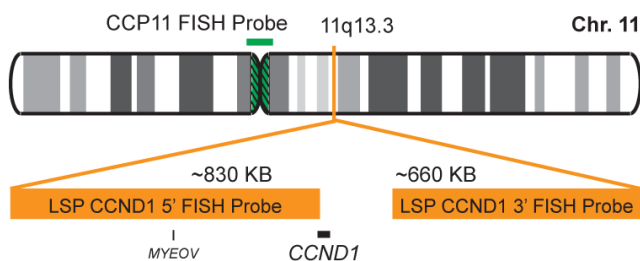


Cat. No. CT-PAC189-10-OG (100 µL)

### CCND1/CCP11 FISH Probe Kit

The CCND1/CCP11 FISH Probe Kit is designed to detect the human CCND1 gene located on chromosome band 11q13.3, along with the number of chromosome 11 copies per cell. Abnormal expression of the CCND1 gene – also known as BCL1, D11S287E, PRAD1, or HU21B31 – has been observed in breast carcinoma and a number of other malignancies.

Cont.	Color
LSP CCND1 5'-3' FISH Probe CCP11 FISH Probe	CytoOrange CytoGreen



## TLX1 Break Apart FISH Probe Kit

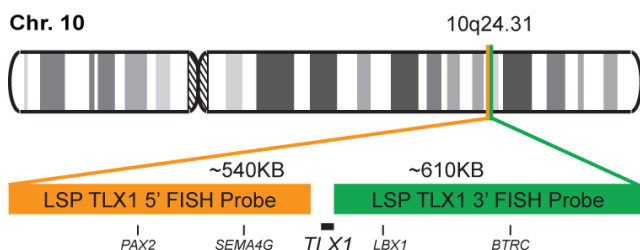


Cat. No. CT-PAC194-10-OG (100 µL)

### TLX1 Break Apart FISH Probe Kit

The TLX1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human TLX1 gene located on chromosome band 10q24.31. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other TLX1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the TLX1 gene – also known as TCL3 or HOX11 – have been observed in acute lymphoblastic leukemia (ALL), non-Hodgkin lymphoma (NHL) and other malignancies.

Cont.	Color
LSP TLX1 5' FISH Probe LSP TLX1 3' FISH Probe	CytoOrange CytoGreen



Lymphoma



# IGH-MYC/CCP8 Tri-color Fusion/Translocation FISH Probe Kit

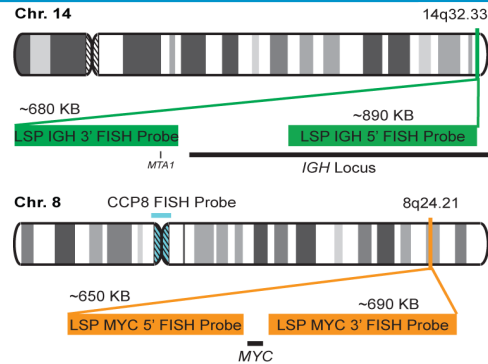


Cat. No. CT-PAC199-10-GOA (100 µL)

## IGH-MYC/CCP8 Tri-color Fusion/Translocation FISH Probe Kit

The IGH-MYC/CCP8 Tri-color Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human IGH locus and MYC gene, located on chromosome bands 14q32.33 and 8q24.21, respectively, along with the number of chromosome 8 copies per cell. Rearrangements between the two regions have been observed in Burkitt's Lymphoma (BL) and other lymphomas and leukemias.

Cont.	Color
LSP IGH 5'-3' FISH Probe	CytoGreen
LSP MYC 5'-3' FISH Probe	CytoOrange
CCP8 FISH Probe	CytoAqua



## IGH Break Apart FISH Probe Kit

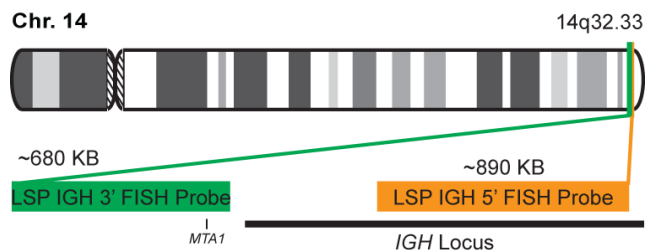


Cat. No. CT-PAC201-10-OG (100 µL)

## IGH Break Apart FISH Probe Kit

The IGH Break Apart FISH Probe Kit is designed to detect rearrangements in the human IGH locus located on chromosome band 14q32.33. In addition to revealing breaks, which can lead to translocation of parts of the locus, inversion, or its fusion to other genes, the probe set can also be used to identify other IGH aberrations such as deletions or amplifications. Rearrangements involving the IGH locus have been observed in many leukemia and lymphoma types.

Cont.	Color
LSP IGH 5' FISH Probe	CytoOrange
LSP IGH 3' FISH Probe	CytoGreen



Lymphoma



# MALT1 Break Apart FISH Probe Kit

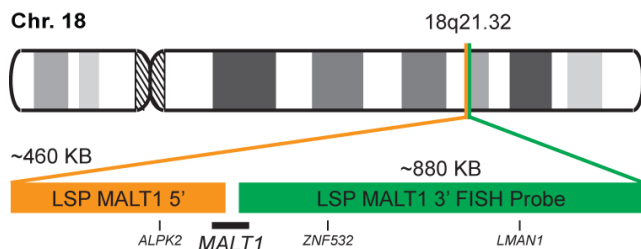


Cat. No. CT-PAC202-10-OG (100 µL)

## MALT1 Break Apart FISH Probe Kit

The MALT1 Break Apart FISH Probe Kit is designed to detect rearrangements in the human MALT1 gene located on chromosome band 18q21.32. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other MALT1 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the MALT1 gene – also known as MLT, MLT1 or IMD12 – have been observed in B-cell lymphomas and other malignancies.

Cont.	Color
LSP MALT1 5' FISH Probe	CytoOrange
LSP MALT1 3' FISH Probe	CytoGreen



# BCL2 Break Apart FISH Probe Kit

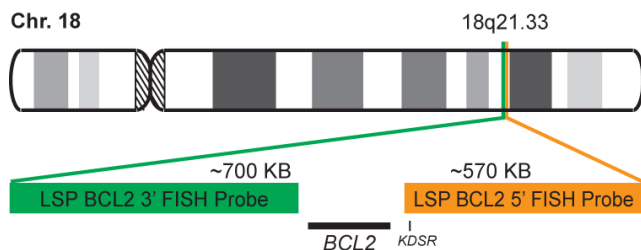


Cat. No. CT-PAC206-10-OG (100 µL)

## BCL2 Break Apart FISH Probe Kit

The BCL2 Break Apart FISH Probe Kit is designed to detect rearrangements in the human BCL2 gene located on chromosome band 18q21.33. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other BCL2 aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the BCL2 gene – also known as Bcl-2 or PPP1R50 – is routinely found in follicular lymphoma but also occurs in many other hematological and solid cancer types. One particularly common rearrangement is a reciprocal translocation to the IGH@ locus on chromosome 14.

Cont.	Color
LSP BCL2 5' FISH Probe	CytoOrange
LSP BCL2 3' FISH Probe	CytoGreen



Lymphoma



# BCL6 Break Apart FISH Probe Kit

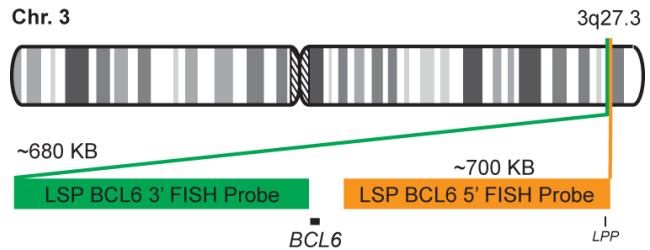


Cat. No. CT-PAC207-10-OG (100 µL)

## BCL6 Break Apart FISH Probe Kit

The BCL6 Break Apart FISH Probe Kit is designed to detect rearrangements in the human BCL6 gene located on chromosome band 3q27.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other BCL6 aberrations such as deletions or amplifications. Rearrangements of the BCL6 gene – also known as BCL5, LAZ3, BCL6A, ZNF51 or ZBTB27 – have been observed in B-cell lymphomas and leukemias. BCL6 is also dysregulated in multiple myeloma cases and several solid tumor types. More than 30 different translocation partner genes have been described.

Cont.	Color
LSP BCL6 5' FISH Probe LSP BCL6 3' FISH Probe	CytoOrange CytoGreen



Lymphoma

# PDGFRB Break Apart FISH Probe Kit

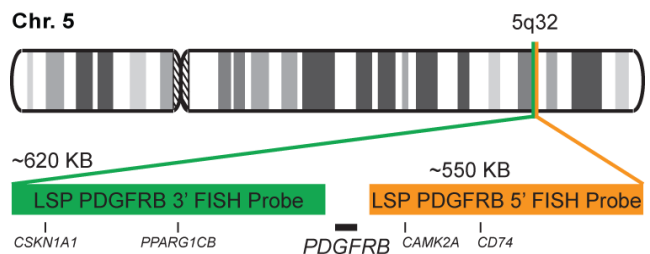


Cat. No. CT-PAC210-10-OG (100 µL)

## PDGFRB Break Apart FISH Probe Kit

The PDGFRB Break Apart FISH Probe Kit is designed to detect rearrangements in the human PDGFRB gene located on chromosome band 5q32. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other PDGFRB aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the PDGFRB gene – also known as IMF1, IBGC4, JTK12, PDGFR, CD140B, PDGFR1 or PDGFR-1 – have been observed in several chronic myeloproliferative disorders.

