

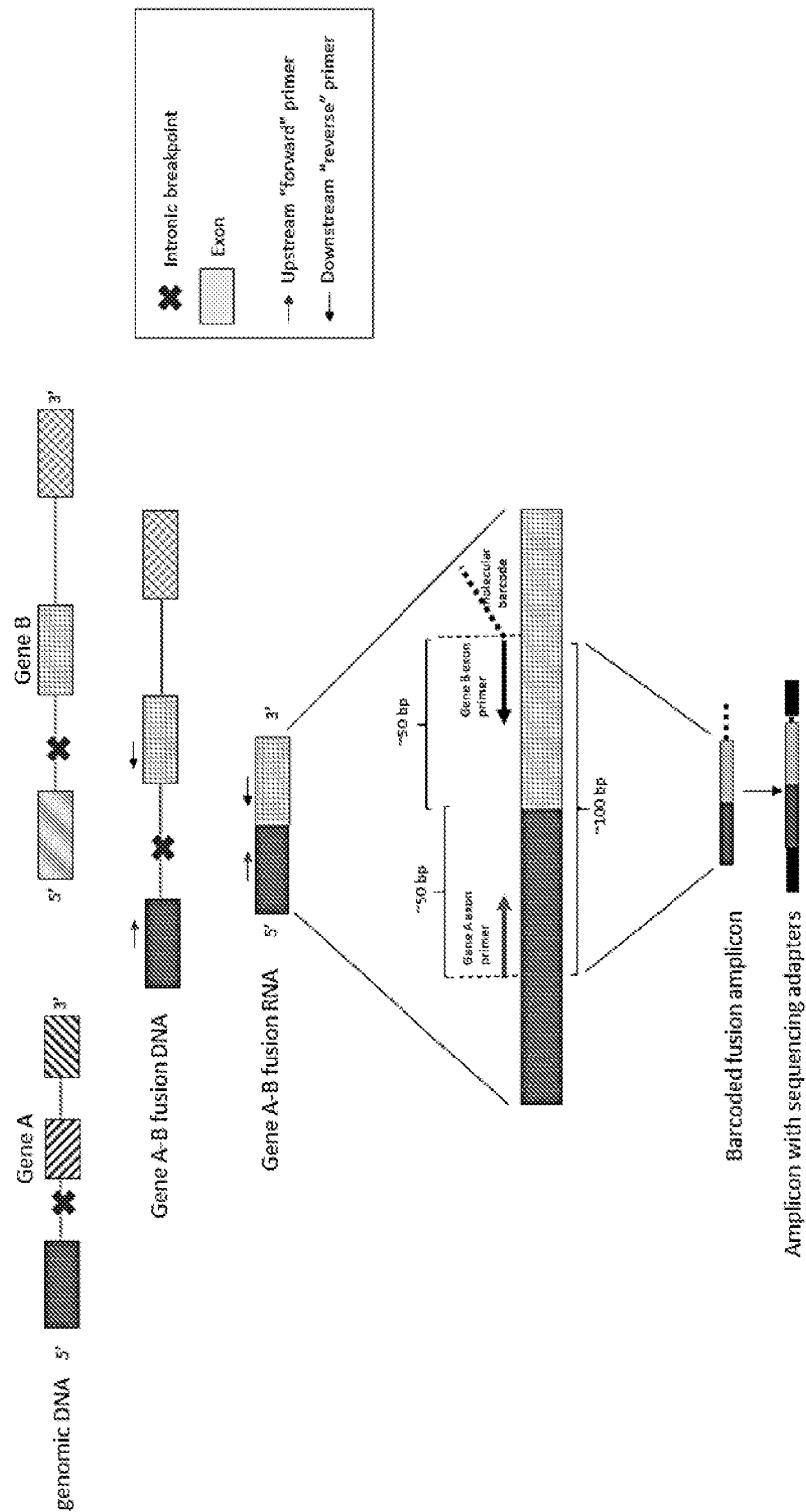


Fig. 1

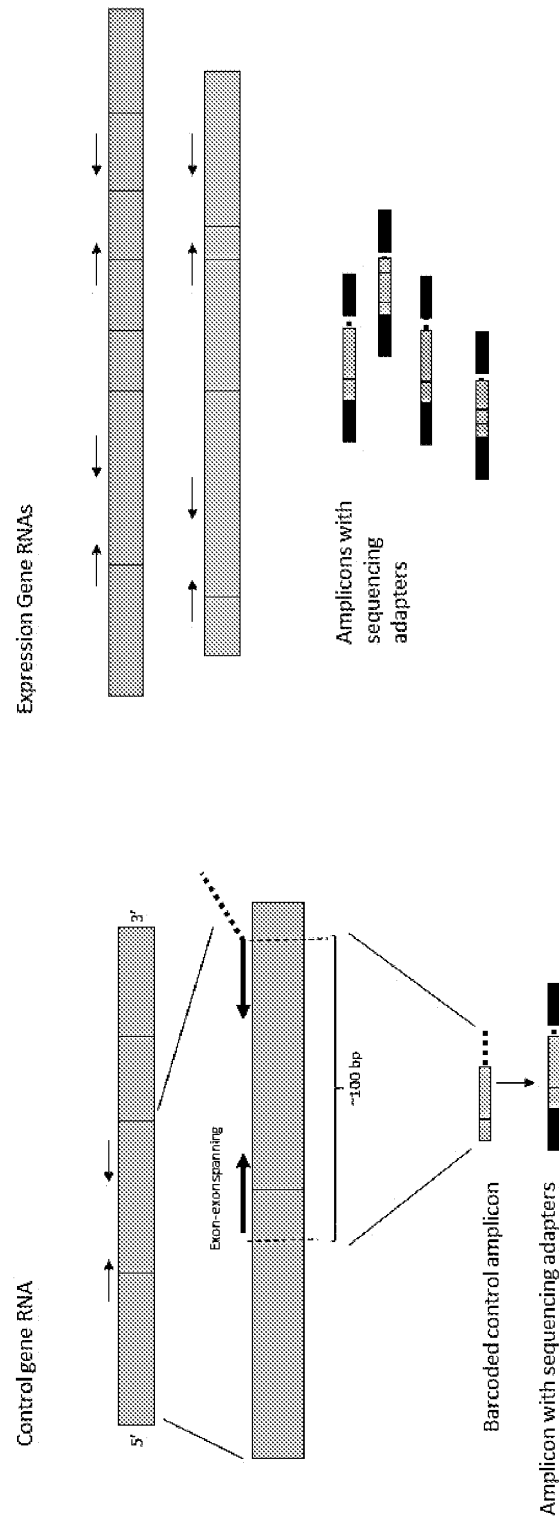


Fig. 2A

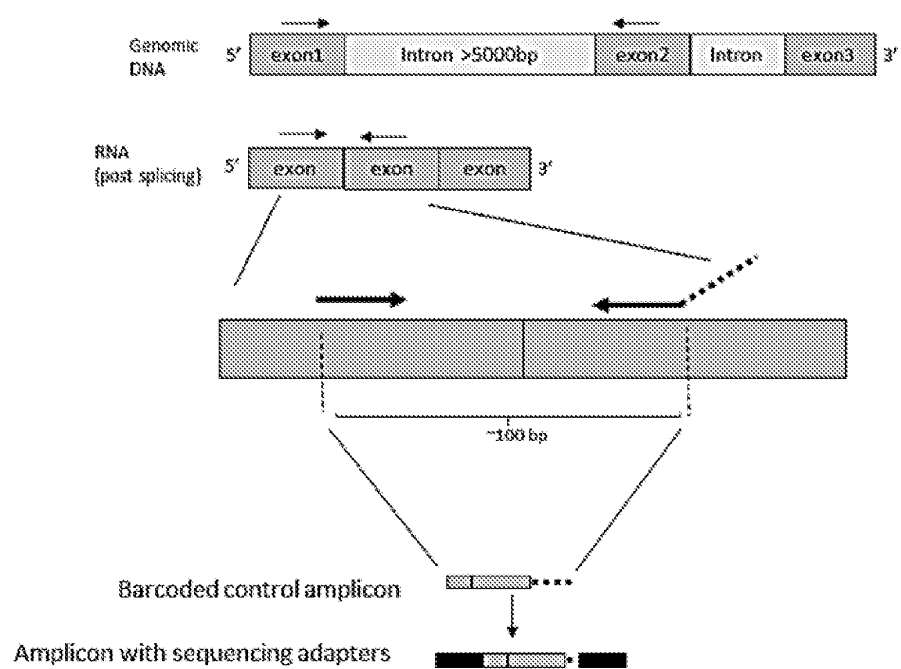


Fig. 2B

