Solutions for Molecular Pathology Laboratory of Today, Tomorrow and Beyond...

BioGenex designs, develops, and commercializes advanced fully-automated molecular pathology systems for cancer diagnosis, prognosis, personalized medicine, and life science research. The recent introduction of our eFISHency integrated workflow solution for FISH laboratories and miRNA system for characterization of CUP and for undifferentiated tumors is a game changer and unrivaled in the industry. Our fully automated molecular pathology work stations are the most advanced system globally. Our customer focused approach, with premier after sales support and excellent technical service, provides the best in class customer care. Our spirit of innovation drives us to deliver cutting edge technology, years ahead of our competition, and the finest systems for life Science research and diagnostics.

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www.biogenex.com

BioGenex
Accelerating the pace of precision Oncology

Game Changer

eFISHiency Integrated System

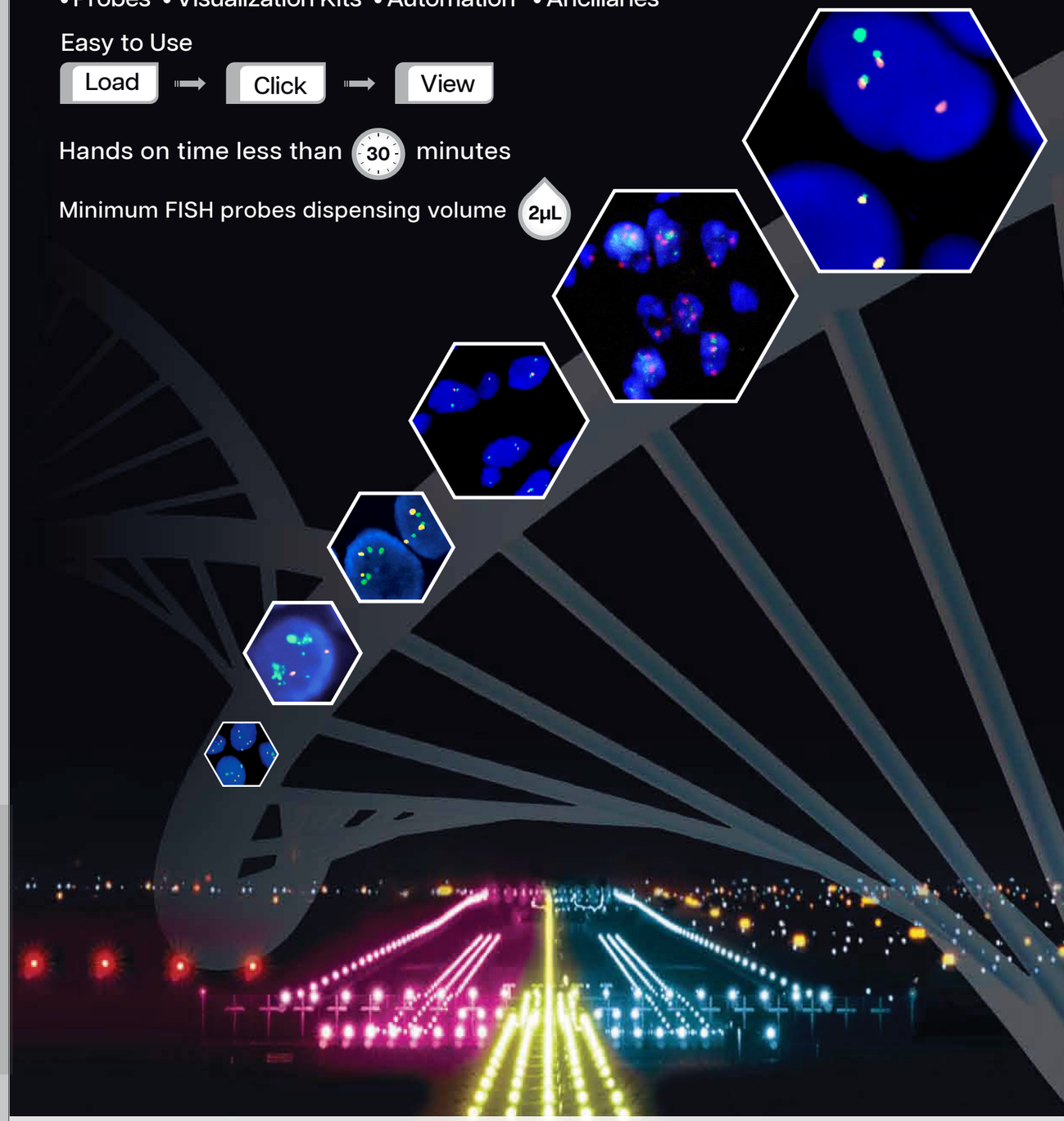
• Probes • Visualization Kits • Automation • Ancillaries