Cont.	Color
LSP PDGFRB 5' FISH Probe LSP PDGFRB 3' FISH Probe	CytoOrange CytoGreen



# IGH-BCL2 Dual Fusion/Translocation FISH Probe Kit

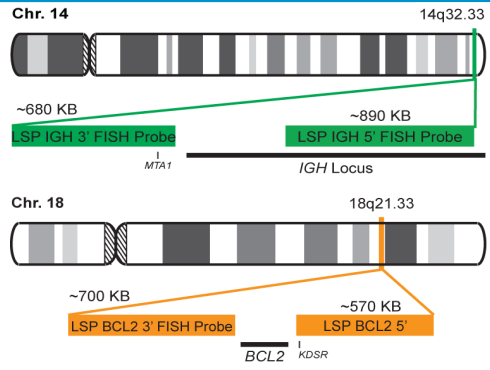


Cat. No. CT-PAC221-10-GO (100 µL)

## IGH-BCL2 Dual Fusion/Translocation FISH Probe Kit

The IGH-BCL2 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human IGH locus and the BCL2 gene, located on chromosome bands 14q32.33 and 18q21.33, respectively. Rearrangements between the two regions are routinely found in follicular lymphoma but also occur in many other hematological and solid cancer types.

Cont.	Color
LSP IGH 5'-3' FISH Probe LSP BCL2 5'-3' FISH Probe	CytoGreen CytoOrange



Lymphoma

# IGH-CCND1 Dual Fusion/Translocation FISH Probe Kit

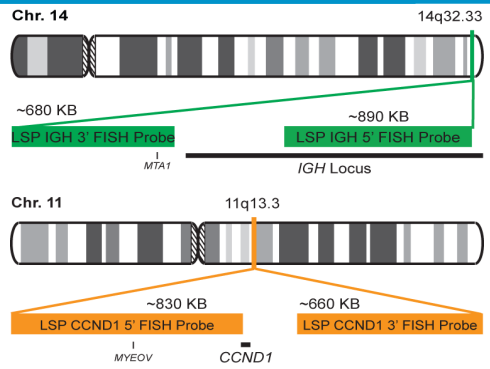


Cat. No. CT-PAC222-10-GO (100 µL)

## IGH-CCND1 Dual Fusion/Translocation FISH Probe Kit

The IGH-CCND1 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human IGH locus and CCND1 gene located on chromosome bands 14q32.33 and 11q13.3, respectively. Rearrangements between the two regions have been observed in several types of hematological malignancies.

Cont.	Color
LSP IGH 5'-3' FISH Probe LSP CCND1 5'-3' FISH Probe	CytoGreen CytoOrange



# IGH-MYC Dual Fusion/Translocation FISH Probe Kit

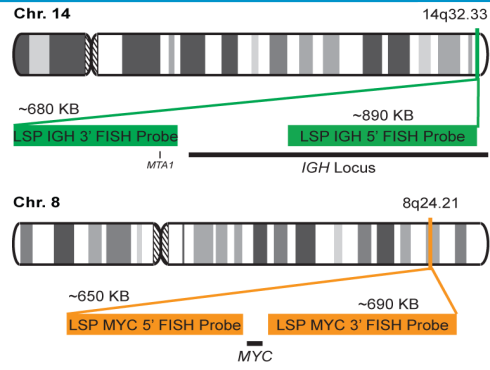


Cat. No. CT-PAC223-10-GO (100 µL)

## IGH-MYC Dual Fusion/Translocation FISH Probe Kit

The IGH-MYC Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human IGH locus and MYC gene, located on chromosome bands 14q32.33 and 8q24.21, respectively. Rearrangements between the two regions have been observed in Burkitt's Lymphoma (BL) and other lymphomas and leukemias.

Cont.	Color
LSP IGH 5'-3' FISH Probe	CytoGreen
LSP MYC 5'-3' FISH Probe	CytoOrange



Lymphoma

# IGH-BCL6 Dual Fusion/Translocation FISH Probe Kit

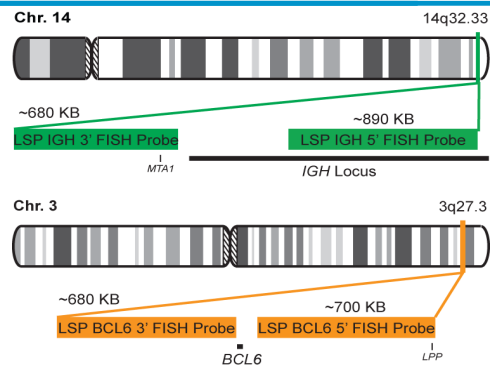


Cat. No. CT-PAC224-10-GO (100 µL)

## IGH-BCL6 Dual Fusion/Translocation FISH Probe Kit

The IGH-BCL6 Fusion/Translocation FISH Probe Kit is designed to detect rearrangements involving the human IGH locus and BCL6 gene, located on chromosome bands 14q32.33 and 3q27.3, respectively. Rearrangements between the two regions have been observed in B-cell lymphomas and leukemias.

Cont.	Color
LSP IGH 5'-3' FISH Probe	CytoGreen
LSP BCL6 5'-3' FISH Probe	CytoOrange





# MYC Break Apart LR FISH Probe Kit

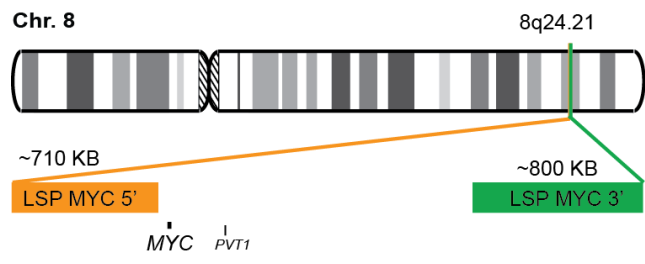


Cat. No. CT-PAC228-10-OG (100 µL)

## MYC Break Apart LR FISH Probe Kit

The MYC Break Apart LR FISH Probe Kit probe set is designed to detect rearrangements involving regions of the human MYC gene located on chromosome band 8q24. In addition to revealing breaks, which lead to translocation of parts or all of the gene or its fusion to other genes, the probe set can also be used to identify other MYC aberrations such as deletions, amplifications or chromosome 8 hyperdiploidy. Rearrangements and abnormal expression of the MYC gene – also known as MRTL, MYCC, c-Myc or bHLHe39 – have been observed in Burkitt's Lymphoma and other hematological malignancies, myeloma, as well as breast, cervical, colon, ovarian and other tumor types.

Cont.	Color
LSP MYC 5' LR FISH Probe	CytoOrange
LSP MYC 3' LR FISH Probe	CytoGreen



Lymphoma

# IGL Break Apart FISH Probe Kit

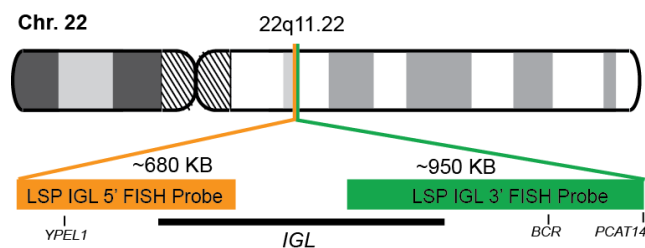


Cat. No. CT-PAC229-10-OG (100 µL)

## IGL Break Apart FISH Probe Kit

The IGL Break Apart FISH Probe Kit is designed to detect rearrangements in the human IGL locus mapping to chromosome band 22q11.22. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other IGL aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the IGL gene – also known as IGL@ or IGLC6 - have been observed in various B-cell lymphoma subtypes and other malignancies.

Cont.	Color
LSP IGL 5' FISH Probe	CytoOrange
LSP IGL 3' FISH Probe	CytoGreen



# IGK Break Apart FISH Probe Kit

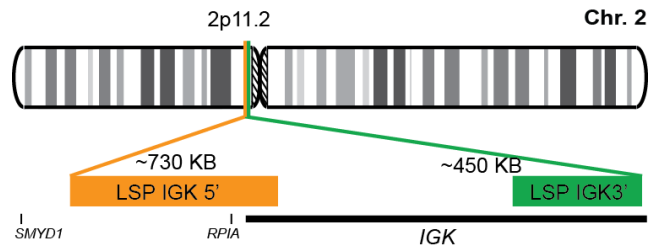


Cat. No. CT-PAC230-10-OG (100 µL)

## IGK Break Apart FISH Probe Kit

The IGK Break Apart FISH Probe Kit is designed to detect rearrangements in the human IGK locus mapping to chromosome band 2p11.2. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other IGK aberrations such as deletions or amplifications. Rearrangements and abnormal expression of the IGK gene – also known as IGK@ - have been observed in various B-cell lymphoma subtypes and other malignancies.