Cancer – 5.24 ng/ul

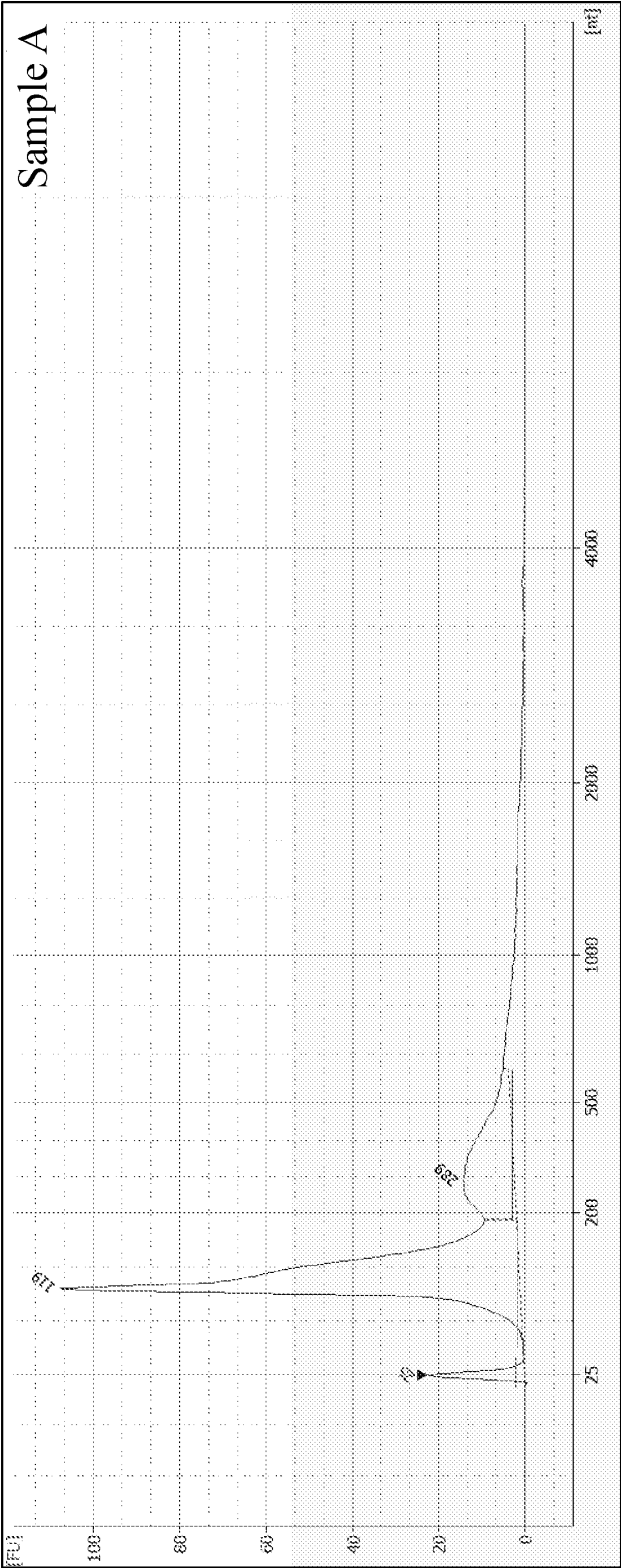


Fig. 3A

Cancer – 2.71 ng/ul

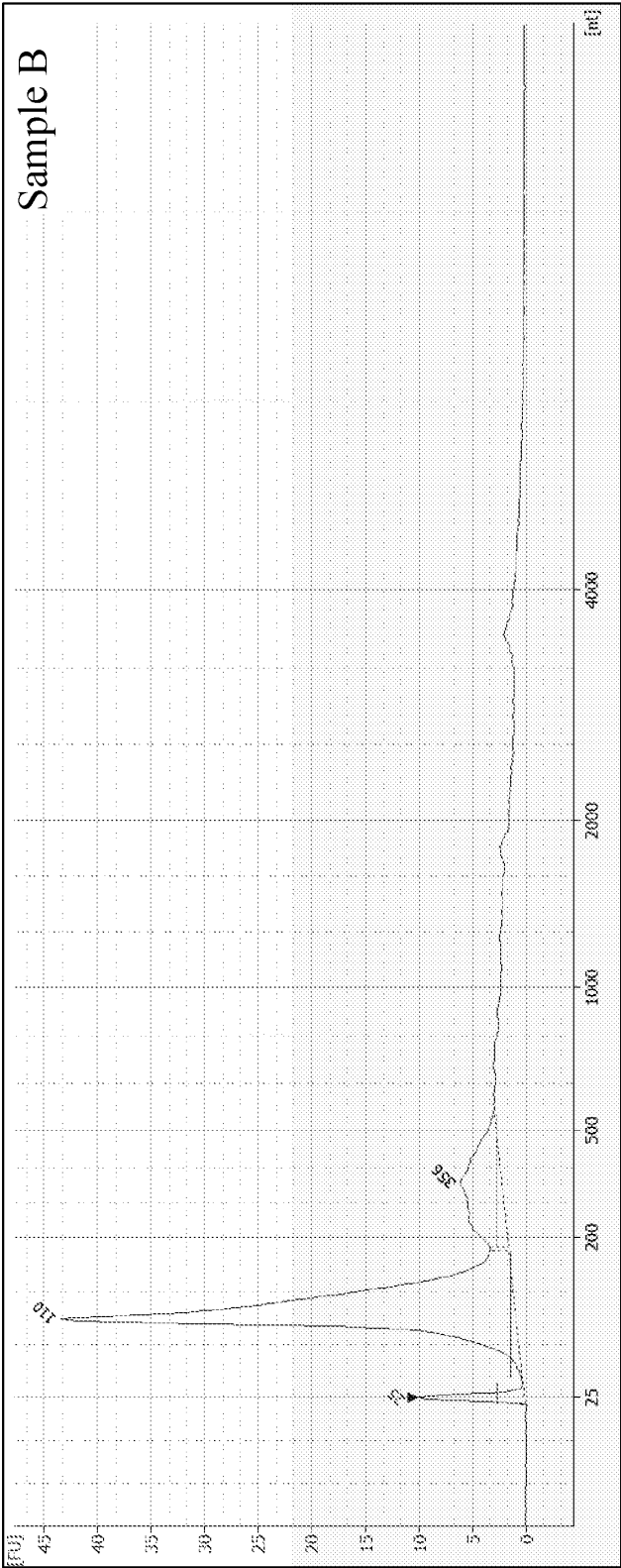


Fig. 3B

Healthy - 0.82 ng/ul