Easy to Use

Load → Click → View

Hands on time less than 30 minutes

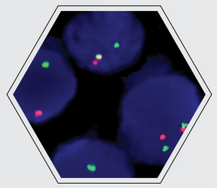
Minimum FISH probes dispensing volume 2µL



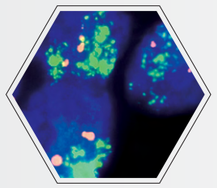
BioGenex
Accelerating the pace of precision Oncology

• Ready to Use • Intense Signals • Opimized protocols

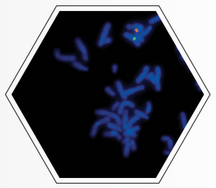
eFISH Probes



Hematology Probes



Oncology Probes



Genetics & Enumeration Probes

Automation					
	NanoVIP® Elite	NanoVIP® Infinity	NanoVIP® 300	Xmatrx® Elite	Xmatrx® Infinity
FISH Using 2µL Probe	No	No	Yes	No	No
FISH Using 10µL Probe	Yes	Yes	Yes	Yes	Yes

Kit Components

- Nucleic Acid Retrieval
- Protease
- Fixative (Cyto)
- Wash Buffer

eFISH Visualization Kits & Accessories

The kits consist of convenient-to-use reagents including protease and buffers for pre-treatment and post-hybridization stringency washes. eFISH Histo is for formalin fixed paraffin embedded blocks (FFPE), eFISH Cyto is for bone marrow aspirate, peripheral blood and smear slides. Kits include template protocols optimized for use with eFISH probes and kits.

Reagents*	Volume
eFISH Histo kit (20 Tests)	Cat # DF500-20XE
eFISH Liquid pepsin	7 mL
EZ-AR™ 2, Nucleic Acid Retrieval	5 mL
eFISH Wash buffer1 (10x)	200 mL
eFISH Reagent A	12 mL
eFISH Cyto kit (20 Tests)	Cat # DF510-20XE
eFISH Liquid pepsin	7 mL
eFISH Formalin fixative	20 mL
eFISH Wash buffer 1 (10X)	200 mL
eFISH Wash buffer 2 (10X)	200 mL

Reagents & Consumables	Volume	Cat. No.
DAPI counter stain	1 mL	HK606-10K
Barrier Slides		
18x18mm	72 slides/box	XT128-SL
18x18mm	1440 slides/case	XT128-CL
25x25mm	72 slides/box	XT108-SL
25x25mm	1440 slides/case	XT108-CL
Coverslips		
18x18mm	175 coverslip/box	XT121-YBX
18x18mm	1750 coverslip/box	XT121-XBX
25x25mm	90 coverslip/box	XT122-90X
25x25mm	900 coverslip/box	XT122-YQK
X-DeWax™		
Ready to use	1000 mL	HX015-XAK
Concentrated (2X)	1000 mL	HX016-XAK

*Kit component may change as per protocols update.