Cont.	Color
LSP IGK 5' FISH Probe	CytoOrange
LSP IGK 3' FISH Probe	CytoGreen



Lymphoma

## IGK-MYC Dual Fusion/Translocation LR FISH Probe Kit

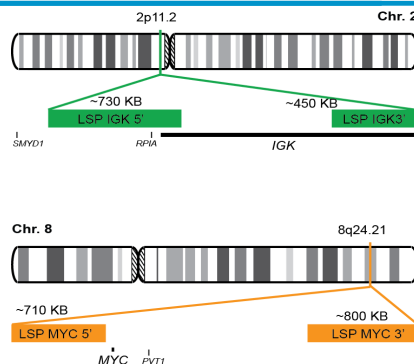


Cat. No. CT-PAC231-10-GO (100 µL)

## IGK-MYC Dual Fusion/Translocation LR FISH Probe Kit

The IGK-MYC Dual Fusion/Translocation LR (long-range) FISH Probe Kit is designed to detect rearrangements involving the human IGK and MYC genes, located on chromosome bands 2p11.2 and 8q24.21, respectively. IGK is also known as IGK@. MYC is also known as MRTL, MYCC, c-Myc or bHLHe39. Rearrangements involving portions of these two genes have been observed in several B-cell lymphoma subtypes, especially Burkitt lymphoma, and other malignancies.

Cont.	Color
LSP IGK 5'-3' FISH Probe	CytoGreen
LSP MYC 5'-3' LR FISH Probe	CytoOrange



# IGL-MYC Dual Fusion/Translocation LR FISH Probe Kit

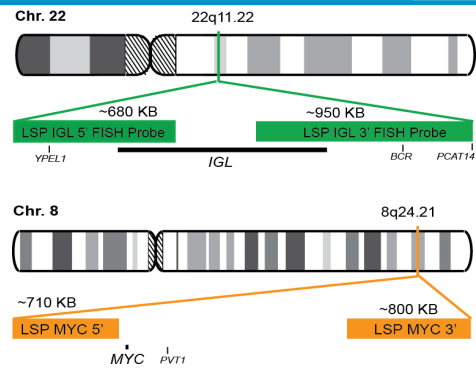


Cat. No. CT-PAC232-10-GO (100 µL)

## IGL-MYC Dual Fusion/Translocation LR FISH Probe Kit

The IGL-MYC Dual Fusion/Translocation LR (long-range) FISH Probe Kit is designed to detect rearrangements involving the human IGL and MYC genes, located on chromosome bands 22q11.22 and 8q24.21, respectively. IGL is also known as IGL@ or IGLC6. MYC is also known as MRTL, MYCC, c-Myc or bHLHe39. Rearrangements involving portions of these two genes have been observed in several B-cell lymphoma subtypes, especially Burkitt lymphoma, and other malignancies.

Cont.	Color
LSP IGL 5'-3' FISH Probe LSP MYC 5'-3' LR FISH Probe	CytoGreen CytoOrange



Lymphoma

## TP63/CCP3 FISH Probe Kit

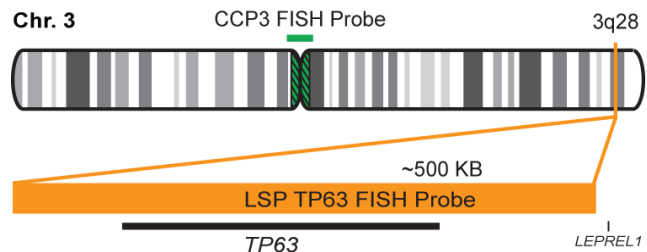


Cat. No. CT-PAC253-10-OG (100 µL)

## TP63/CCP3 FISH Probe Kit

The TP63/CCP3 FISH Probe Kit is designed to detect the human TP63 gene located on chromosome band 3q28, along with the number of chromosome 3 copies per cell. Abnormal expression of the TP63 gene – also known as AIS, KET, LMS, NBP, RHS, p40, p51, p63, EEC3, OFC8, p73H, p73L, SHFM4, TP53L, TP73L, p53CP, TP53CP, B(p51A) or B(p51B) – has been observed in various cancer types.

Cont.	Color
LSP TP63 FISH Probe CCP3 FISH Probe	CytoOrange CytoGreen



## DLEU1/TP53 FISH Probe Kit

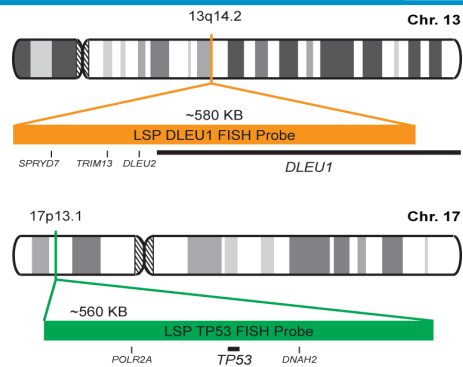


Cat. No. CT-PAC255-10-OG (100 µL)

### DLEU1/TP53 FISH Probe Kit

The DLEU1/TP53 FISH Probe Kit is designed to detect the human DLEU1 and TP53 genes located on chromosome bands 13q14.2 and 17p13.1, respectively. Rearrangements and abnormal expression of the DLEU1 gene region – also known as BCMS, DLB1, LEU1, LEU2, XTP6, BCMS1, DLEU2, LINC00021 or NCRNA00021 – and the TP53 gene – also known as P53, BCC7, LFS1 or TRP53 – have been observed in B-cell chronic lymphocytic leukemia (CLL) and other malignancies.

Cont.	Color
LSP DLEU1 FISH Probe	CytoOrange
LSP TP53 FISH Probe	CytoGreen



Lymphoma

## IGH/CCP14 FISH Probe Kit



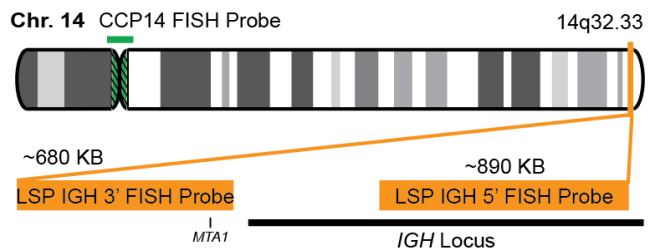
Cat. No. CT-PAC279-10-OG (100 µL)

### IGH/CCP14 FISH Probe Kit

The IGH/CCP14 FISH Probe Kit is designed to detect the human IGH gene located on chromosome band 14q32.33, along with the number of chromosome 14 copies per cell.

Abnormal expression, mutations or rearrangements of the IGH gene – also known as IGD1, IGH@, IGHJ, IGHV, IGHD@, IGHJ@, IGHV@, IGH.1@ or IGHDY1 - has been observed in many acute and chronic hematological malignancies.

Cont.	Color
LSP IGH 5'-3' FISH Probe	CytoOrange
CCP14 (Pericentromeric) FISH Probe	CytoGreen



# IGH-MYC Dual Fusion/Translocation LR FISH Probe Kit



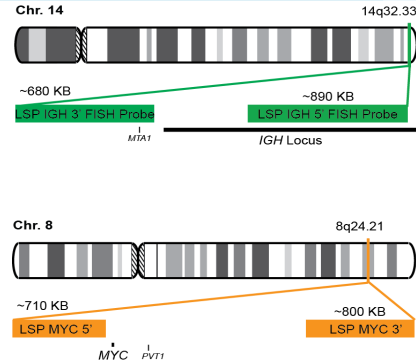
Cat. No. CT-PAC367-10-GO (100 µL)

## IGH-MYC Dual Fusion/Translocation LR FISH Probe Kit

The IGH-MYC Dual Fusion/Translocation LR (long-range) FISH Probe Kit is designed to detect rearrangements involving the human IGH and MYC genes, located on chromosome bands 14q32.33 and 8q24.21, respectively.

IGH is also known as IGD1, IGH@, IGHJ, IGHV, IGHD@, IGHJ@, IGHV@, IGH.1@ or IGHDY1 MYC is also known as MRTL, MYCC, c-Myc or bHLHe39. Rearrangements involving portions of these two genes have been observed in several B-cell lymphoma subtypes, especially Burkitt lymphoma, and other malignancies.

Cont.	Color
LSP IGH 5'-3' FISH Probe	CytoGreen
LSP MYC 5'-3' LR FISH Probe	CytoOrange



Lymphoma

# CSF1R Break Apart FISH Probe Kit



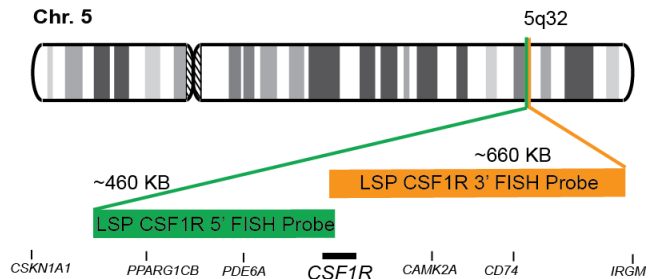
Cat. No. CT-PAC387-10-GO (100 µL)

## CSF1R Break Apart FISH Probe Kit

The CSF1R Break Apart FISH Probe Kit is designed to detect rearrangements in the human CSF1R locus mapping to chromosome band 5q32. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other CSF1R aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the CSF1R gene – also known as IFMS, CSFR, FIM2, HDLS, C-FMS, CD115, CSF-1R, or M-CSF-R - have been observed in acute megakaryoblastic leukemia (AMKL), myelodysplastic syndrome (MDS), breast and cervical and other cancers.