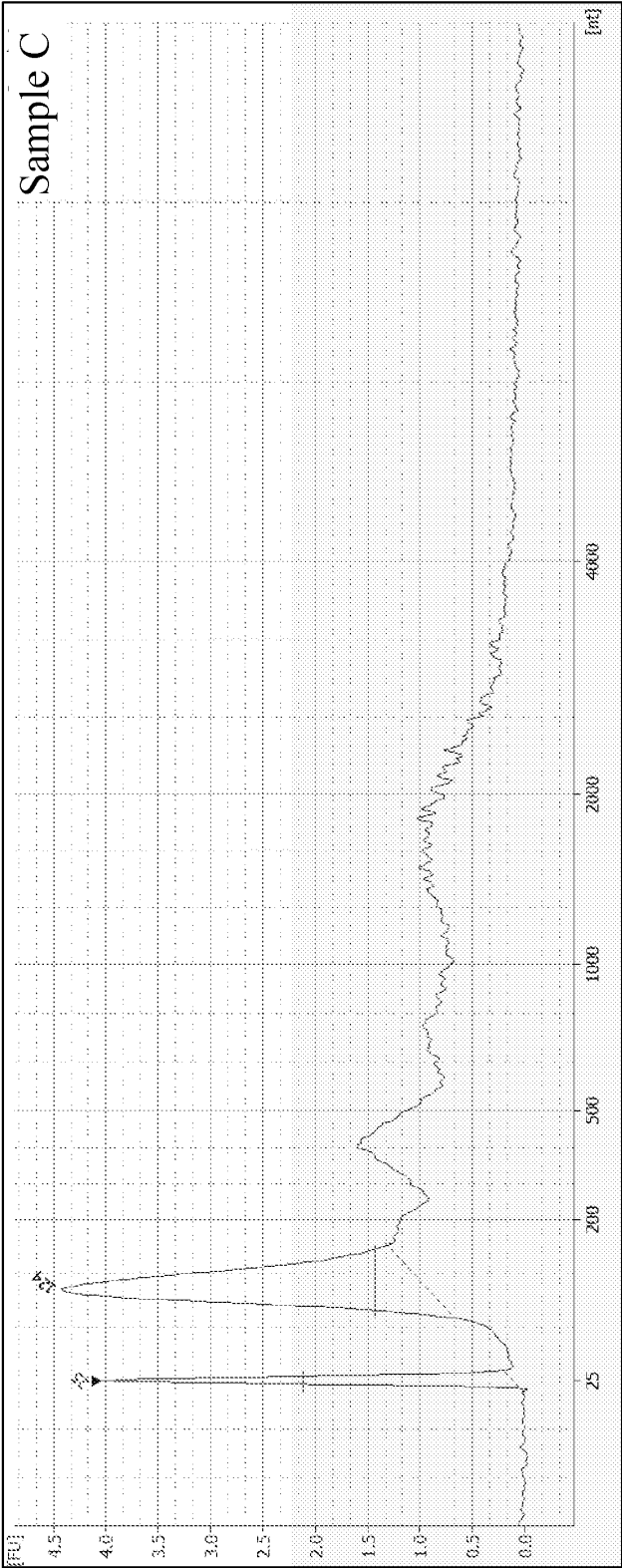


Fig. 3C

Healthy – 0.571 ng/ul

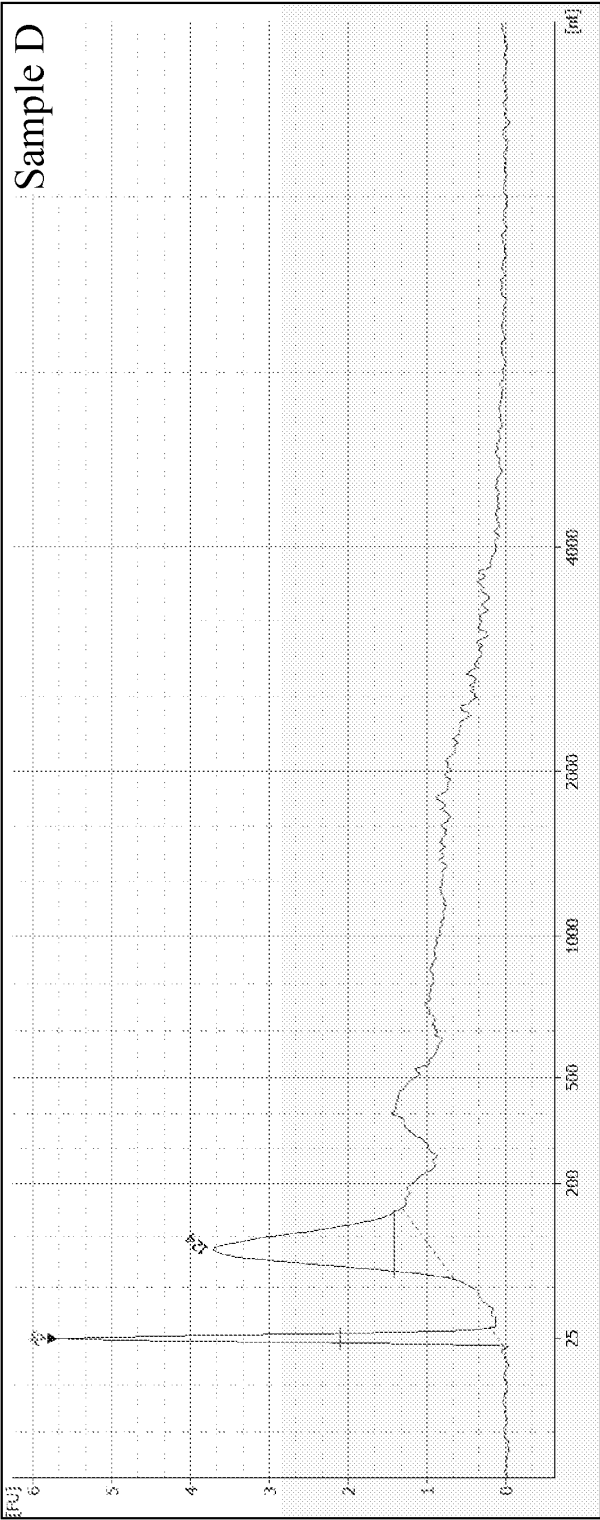


Fig. 3D

Sample	Diagnosis	cfDNA per ml plasma (ng)	cfRNA per ml plasma (ng)
Ca-1	Metastatic Prostate Cancer	145	43.7
Ca-2	Metastatic Lung Cancer	26.6	27.1
Ca-3	Metastatic Pancreatic Cancer	25.8	61.5
Ca-4	Metastatic Prostate Cancer	356.5	52.1
Ca-5	Metastatic Lung Cancer	2156	96.8
Hth-1	Healthy	7.92	8.2
Hth-2	Healthy	4.76	5.71
Hth-3	Healthy	7.37	3.33

