WORLD ODISSEY

CE IVD

FAST-Probe (Fluorescence In-Situ Hybridization / FISH Probe)

***FAST*-Probe** is based on unique fluorescence in situ hybridization technology; it takes only 2 hours for hybridization for the blood cells and tissues.

***FAST*-Probe** is based on unique fluorescence in situ hybridization technology. A nucleic acid probe is labeled with fluorescein; the target gene is detected with homologous complementary to the nucleic acid probe used. Both after denaturation, annealing and renaturation, the hybrid of the target gene and the nucleic acid probe can be formed, and the qualitative, quantitative or relative positioning analysis of the gene to be measured under the microscope can be performed by the fluorescence detection system.

***FAST*-Probe** uses non-repetitive sequences technology ensuring a product with a very good hybridization results; and it offers high specificity with accuracy while providing clear signal to background noise & excellent anti-quenching effect that allows long observation under fluorescence microscope.

11q23.3/11q24.3	CSF1R (5q32)	MDM2
13 (13q14)	CSF1R/D5S630	MET
13q	D13S25 (13q14)	MLL
15q22/6q21	D13S319	MYB (6q23)
1p/19q	D13S319/CEP12	MYC
1q21/1p32	D20S108/CEP8	MYC (8q24)
20q	D7S486/CEP7	MYCN
3p	D7S522/CEP7	NR4A3 (9q22)
6q (ROS1)	DDIT3 (12q13)	NTRK1
ABL1 (9q34)	DEK/NUP214	NTRK2 (9q21)
ABL2 (1q25)	E2A	NTRK3 (15q25)
ALK	EGR1/D5S630	NUP98
AML1/ETO	EPOR (19p13)	P16
API2/MALT1	ETV6	P53/CEP17
BCL2	ETV6 (TEL)/RUNX1 (AML1)	PAX3 (2q36)
BCL6	ETV6/NTRK3	PDGFRA
BCL6/IGH	EVI	PDGFRB
BCR/ABL (DF)	EWSR1	PDL1 (9p24)/CSP9
BRAF	FGFR1	Prenatal chromosomes
CBFB	FGFR3/IGH	RARA
CBFBMYH11	FKHR	RARA (17q21)
CCND1 (BCL1)	FUS	RB1
CCND1/IGH	HER2	RB1/ATM
CCND3/IGH	IGH	RET
CDK4 (12q13)/SE12	IGH/BCL2	SRD (1p36)
CEP11/ATM	IGH/C-MYC	SS18 (SYT)
CEP12	IRF4 (6p25)	TCF3/PBX1
CEP17	JAK2	TCRB (7q34)
CEP3/CEP7; P16/CEP17s	JAZF1 (7p15)	TERC
CEP4/CEP10	KMT2A (MLL)	TFE3
CEP7	MAF/IGH	TMPRSS2
CEP8	MAFB/IGH	TOP2A
CEPX/CEPY	MALT1	USP6 (17p13)
CHIC2 (PDGFRA)	MALT1/IGH	Yq12/CEPX
CRLF2	MAML2 (11q21)	

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Protocol for Tissue Sample:

Paraffin-embedded tissue samples fixation with 4% formaldehyde (for 6-72 hours)
Thickness: 35μm
Glass slides: Adhesive slides

PRETREATMENT
Slides heating: Heat at 80oC for 30min or 65°C for 2h or overnight.
Dewaxing: deparaffinization agent 68°C for 15min.
Washing: Wash with anhydrous EtOH at room temperature for 5min.
Permeation: Permeation agent 90°C for 20min or deionized water 90°C for 40min.
Washing: Wash with distilled water at 37°C for 3min.
Digestion: Enzymic digestion at 37oC for 10-40min. Enzyme working buffer and Protease solution (10x) in 9:1 proportion.
Washing: At room temperature, wash with cleaning solution twice, 5min each time.
Dehydration: With 70%, 85% and 100% gradient EtOH for 2min.
Dry at room temperature.

DENATURATION
Before probe use, invert the tube up and down for 5 times.
Centrifuge instantaneously for 1-2 sec., if there is a persistent red substance, invert until the substance disappearance.

HYBRIDIZATION
85°C denaturation for 5min
42°C hybridization for 2h
(for pretreatment made with FISH Pretreatment Reagent Kit);or Overnight
(for pretreatment made FISH Pretreatment Kit Reagent Kit)

WASHING
Wash at room temperature with 2xSSC solution for 1min.
Washing solution 68°C (Neutral 0.3% NP-40/0.4 x SSC solution) for 3min. Deionized water at 37°C for 1min.
Dry at room temperature.

DYEING
DAPI counterstaining for 10 min.

RESULTS ANALYSIS
Target area analysis under fluorescence microscope
(Filter parameters: Green (495/518), Orange (553/565), DAPI (367/452).

Protocol for Cell Sample:

Anticoagulated fresh bone marrow
(Storage conditions 4°C, within 24h)
Bone marrow cells accurate fixation
(Storage conditions -20°C, within 6 months)
Glass slides: Ordinary/Common glass slides

PRETREATMENT
Slides heating: Heat at 56°C for 30min.
Washing: At room temperature, wash with cleaning solution twice, 5mineach time.
Dehydration: With 70%, 85% and 100% gradient EtOH for 2min.
Dry at room temperature.

DENATURATION
Before probe use, invert the tube up and down for 5 times.
Centrifuge instantaneously for 1-2 sec.,
if there is a persistent red substance, invert until the substance
disappearance.

HYBRIDIZATION
88°C denaturation for 2min.
45°C hybridization for 2h.

WASHING
Wash at room temperature with 2xSSC solution for 1min.
Washing solution 68°C (Neutral 0.3% NP-40/0.4 x SSC solution) for 3min. Deionized water at 37°C for 1min.
Dry at room temperature.

DYEING
DAPI counterstaining for 10 min.

RESULTS ANALYSIS
Target area analysis under fluorescence microscope
(Filter parameters: Green (495/518), Orange (553/565), DAPI (367/452).

Flexible Dye Selection:

Fluorescence	Excitation	Emission	Filter
Orange (RHO)	553	565	Orange Monochannel; Green/Orange Dual Channel
Green (FITC)	495	518	Green Monochannel; Green/Orange Dual Channel
Blue (DAPI)	367	452	Monochannel