Cont.	Color
LSP CSF1R 5' FISH Probe	CytoGreen
LSP CSF1R 3' FISH Probe	CytoOrange



## Microdeletion

DiGeorge syndrome: TBX1/ARSA FISH Probe Kit	133
DiGeorge syndrome: D22S75/ARSA FISH Probe Kit	133
Turner syndrome: XIST/CCPX FISH Probe Kit	134
Rubinstein-Taybi syndrome: CREBBP Break Apart FISH Probe Kit	134
Sotos Region: NSD1/D5S23, D5S721 FISH Probe Kit	135
SRY/CCPX FISH Probe Kit	135



## DiGeorge syndrome: TBX1/ARSA FISH Probe Kit

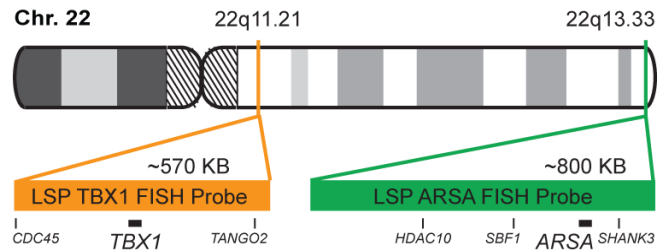


Cat. No. CT-PAC401-10-OG (100 µL)

### TBX1/ARSA FISH Probe Kit

The TBX1/ARSA FISH Probe Kit is designed to detect the human TBX1 and ARSA genes located on chromosomes band 22q11.21 and 22q13.33, respectively. Abnormalities in TBX1 gene region – also named CAFS, CATCH22, CTHM, DGCR, DGS, DORV, TBX1C, TGA, VCF or VCFS – are found in DiGeorge Syndrome and other conditions.

Cont.	Color
LSP TBX1 FISH Probe	CytoOrange
LSP ARSA FISH Probe	CytoGreen



## DiGeorge syndrome: D22S75/ARSA FISH Probe Kit

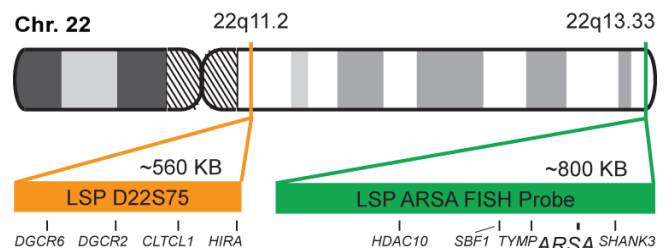


Cat. No. CT-PAC403-10-OG (100 µL)

### D22S75/ARSA FISH Probe Kit

The D22S75/ARSA FISH Probe Kit is designed to detect the human D22S75 (N25) region, located on chromosome band 22q11.2 and the ARSA gene region on chromosome band 22q13.33. Abnormalities in both regions are found in DiGeorge Syndrome and other conditions.

Cont.	Color
LSP D22S75 FISH Probe	CytoOrange
LSP ARSA FISH Probe	CytoGreen



Microdeletion



## Turner syndrome: XIST/CCPX FISH Probe Kit

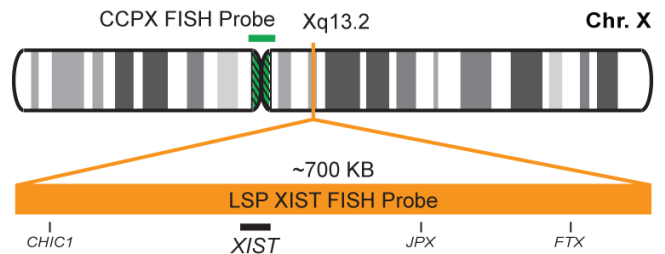


Cat. No. CT-PAC020-10-OG (100 µL)

### XIST/CCPX FISH Probe Kit

The XIST/CCPX FISH Probe Kit is designed to detect the human XIST gene located on chromosome band Xq13.2, along with the number of chromosome X copies per cell. Rearrangements in the XIST gene region – also known as SX11, swd66, DXS1089, DXS399E, LINC00001 or NCRNA00001 – have been observed in a number of familial and other conditions.

Cont.	Color
LSP XIST FISH Probe	CytoOrange
CCPX FISH Probe	CytoGreen



## Rubinstein-Taybi syndrome: CREBBP Break Apart FISH Probe Kit



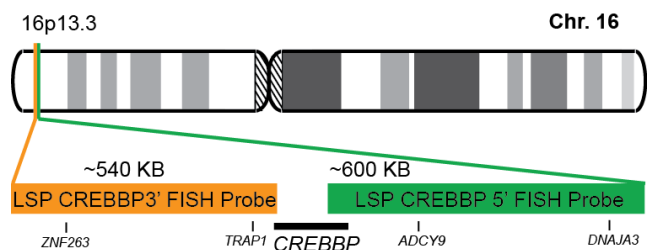
Cat. No. CT-PAC340-10-GO (100 µL)

### CREBBP Break Apart FISH Probe Kit

The CREBBP Break Apart FISH Probe Kit is designed to detect rearrangements in the human CREBBP gene located on chromosome band 16p13.3. In addition to revealing breaks, which can lead to translocation of parts of the gene, inversion, or its fusion to other genes, the probe set can also be used to identify other CREBBP aberrations such as deletions or amplifications.

Rearrangements and abnormal expression of the CREBBP gene – also known as CBP, RSTS, KAT3A or RSTS1– have been observed in acute nonlymphocytic leukemia (AML) and other malignancies and in some developmental disorders.

Cont.	Color
LSP CREBBP 5' FISH Probe	CytoGreen
LSP CREBBP 3' FISH Probe	CytoOrange



Microdeletion





# Sotos Region: NSD1/D5S23, D5S721 FISH Probe Kit



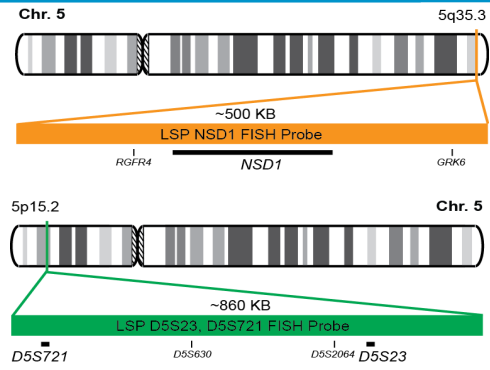
Cat. No. CT-PAC372-10-OG (100 µL)

## NSD1/D5S23, D5S721 FISH Probe Kit

The NSD1/D5S23, D5S721 FISH Probe Kit is designed to detect the human NSD1 gene located on chromosome band 5q35.3, along with the human D5S23, D5S721 region located on chromosome band 5p15.2.

Abnormal expression or rearrangements of the NSD1 gene – also known as STO, KMT3B, SOTOS, ARA267 or SOTOS1 - have been observed in acute myeloid leukemia (AML), other neoplasms and some inherited defects such as Sotos syndrome and Weaver syndrome.

Cont.	Color
LSP NSD1 FISH Probe	CytoOrange
LSP D5S23, D5S721 FISH Probe	CytoGreen



## SRY/CCPX FISH Probe Kit

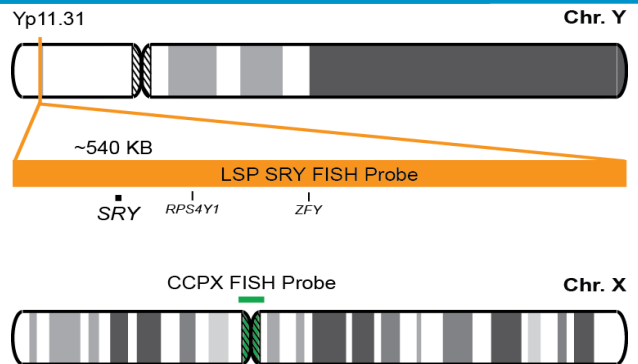


Cat. No. CT-PAC402-10-OG (100 µL)

## SRY/CCPX FISH Probe Kit

The SRY/CCPX FISH Probe Kit is designed to detect the human SRY gene located on chromosome band Yp11.31, along with the number of chromosome X copies per cell. Rearrangements in the SRY gene region – also known as TDF, TDY, SRXX1 or SRXY1 – have been observed in a number of heritable and somatic conditions.

Cont.	Color
LSP SRY FISH Probe	CytoOrange
CCPX FISH Probe	CytoGreen



Microdeletion



## Pre-/Postnatal

CCP13, 18, 21, X, Y FISH Probe Kit	137
SRY/CCPX FISH Probe Kit	137
XIST/CCPX FISH Probe Kit	138
CUX1/VIPR2 FISH Probe Kit	138
CCP13/CCP21 FISH Probe Kit	139
CCP18/CCPX/CCPY FISH Probe Kit	139



# CCP13, 18, 21, X, Y FISH Probe Kit

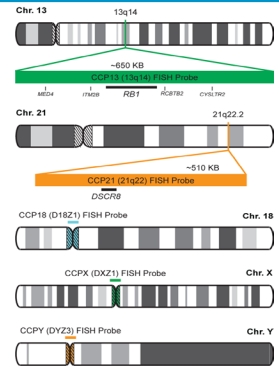


Cat. No. CT-PAC404-10-GAOGO (100 µL)

## CCP13, 18, 21, X, Y FISH Probe Kit

The CCP13,18,21,X,Y FISH Probe Kit is designed to simultaneously determine the copy number of human chromosomes 13, 18, 21, X and Y, and to detect copy number aberrations in these chromosomes, in metaphase and interphase blood and tissue cells. Trisomies of chromosomes 13, 18 and 21 as well as sex chromosome aneuploidies are the by far most common prenatal chromosomal aberrations. While the panel can also reveal other copy number defects including mono-, tetra- and polyploidies and other anomalies, a diverse range of specific abnormalities may not be detected by this panel such as localized inversions or balanced intrachromosomal translocations, centromeric polymorphisms, some microdeletions or microduplications, and other defect types.