Fig. 4

H2228 RNA

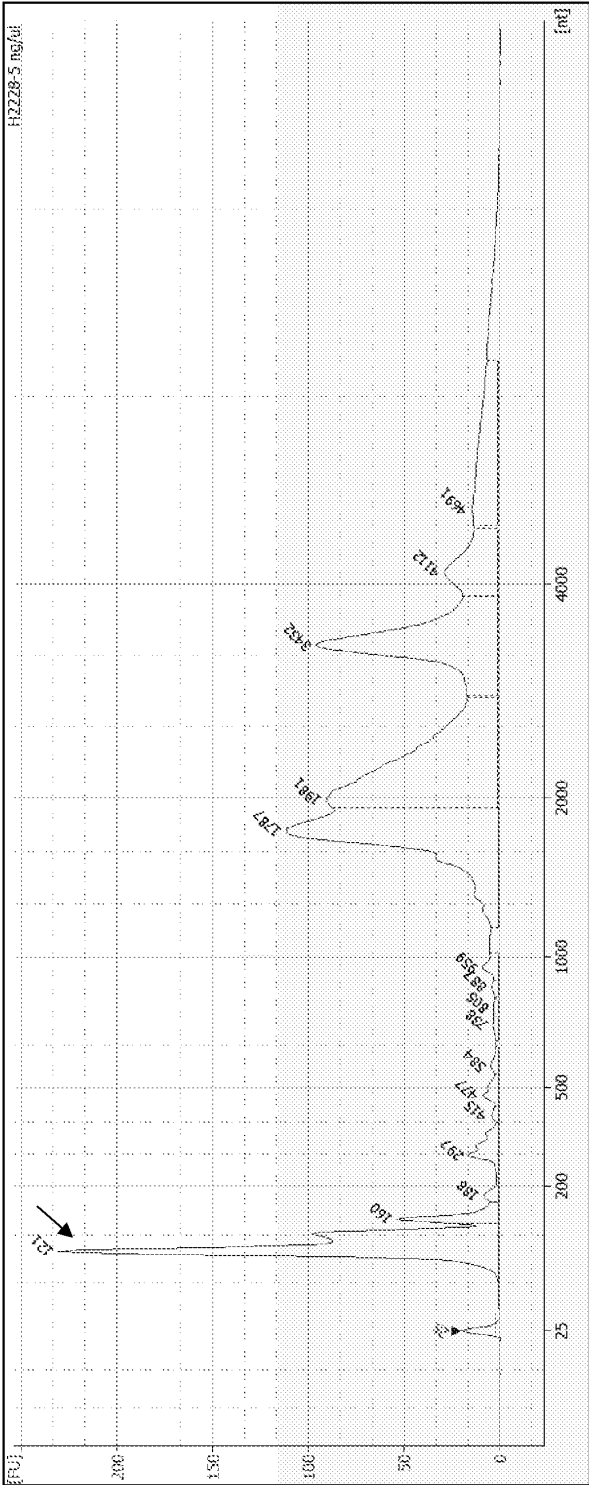


Fig. 5A

Fragmented H2228 RNA