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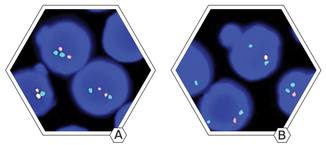
eFISHiency Integrated System

- Affordable
- Reproducible
- Reliable

DELETION

eFISH TP53 / CEN17

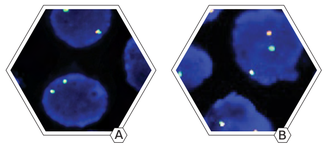


A. Normal interphase cells showing two orange and two green signals in each nucleus.

B. Bone marrow tissue with deletion of the TP53 gene as indicated by one orange signal and two green signals in each nucleus.

BREAK APART

eFISH ROS1

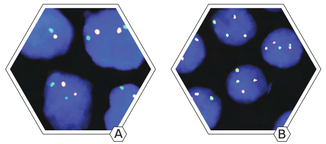


A. Normal interphase cells showing two orange/green fusion signals (yellow) in each nucleus.

B. Paraffin embedded NSCLC cells showing one orange/green fusion signal (non-rearranged). One orange signal, and one green signal indicating translocation of ROS1.

FUSION

eFISH BCR / ABL

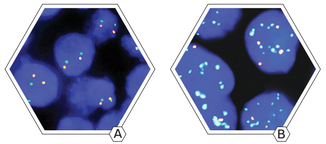


A. Normal interphase cells showing two orange and two green signals in each nucleus.

B. Bone marrow biopsy tissue with translocation affecting the BCR/ABL loci as indicated by one orange signal, one green signal and two orange/green fusion signals.

COPY NUMBER

eFISH FGFR1 / CEN8



A. Normal interphase cells showing two orange and two green signals in each nucleus.

B. Lung carcinoma tissue showing amplification of the FGFR1 gene (green) and partly polysomy 8 (orange).

BioGenex
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Game Changer

High Sensitivity & Specificity - Optimum Results

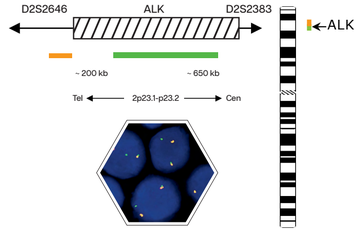
eFISH probes provide improved signal intensity. All eFISH probes are processed by a unique Repeat Subtraction Technique resulting in intense clear stain.

Ordering Information

eFISH Oncology Probes*

The use of eFISH ALK Dual Color Break Apart Probe along with appropriate filters produces orange and green signal for hybridization regions of chromosomal region 2p23. In normal interphase cells or cells without 2p23 translocation, two orange/two green fusion signals appear. In regions where 2p23 is affected by translocation, one separate green signal and one separate orange signal are observed.

eFISH ALK Probe Map (not to scale)