Cont.	Color
Vial 1: CCP13 (13q14) FISH Probe	CytoGreen
CCP21 (21q22) FISH Probe	CytoOrange
Vial 2: CCP18 (Pericentromeric) FISH Probe	CytoAqua
CCPX FISH Probe	CytoGreen
	CytoOrange



## SRY/CCPX FISH Probe Kit

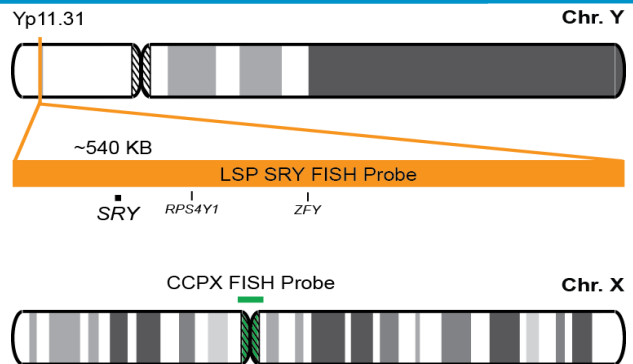


Cat. No. CT-PAC402-10-OG (100 µL)

## SRY/CCPX FISH Probe Kit

The SRY/CCPX FISH Probe Kit is designed to detect the human SRY gene located on chromosome band Yp11.31, along with the number of chromosome X copies per cell. Rearrangements in the SRY gene region – also known as TDF, TDY, SRXX1 or SRXY1 – have been observed in a number of heritable and somatic conditions.

Cont.	Color
LSP SRY FISH Probe	CytoOrange
CCPX FISH Probe	CytoGreen



Pre-/Postnatal



## XIST/CCPX FISH Probe Kit

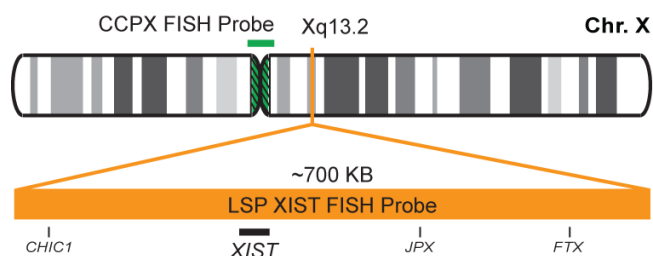


Cat. No. CT-PAC020-10-OG (100 µL)

### XIST/CCPX FISH Probe Kit

The XIST/CCPX FISH Probe Kit is designed to detect the human XIST gene located on chromosome band Xq13.2, along with the number of chromosome X copies per cell. Rearrangements in the XIST gene region – also known as SX11, swd66, DXS1089, DXS399E, LINC00001 or NCRNA00001 – have been observed in a number of familial and other conditions.

Cont.	Color
LSP XIST FISH Probe	CytoOrange
CCPX FISH Probe	CytoGreen



## CUX1/VIPR2 FISH Probe Kit

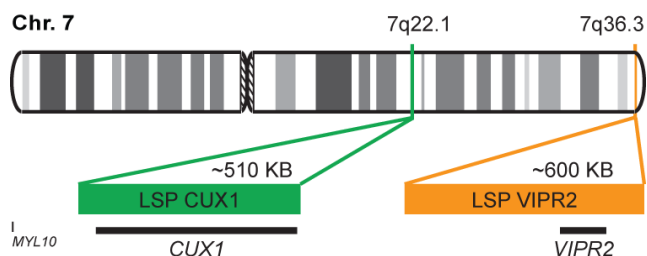


Cat. No. CT-PAC162-10-GO (100 µL)

### CUX1/VIPR2 FISH Probe Kit

The CUX1/VIPR2 FISH Probe Kit is designed to detect the human CUX1 gene located on chromosome band 7q22.1 and the VIPR2 gene on chromosome band 7q36.3. Expression of the CUX1 gene – also known as CDP, CUX, p75, CASP, CDP1, COY1, Clox, p100, p110, p200, CUTL1, GOLIM6, CDP/Cut, Cux/CDP or Nbla10317 – has been observed elevated in pancreatic, breast and other cancers. Duplications and other anomalies in the region of the VIPR2 gene – also called VPAC2, VPAC2R, VIP-R-2, VPCAP2R, PACAP-R3, DUP7q36.3, PACAP-R-3, C16DUPq36.3 – are associated with schizophrenia, prenatal malformations and some intestinal malignancies.

Cont.	Color
LSP CUX1 FISH Probe	CytoGreen
LSP VIPR2 FISH Probe	CytoOrange



Pre-/Postnatal



# CCP13/CCP21 FISH Probe Kit

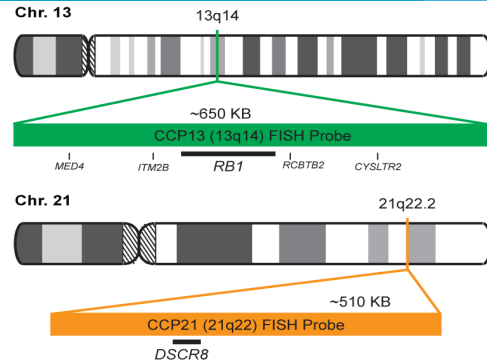


Cat. No. CT-PAC212-10-GO (100 µL)

## CCP13/CCP21 FISH Probe Kit

The CCP13/CCP21 FISH Probe Kit is designed to simultaneously determine the copy number of human chromosomes 13 and 21, and to detect copy number aberrations in these chromosomes, in metaphase and interphase blood and tissue cells. Trisomies of chromosomes 13 and 21 are common prenatal chromosomal aberrations. While the panel can also reveal other copy number defects including mono-, tetra- and polyploidies and other anomalies, a diverse range of specific abnormalities may not be detected by this panel such as localized inversions or balanced intrachromosomal translocations, centromeric polymorphisms, some microdeletions or microduplications, and other defect types.

Cont.	Color
CCP13 (13q14) FISH Probe CCP21 (21q22) FISH Probe	CytoGreen CytoOrange



# CCP18/CCPX/CCPY FISH Probe Kit

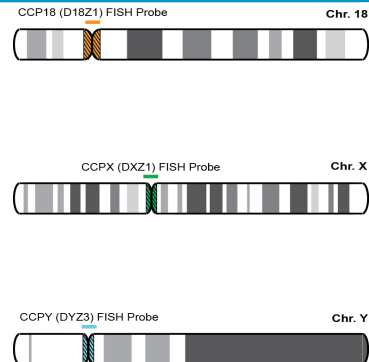


Cat. No. CT-PAC214-10-AGO (100 µL)

## CCP18/CCPX/CCPY FISH Probe Kit

The CCP18/CCPX/CCPY FISH Probe Kit is designed to simultaneously determine the copy number of human chromosomes 18, X and Y, and to detect copy number aberrations in these chromosomes, in metaphase and interphase blood and tissue cells. Trisomies of chromosome 18 as well as sex chromosome aneuploidies are common prenatal chromosomal aberrations. While the panel can also reveal other copy number defects including mono-, tetra- and polyploidies and other anomalies, a diverse range of specific abnormalities may not be detected by this panel such as localized inversions or balanced intrachromosomal translocations, centromeric polymorphisms, some microdeletions or microduplications, and other defect types.

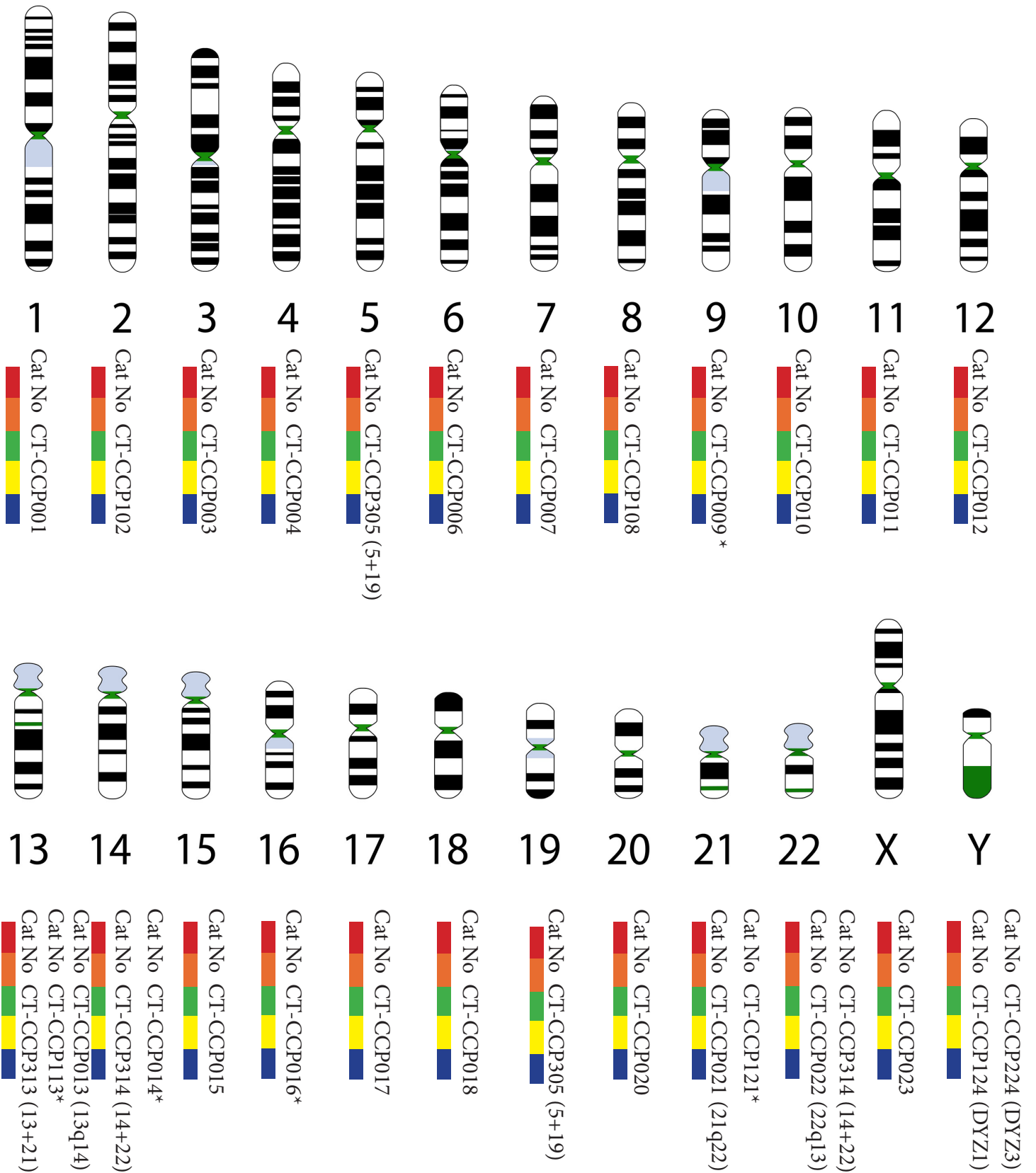
Cont.	Color
CCP18 (Pericentromeric) FISH Probe CCPX FISH Probe CCPY (DYZ3) FISH Probe	CytoAqua CytoGreen CytoOrange