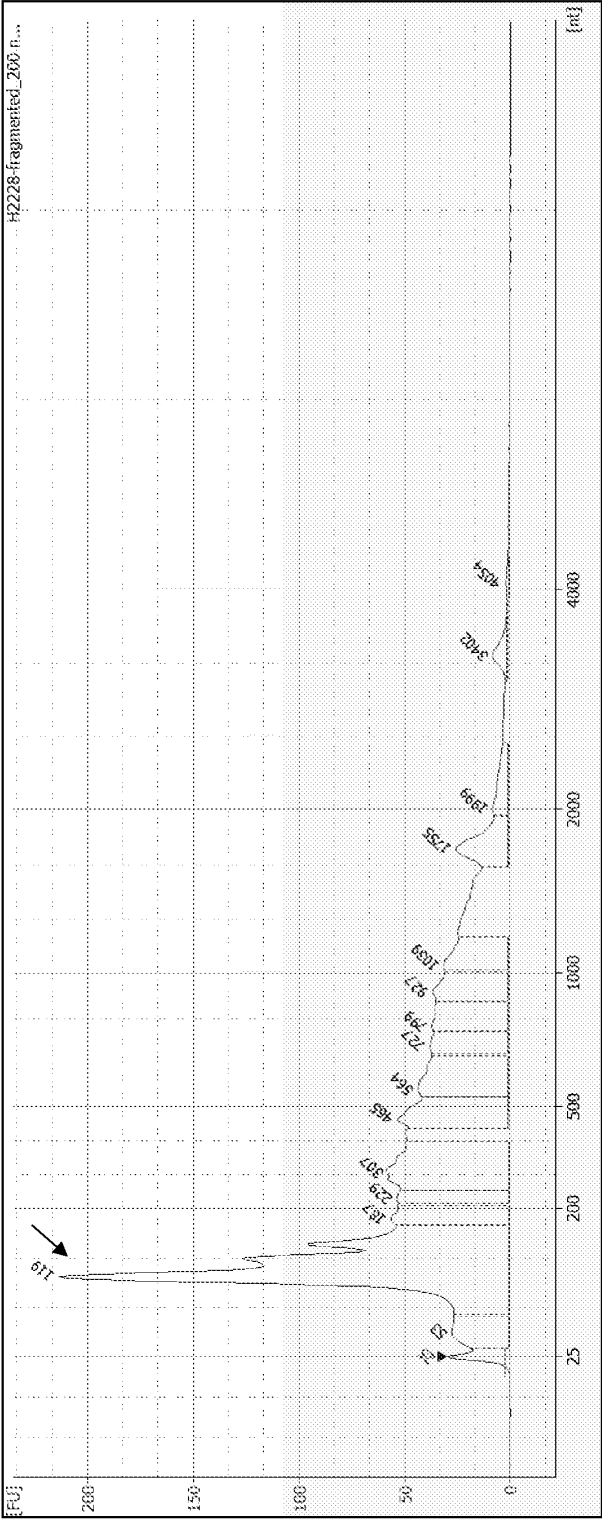


Fig. 5B

Plasma cfRNA