Product Description	Probe Type	Colors	Cat. No. (10 Tests)	Cat. No. (20 Tests)
eFISH 1p36/1q25	Gene Deletion	•/•	FP044-10XE	FP044-20XE
eFISH 19q13/19p13	Gene Deletion	•/•	FP045-10XE	FP045-20XE
eFISH ALK	Breakapart	•/•	FP056-10XE	FP056-20XE
eFISH CHOP	Breakapart	•/•	FP050-10XE	FP050-20XE
eFISH CMYC/CEN 8	Copy Number	•/•	FP065-10XE	FP065-20XE
eFISH COL1A1	Breakapart	•/•	FP054-10XE	FP054-20XE
eFISH COL1A1/PDGFB	Dual Fusion	•/•	FP052-10XE	FP052-20XE
eFISH EGFR/CEN 7	Copy Number	•/•	FP040-10XE	FP040-20XE
eFISH EWSR1	Breakapart	•/•	FP048-10XE	FP048-20XE
eFISH FGFR1/CEN 8	Copy Number	•/•	FP042-10XE	FP042-20XE
eFISH FGFR2/CEN 10	Copy Number	•/•	FP055-10XE	FP055-20XE
eFISH FOXO1	Breakapart	•/•	FP077-10XE	FP077-20XE
eFISH FUS	Breakapart	•/•	FP058-10XE	FP058-20XE
eFISH HER2/CEN17	Copy Number	•/•	FP039-10XE	FP039-20XE
eFISH MDM2/CEN 12	Copy Number	•/•	FP038-10XE	FP038-20XE
eFISH MET/CEN 7	Copy Number	•/•	FP047-10XE	FP047-20XE
eFISH NMYC/2q11	Copy Number	•/•	FP043-10XE	FP043-20XE
eFISH p16/CEN 9	Gene Deletion	•/•	FP041-10XE	FP041-20XE
eFISH PDGFB	Breakapart	•/•	FP053-10XE	FP053-20XE
eFISH PIK3CA/CEN 3	Copy Number	•/•	FP059-10XE	FP059-20XE
eFISH RB1/13q12	Gene Deletion	•/•	FP079-10XE	FP079-20XE
eFISH RET	Breakapart	•/•	FP061-10XE	FP061-20XE
eFISH ROS1	Breakapart	•/•	FP060-10XE	FP060-20XE
eFISH SYT	Breakapart	•/•	FP049-10XE	FP049-20XE
eFISH TERT/5q31	Copy Number	•/•	FP066-10XE	FP066-20XE
eFISH TFE3	Breakapart	•/•	FP051-10XE	FP051-20XE
eFISH TP53/CEN 17	Gene Deletion	•/•	FP062-10XE	FP062-20XE
eFISH VHL/CEN 3	Gene Deletion	•/•	FP046-10XE	FP046-20XE

*For In Vitro Diagnostics Use

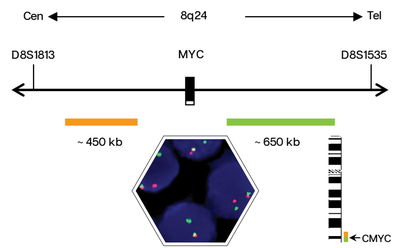
eFISHiency Integrated System

Ordering Information

eFISH Hematology Probes*

eFISH CMYC Dual Color break apart Probe is a mixture of two direct labeled probes hybridizing to the 8q24 band. The orange fluorochrome direct labeled probe hybridizes proximal to the CMYC gene, the green fluorochrome direct labeled probe hybridizes distal to that gene.

CMYC Probe Map (not to scale)



Product Description	Probe Type	Colors	Cat. No. (10 Tests)	Cat. No. (20 Tests)
eFISH ALK	Breakapart	•/•	FP056-10XE	FP056-20XE
eFISH AML1/ETO	Dual Fusion	•/•	FP072-10XE	FP072-20XE
eFISH BCL2/IGH	Dual Fusion	•/•	FP074-10XE	FP074-20XE
eFISH BCL6	Breakapart	•/•	FP080-10XE	FP080-20XE
eFISH BCR/ABL	Dual Fusion	•/•	FP071-10XE	FP071-20XE
eFISH BIRC3/MALT1	Dual Fusion	•/•	FP075-10XE	FP075-20XE
eFISH CCND1	Breakapart	•/•	FP069-10XE	FP069-20XE
eFISH CCND1/CEN 11	Copy Number	•/•	FP063-10XE	FP063-20XE
eFISH CCND1/IGH	Dual Fusion	•/•	FP057-10XE	FP057-20XE
eFISH CMYC	Breakapart	•/•	FP064-10XE	FP064-20XE
eFISH CMYC/CEN 8	Copy Number	•/•	FP065-10XE	FP065-20XE
eFISH CMYC/IGH	Dual Fusion	•/•	FP067-10XE	FP067-20XE
eFISH D13S319/ 13q34/CEN 12	Copy Number	•/•/•	FP078-10XE	FP078-20XE
eFISH EGR1/5p15	Gene Deletion	•/•	FP068-10XE	FP068-20XE
eFISH ETV6	Breakapart	•/•	FP083-10XE	FP083-20XE
eFISH ETV6/RUNX1	Dual Fusion	•/•	FP076-10XE	FP076-20XE
eFISH IGH	Breakapart	•/•	FP070-10XE	FP070-20XE
eFISH p16/CEN 9	Gene Deletion	•/•	FP041-10XE	FP041-20XE
eFISH PDGFRB	Breakapart	•/•	FP081-10XE	FP081-20XE
eFISH PML/RARA	Dual Fusion	•/•	FP073-10XE	FP073-20XE
eFISH RB1/13q12	Gene Deletion	•/•	FP079-10XE	FP079-20XE
eFISH TERT/5q31	Copy Number	•/•	FP066-10XE	FP066-20XE
eFISH TP53/CEN 17	Gene Deletion	•/•	FP062-10XE	FP062-20XE