Pre-/Postnatal



# Human Chromosome Counting Probes (CCP)

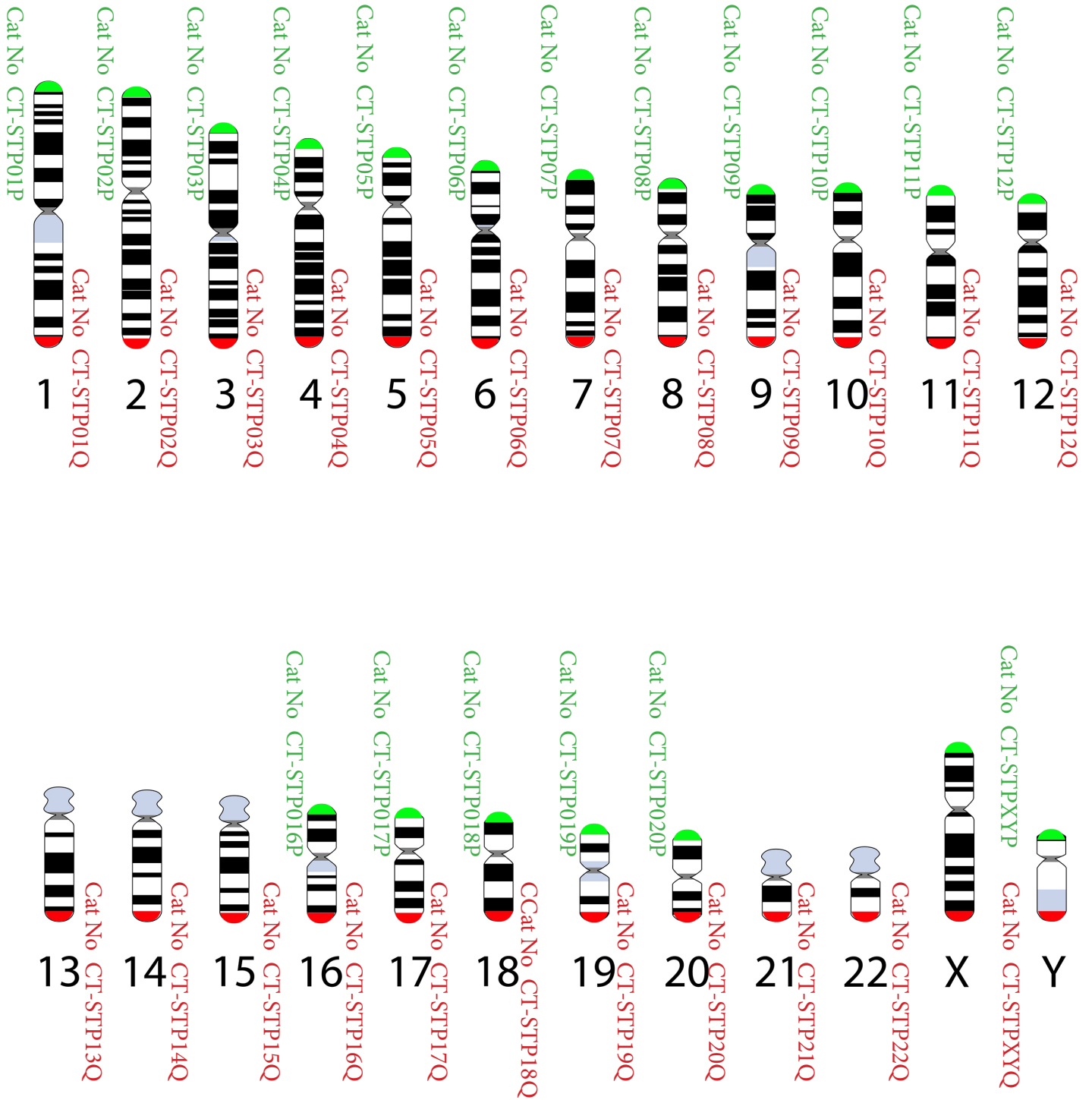


\* Pericentromeric probes.

Counting



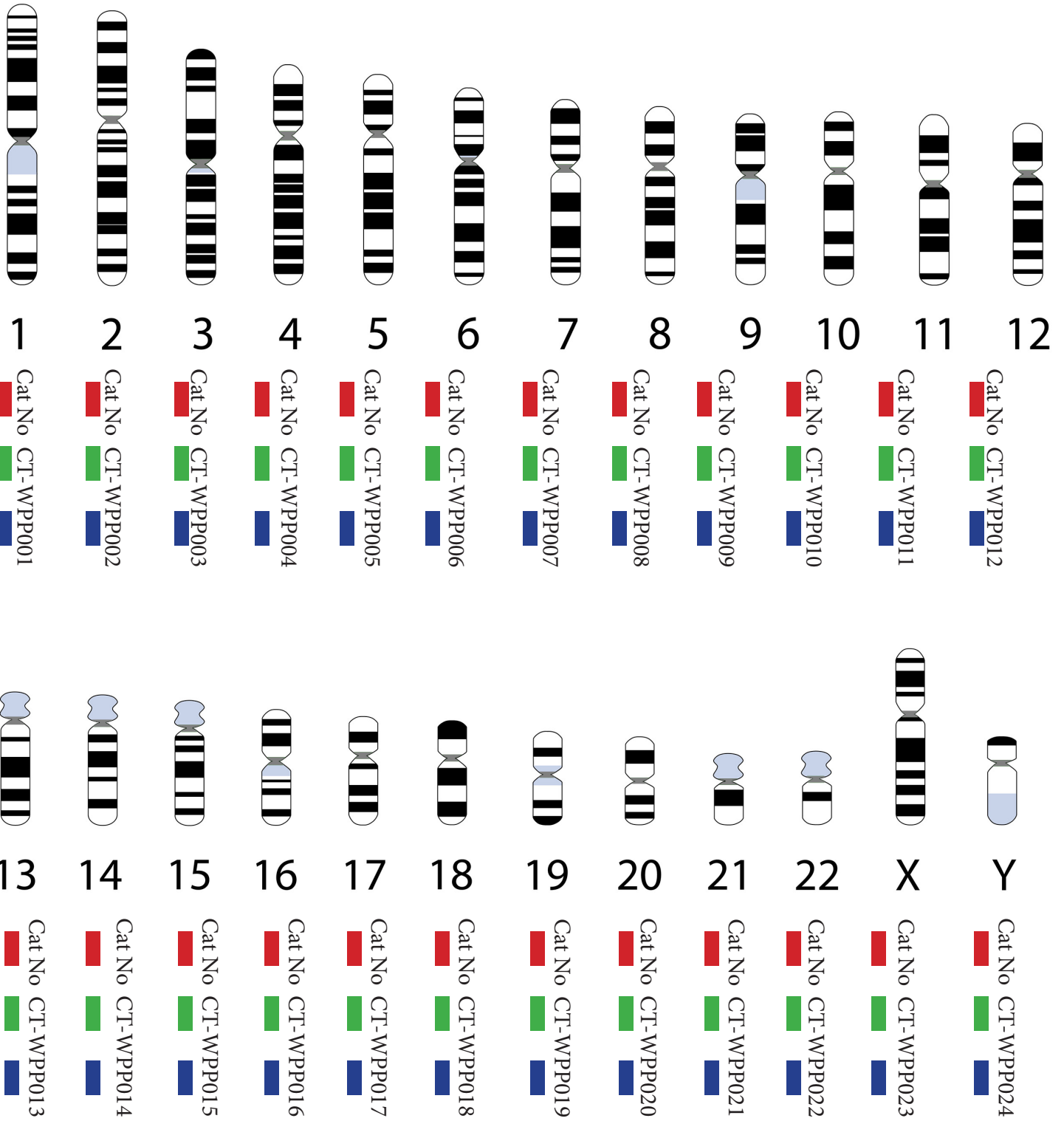
# Human Chromosome Subtelomere Probes (STP)



Subtelomere



# Human Whole Chromosome Painting Probes (WPP)



Painting





## Other Reagents and Accessories

### FISH Reagent Kit Cat No. CT -ACC101

CytoTest's FISH Reagents kit is designed to wash and stain tissue samples after hybridization for optimal performance of CytoTest's FISH probes.