*For In Vitro Diagnostics Use

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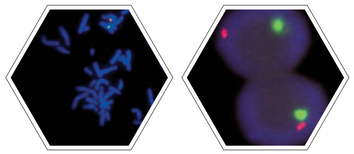
Ordering Information

eFISH Enumeration Probes*

Chromosome enumeration probes (CEP) are chromosome -specific FISH probes that hybridize to highly repetitive human satellite DNA sequences, usually located near centromeres.CEP signals are bright, and enable the identification and enumeration of human chromosomes in interphase and meta-phase cells from fresh and archived samples.



Product Description	Probe Type	Colors	Cat. No. (10 Tests)	Cat. No. (20 Tests)
eFISH 1p12	Copy Number	•	FP084-10XE	FP084-20XE
eFISH 2q11	Copy Number	•	FP085-10XE	FP085-20XE
eFISH CEN 3	Copy Number	•	FP086-10XE	FP086-20XE
eFISH 4p11	Copy Number	•	FP087-10XE	FP087-20XE
eFISH CEN 6	Copy Number	•	FP088-10XE	FP088-20XE
eFISH CEN 7	Copy Number	•	FP089-10XE	FP089-20XE
eFISH CEN 8	Copy Number	•	FP090-10XE	FP090-20XE
eFISH CEN 9	Copy Number	•	FP091-10XE	FP091-20XE
eFISH CEN 10	Copy Number	•	FP092-10XE	FP092-20XE
eFISH CEN 11	Copy Number	•	FP093-10XE	FP093-20XE
eFISH CEN 12	Copy Number	•	FP094-10XE	FP094-20XE
eFISH 13q12	Copy Number	•	FP095-10XE	FP095-20XE
eFISH CEN 13/ CEN 18/CEN 21	Copy Number	•/•/•	FP096-10XE	FP096-20XE
eFISH CEN 17	Copy Number	•	FP097-10XE	FP097-20XE
eFISH CEN 18	Copy Number	•	FP098-10XE	FP098-20XE
eFISH 21q22	Copy Number	•	FP099-10XE	FP099-20XE
eFISH CEN X	Copy Number	•	FP100-10XE	FP100-20XE
eFISH CEN Yq12	Copy Number	•	FP101-10XE	FP101-20XE
eFISH CEN X/Yq12	Copy Number	•/•	FP102-10XE	FP102-20XE