Reagents	Quantity	Storage
20x SSC Salt	1 x 66g	20°C to 25°C
DAPI Counterstain	1 x 300 ul	2°C to 6°C (avoid light)
NP-40	2 x 2ml	20°C to 25°C

DAPI Counterstain can be ordered separately.

### Paraffin Pretreatment Kit CT -ACC112


CytoTest's Paraffin Sample Pretreatment kit is optimized to treat formalin-fixed paraffin-embedded tissue sections for use in fluorescence in situ hybridization with CytoTest's FISH probes.


Reagents	Quantity	Storage
Pretreatment Solution	5 x 50 ml	2°C to 25°C
Protease Buffer	5 x 62.5 ml	2°C to 25°C
Protease	5 x 250 mg	-20°C to 8°C


For more information visit - [www.cytotest.com](http://www.cytotest.com)





# Filters


Description	Part #	Color
CytoTest Green	CT-ACC505	
<b>EX</b>	<b>EM</b>	<b>BS</b>
ET485/25x	ET252/30M	T505lpxr

Description	Part #	Color
CytoTest Aqua	CT-ACC506	
<b>EX</b>	<b>EM</b>	<b>BS</b>
ET436/20x	ET480/30M	T455lp

Description	Part #	Color
CytoTest Orange	CT-ACC503	
<b>EX</b>	<b>EM</b>	<b>BS</b>
ET539/21x	ET576/31M	T556lpxr

Description	Part #	Color
DAPI	CT-ACC501	
<b>EX</b>	<b>EM</b>	<b>BS</b>
AT350/50x	ET460/50M	T400LP

Description	Part #	Color
CytoTest Red	CT-ACC502	
<b>EX</b>	<b>EM</b>	<b>BS</b>
ET592/21x	ET630/30M	T610lpxr

Description	Part #	Color
GOLD	CT-ACC504	
<b>EX</b>	<b>EM</b>	<b>BS</b>
ET546/10x	ET572/23M	T556LPXR



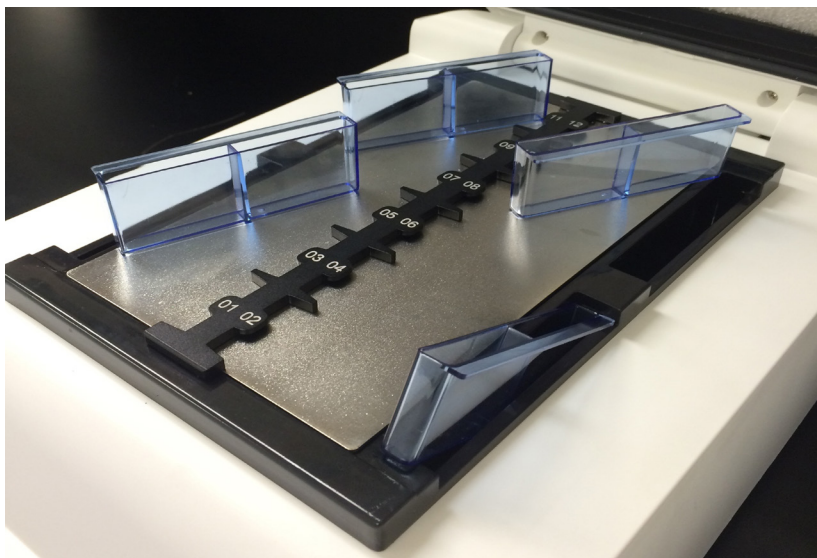
# Instrument



The CytoHYB CT500 Denaturation and hybridization instrument is a programmable system for automated processing in slide-based FISH procedures. The machine is equipped with several dis-



tinct advantageous features, including convenient touchscreen programming, integral USB port, unparalleled heating speed and accuracy, minimal temperature variation, and higher humidity range. Moreover, a unique design with liquid grooves allows for convenient humidification and stable humidity control in the chamber interior. In addition, the unit is easy to clean, and there is no need for disposable foam strips, or for any other accessory consumable that have to be frequently replaced, meaning eco friendly! Accepting a broad range of sample types, and equipped with single slide guides that keep slides in place and allow for one-handed placement and removal, the low cost unit drastically reduces hands-on time without compromising precision and reproducibility. The product is suitable for a wide variety of denaturation and hybridization experimental strategies, with four distinct modes of operation: Denaturation/hybridization, Hybridization, Custom, and in situ PCR processes. The integrated heating and water tank and secure-sealed heated lid provide experimental consistency to the system, which can process up to 12 slides simultaneously.

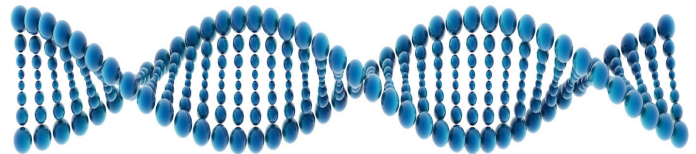


# Product use and Procedure

## Procedure and Principle

Fluorescence In situ hybridization (FISH) is a powerful technique designed to detect presence or absence, location, integrity and amount of DNA or RNA sequences in tissues, cells or on chromosomes. FISH is based on the detection of specific sequences by pairing of bases (hybridization) on complementary single strands of nucleic acid. Here, one of the strands is a fluorescently labeled sequence fragment (probe) that binds only to those parts of the genome with sequences highly or completely complementary to the probe sequence, and the other strand is present in the sample material that is to be analyzed. Accordingly, in situ hybridization starts with preparing the sample to be analyzed and with preparing the probe. The typically double-stranded DNA in the sample has to be melted (denatured) into single strands, and the probe has to be fluorescently labeled to enable detection.

Flourophore	Ex. (nm)	Em. (nm)	Compatability w/ other dyes
CytoRed™	583	605	SpectrumRedPropidiumiodine (543-614)
CytoOrange™	557	575	SpectrumOrange
CytoGold™	523	549	SpectrumGold
CytoGreen™	495	518	SpectrumGreen-FlouresceinIsothiocyanate (FITC)
CytoAqua™	422	471	SpectrumAqua
CytoBlue™	402	421	SpectrumBlue (400-450)
DAPI	358	461	



**CYTOTEST®**





## Storage and Handling

CytoTest FISH probes should be stored at  $-15^{\circ}\text{C}$  to  $-25^{\circ}\text{C}$  and protected from light. Avoid repeated freeze/thaw cycles. Please check the expiration date on the product label before use. These storage and handling conditions apply to both opened and unopened products

## Warnings and Precautions

Excessive exposure to light can photobleach the probe's fluorophores. Please take appropriate precautions when handling all reagents and slides containing the probe to avoid direct and prolonged light exposure. It is recommended to comply with the instructions described in this Instruction for Use when handling and using CytoTest FISH probes. Experiment operators should wear suitable protective clothing, gloves and eye/face protection. Reagents used in FISH experiment may irritate eyes and skin; avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Inappropriate handling during transportation or storage can potentially degrade or impair the performance of the product. Any compromised products should be discarded according to any applicable law or regulations in your institution, region and/or country, and the reagents should not be used in any tests. If you have any concerns about degradation in the product's quality or performance, please contact the manufacturer or your regional distributor(s).



# FISH Procedure for FFPE Specimen 1/3

Pic. 1.1



## Slide Pretreatment

1. Immerse slides in xylene at RT for 10 minutes. Repeat twice with fresh xylene each time. (Pic. 1.1)
2. Dehydrate slides in 100% ethanol at RT for 5 minute. Repeation with fresh 100% ethanol. (Pic. 1.2)
3. Air dry slides for 2-5 minutes, if desired.
4. Immerse slides in pre-warmed Pretreatment Solution at 80°C for 10 minutes. (Pic. 1.3)
5. Immerse slides in purified water at RT for 3 minute.

Pic. 1.2



## Protease Pretreatment

1. Immerse slides in Protease Solution at 37°C for 10-60 minutes (depending on the condition of samples) and monitor the condition of cells under a light microscope. (Pic. 1.4)
2. Immerse slides in purified water at RT for 3 minutes.
3. Air dry slides for 2-5 minutes.

Pic. 1.3



## Slide Dehydration

1. Immerse slides in 70% ethanol for 3 minutes.
2. Immerse slides in 90% ethanol for 3 minutes.
3. Immerse slides in 100% ethanol for 3 minutes. (Pic. 1.5)
4. Air dry slides.

Pic. 1.4



## Probe Preparation

1. Pre-warm the probe at RT for 20-30 minutes.
2. Briefly vortex and spin down the probe.

Pic. 1.5



## Co-denaturation & Hybridization

1. Apply 10 µl of the probe on each hybridization area and cover with a 22mm x 22mm coverslip. Seal coverslip(s) with rubber cement (Pic. 1.6)
2. Co-denature slides with probe at 72°C for 5 minutes. (Pic. 1.7)
3. Place slides in a pre-warmed humidified hybridization chamber and incubate slides at 37°C overnight (16 hours).

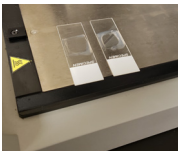
Pic. 1.6



## Post-hybridization Wash

1. Mark each hybridization area on the back of the slides with a diamond-tip pen.
2. Carefully remove rubber cement.
3. Immerse slides in Post-hybridization Wash Solution at RT to loosen the coverslips. Shake gently to allow the coverslips to detach unaided; do not pull the coverslips off.
4. Immerse slides in pre-warmed Post- hybridization Wash Solution at 72°C for 2 minutes. (Pic. 1.8)

Pic. 1.7



Pic. 1.8



## Slide Dehydration

1. Immerse slides in 70% ethanol for 2 minutes.
2. Immerse slides in 90% ethanol for 2 minutes.
3. Immerse slides in 100% ethanol for 2 minutes. (Pic. 1.9)
4. Air dry slides in the dark.

Pic. 1.9



## Visualization

1. Apply DAPI counterstain and cover slides with coverslips. (Pic. 1.10)
2. Examine slides under a fluorescence microscope with proper filter sets.

Pic. 1.10



# FISH Procedure for Cytological Specimens 2/3

Pic. 2.1



## Slide Pretreatment

1. Equilibrate slides in 2X SSC Solution at RT for 2 minutes. (Pic. 2.1)
2. Immerse slides in pre-warmed Pepsin Working Solution at 37°C for 1-10 minutes (depending on the condition of samples) and monitor the condition of cells under a light microscope (Pic. 2.2)
3. Wash slides in 1XPBS Solution at RT for 5 minutes.
4. Post-fix slides in Formaldehyde Solution at RT for 5 minutes.
5. Wash slides in 1XPBS Solution at RT for 5 minutes. (Pic. 2.3)

Pic. 2.2



## Slide Dehydration

1. Immerse slides in 70% ethanol for 3 minutes.
2. Immerse slides in 90% ethanol for 3 minutes.
3. Immerse slides in 100% ethanol for 3 minutes. (Pic. 2.4)
4. Air dry slides.

Pic. 2.3



## Probe Preparation

1. Pre-warm probes at RT for 20~30 minutes.
2. Briefly vortex and spin down probes.

Pic. 2.4



## Co-denaturation & Hybridization

1. Apply 10µl of the probe on each hybridization area and cover with a 22 mm x 22 mm coverslip. Seal coverslip(s) with rubber cement. (Pic. 2.5)
2. Co-denature slides with probe at 72°C for 5 minutes. (Pic. 2.6)
3. Place slides in a pre-warmed humidized hybridization chamber and incubate slides at 37°C overnight (16 hours).

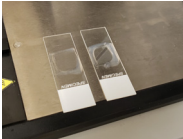
Pic. 2.5



## Post-hybridization Wash

1. Mark each hybridization area on the back of the slides with a diamond-tip pen.
2. Carefully remove rubber cement.
3. Immerse slides in 2X SSC Solution at RT to loose the coverslips. Shake gently to allow the coverslips to detach unaided; do not pull the coverslips off. (Pic. 2.7)
4. Immerse slides in pre-warmed Post-hybridization Wash Solution 1 at 72°C for 1 minute. (Pic. 2.8)
5. Immerse slides in Post-hybridization Wash Solution 2 at room temperature for 2 minutes. (Pic. 2.9)

Pic. 2.6



Pic. 2.7



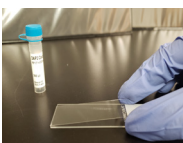
Pic. 2.8



Pic. 2.9



Pic. 2.10



## Visualization

1. Apply DAPI counterstain and cover slides with cover slips. (Pic. 2.10)
2. Examine slides under a fluorescence microscope with proper filter sets.



## FISH Procedure Buffer Information 3/3

Reagents Required but Not Provided:

- Paraffin Pretreatment Reagent Kit (Cat No: CT- ACC112-05):
  - o Pretreatment Solution (50 ml): store at room temperature (RT)
  - o Protease Buffer (62.5 ml, pH 2.0): store at RT
  - o Protease (250 mg): Lyophilized, store at -20°C
- FISH Reagent Kit (Cat No: CT-ACC101-20):
  - o 20X Sodium Chloride-Sodium Citrate Buffer (SSC) Salt: store at RT, avoid humidity
  - o 4',6-diamidino-2- phenylindole (DAPI) Counterstain: store at 4°C in the dark
  - o IGEPAL CA-630, or Nonidet P-40): store at RT
- Xylene: store at RT
- Ethanol (100%): store at RT
- Purified water: store at room RT
- Concentrated (12N) HCl: store at room RT



1. 20X SSC Solution (pH 7.0)		
Reagents	Amount Added	Final Concentration
SSC Salt	66 g	20X
Deionized H <sub>2</sub> O (dH <sub>2</sub> O)	250 ml	-
TOTAL	250 ml	-

2. Protease Solution		
Reagents	Amount Added	Final Concentration
Protease, lyophilized	250 mg	4 mg/ml
Protease Buffer	62.5 ml	-
TOTAL	62.5 ml	-

3. 90% Ethanol		
Reagents	Amount Added	Final Concentration
Ethanol (100%)	90 ml	90%
dH <sub>2</sub> O	10 ml	-
TOTAL	100 ml	-

4. 70% Ethanol		
Reagents	Amount Added	Final Concentration
Ethanol (100%)	70 ml	70%
dH <sub>2</sub> O	30 ml	-
TOTAL	100 ml	-

5. Post-hybridization Wash Solution (pH 7.0)		
Reagents	Amount Added	Final Concentration
20X SSC Solution	10 ml	2X
NP-40	300 µl	0.3%
dH <sub>2</sub> O	90 ml	-
TOTAL	100 ml	-





# Troubleshooting

Possible Causes	Suggested Solutions
<b>Distorted Chromosome Morphology</b>	
Specimen over-denatured	Reduce the slide denaturing time
<b>High Background</b>	
Slides are too dirty	Immerse the slides in 100% ethanol and wipe with clean paper
Too much cell debris	Wash cell pellets with fresh fixative several times before dropping on the slide
Inadequate washing after hybridization	Remove the cover slip and wash again  Check the PH and temperature of the wash solution  Change washing solution
<b>Weak or Invisible Signals</b>	
Probe expired or quenched	Check expiration date of the probes  Store the probes at -20 degree Celsius in the dark
Air bubble in the hybridization area	Clean the cover slips before use  Apply cover slips carefully to avoid making bubbles
Probe solution dried out during hybridization	Make sure the cover slip is sealed by rubber cement completely  Add sufficient water in the moist chamber
Inadequate denaturing of probes	Make sure the probes are denatured at 75 degrees Celsius
Probes are too dilute	Use more concentrated probes
Inadequate denaturing of slides	Increase the denaturing temperature  Increase the denaturing time  Change denaturing solution
Incorrect filter used	Select proper filters  Select proper color of the probes for the filters
Exhausted filters	Change the filters according to the product instructions
Exhausted mercury lamp	Change the mercury lamp according to product instruction



# Legal Terms

## Terms of Sale

### 1. Delivery

Delivery terms shall be FOB CytoTest shipping point, freight will be added to the invoice. Title and risk of loss shall pass to Customer upon delivery to the carrier. CytoTest reserves the right to make delivery in installments, all such installments to be separately invoiced and paid for when due per invoice, without regard to subsequent deliveries. Delay in delivery of any installment shall not relieve Customer of Customer's obligations to accept remaining deliveries.

### 2. Inspection and Returns

Upon your receipt of goods, you shall inspect the goods and notify our Customer Services Department of any claims for shortages, defects or damages. If you fail to so notify us within ten days after you receive the goods, the goods shall conclusively be deemed to conform to these Terms and Conditions and to have been accepted by you. Authorization for all product returns must be approved by our Customer Services Department and a return authorization number given to you prior to the return of goods. Not all items will be authorized for return, due to temperature and packing requirements. Items authorized for return must arrive at our facilities in a state satisfactory for resale to be eligible for product credit. A restocking charge of 20% or \$25 (whichever is greater) may be charged on returns that are not the result of any error or fault of ours. Shipping charges will not be credited. Goods may not be returned for credit more than 30 days after your receipt of the goods.

### 3. Credits and Refunds

At our discretion, we may issue a product credit or refund for the product value and shipping charges. No product credit shall be available for use if a past due balance is outstanding on the account. Any product credit not used within six months of the date of issue shall expire.

### 4. Product Descriptions

The product descriptions provided in this catalog are for general informational purposes only, and are not warranties or promises regarding the products, their features or performance. If you are interested in further information regarding product pricing, license or sales terms, please contact CytoTest's customer service.

### 5. Warranties

CytoTest warrants that the product will meet specifications listed. At CytoTest's discretion, free replacement of any nonconforming product will be made if CytoTest is notified within 30 days of product receipt. This warranty limits CytoTest's liability to the cost of replacement of the product in question only. CytoTest provides no other warranty, express or implied, and is not liable or responsible for any indirect or incidental damages or loss as a consequence of product use. No warranty is given for products used after the printed expiration date or for products not stored or used according to the product use specifications given. If you experience difficulty with any CytoTest product, please contact CytoTest Technical Support promptly.

### 6. Price Change Policy

CytoTest reserves the right to change pricing on its products at its discretion. Should the customer note a non-promotional price change within 30 days of placing an order, they may contact CytoTest Customer Support for assistance.



# Notes







**CytoTest Inc.**

9430 Key West Ave Suite 210  
Rockville, MD 20850  
USA  
Email: [sales@cytotest.com](mailto:sales@cytotest.com)  
Phone: +1-202-688-1188  
Fax: +1-301-296-6950

**USA Headquarter and Service Center**

**Authorized Distributor and Reseller**