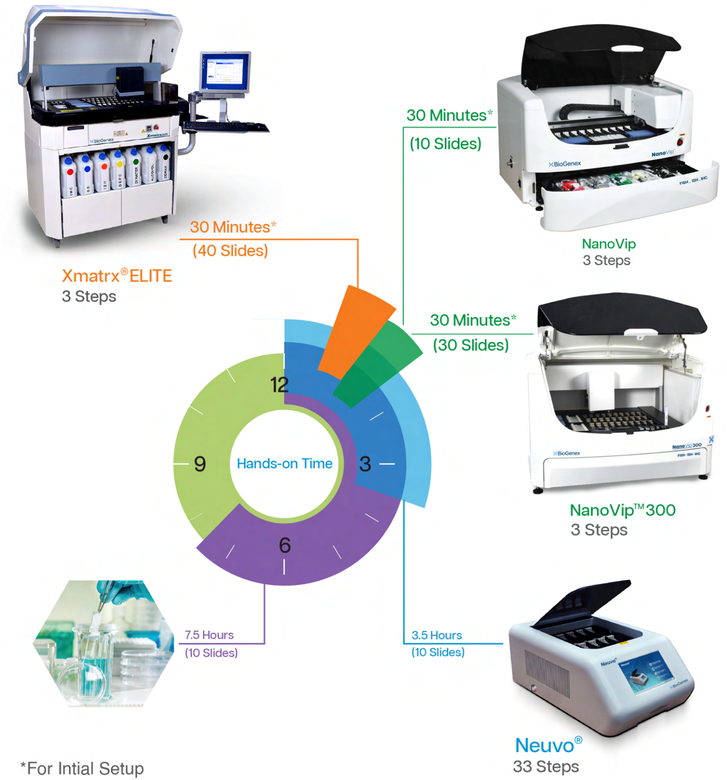
eFISH Probe Characteristics

Fluorochrome	Excitation	Emission	Similar to
eFISH ■	418 nm	467 nm	DEAC
eFISH ■	503 nm	528 nm	FITC
eFISH ■	547 nm	572 nm	Rhodamine

*For In Vitro Diagnostics Use

Adaptable to your Work Flow

HANDS-ON TIME REDUCED BY >90%



*For Intial Setup

Multiple Options for Automation

Xmatrx®ELITE
Microtome to Microscope

- The world's first and only fully automated Front-end FISH Processing System
- Run up to 40 slides under multiple protocols
- Reduce hands-on tech time from 7.5 hours to 30 minutes

33 Steps Reduced to 3

Load ➡ Click ➡ View

NanoVip™
All-in-One • FISH • ISH • IHC • *in situ* PCR

- Compact design
- Fully automated
- Minimal reagent use and cost efficient
- Liquid sensors for accurate liquid handling

33 Steps Reduced to 3

Load ➡ Click ➡ View

Neuvo®
eFISHiency Workstation

- Hybridizer with eXACT™ temperature control
- 10 independently programmable thermal cyclers
- Built-in touch screen display
- Manual coverslip application and removal

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New Additions...!

Product Description	Probe Type	Colors	Cat. No.(10 Tests)	Cat. No.(20 Tests)
eFISH CDKN2A/CEN 9	Gene Deletion	•/•	FP117-10X	FP117-20X
eFISH MYCN/2q11	Copy Number	•/•	FP121-10X	FP121-20X
eFISH CDKN2A/CEN 3/7/17	Gene Deletion	•/•/•/•	FP126-10X	FP126-20X
eFISH MYC	Break Apart	•/•	FP132-10X	FP132-20X
eFISH MYC/CEN 8	Copy Number	•/•	FP134-10X	FP134-20X
eFISH SS18	Break Apart	•/•	FP137-10X	FP137-20X
eFISH DDIT3	Break Apart	•/•	FP138-10X	FP138-20X
eFISH MYC/IGH	Break Apart	•/•	FP140-10X	FP140-20X
eFISH RUNX1/RUNX1T1	Copy Number	•/•	FP146-10X	FP146-20X
eFISH KRAS/CEN 12	Copy Number	•/•	FP149-10X	FP149-20X
eFISH SOX2/CEN 3	Copy Number	•/•	FP156-10X	FP156-20X
eFISH FUS	Break Apart	•/•	FP157-10X	FP157-20X
eFISH MYB	Break Apart	•/•	FP160-10X	FP160-20X
eFISH NR4A3	Break Apart	•/•	FP162-10X	FP162-20X
eFISH KMT2A	Break Apart	•/•	FP171-10X	FP171-20X
eFISH PDGFRB	Break Apart	•/•	FP172-10X	FP172-20X