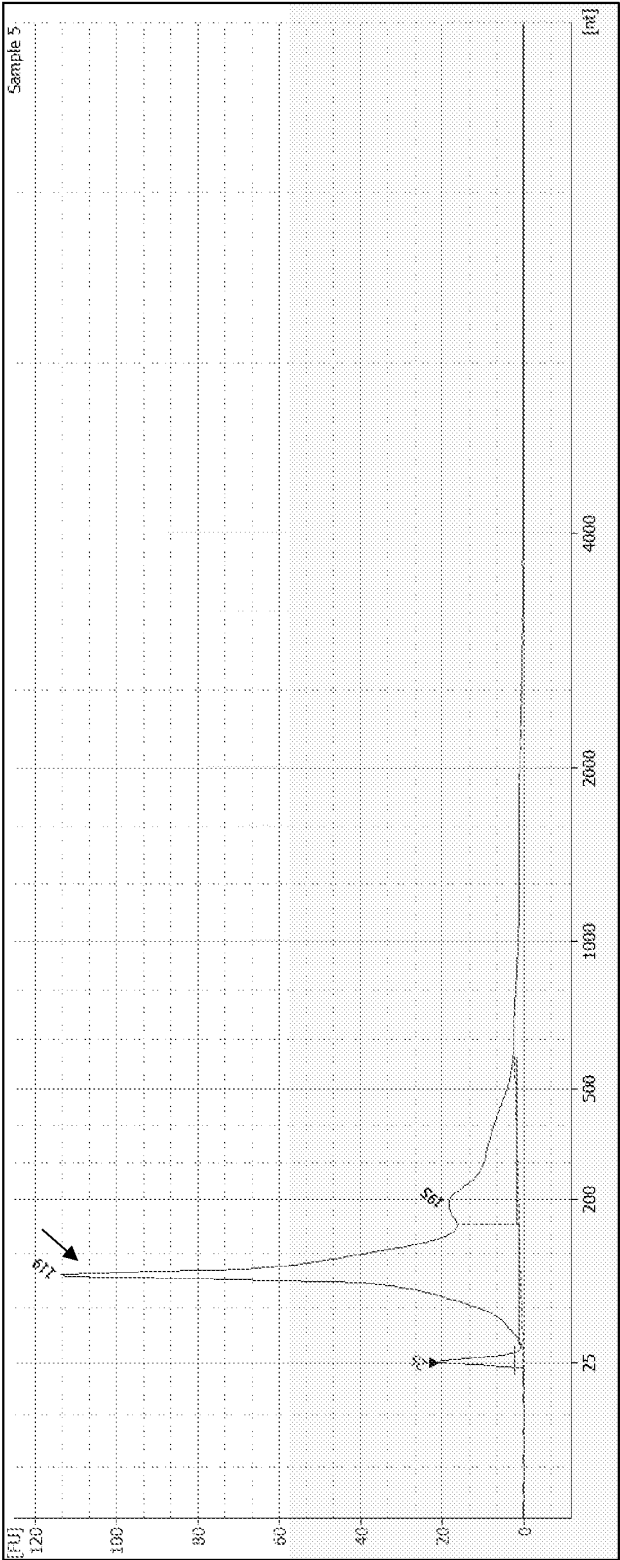


Fig. 5C

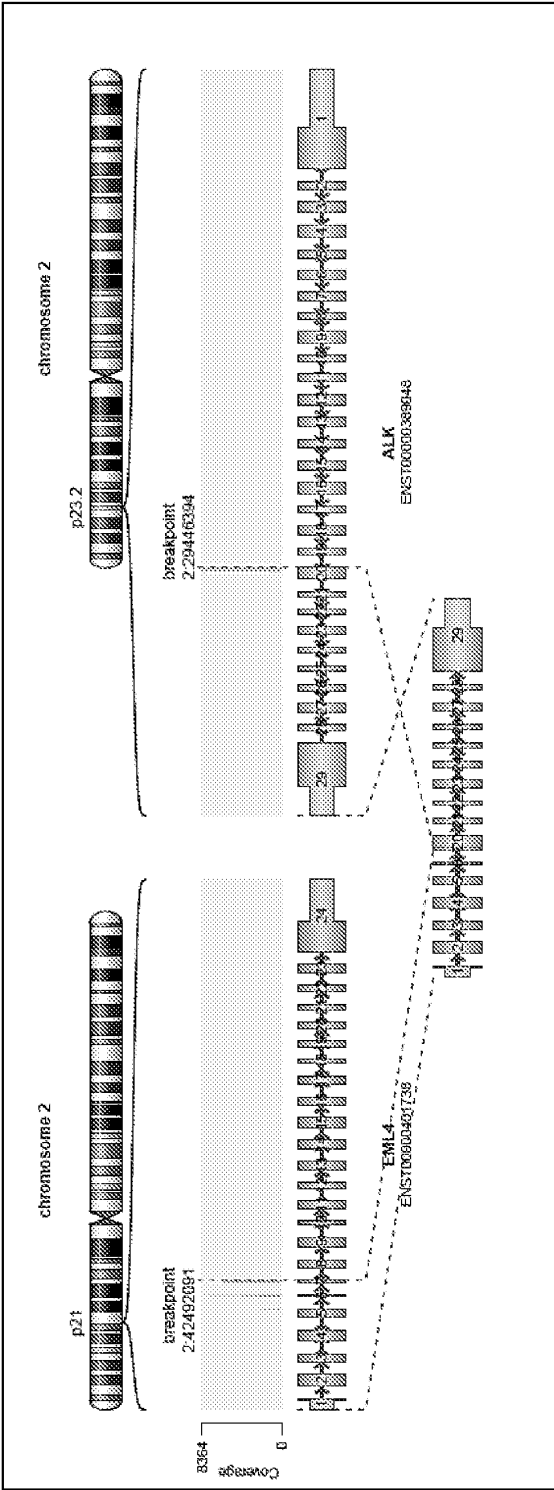


Fig. 6B

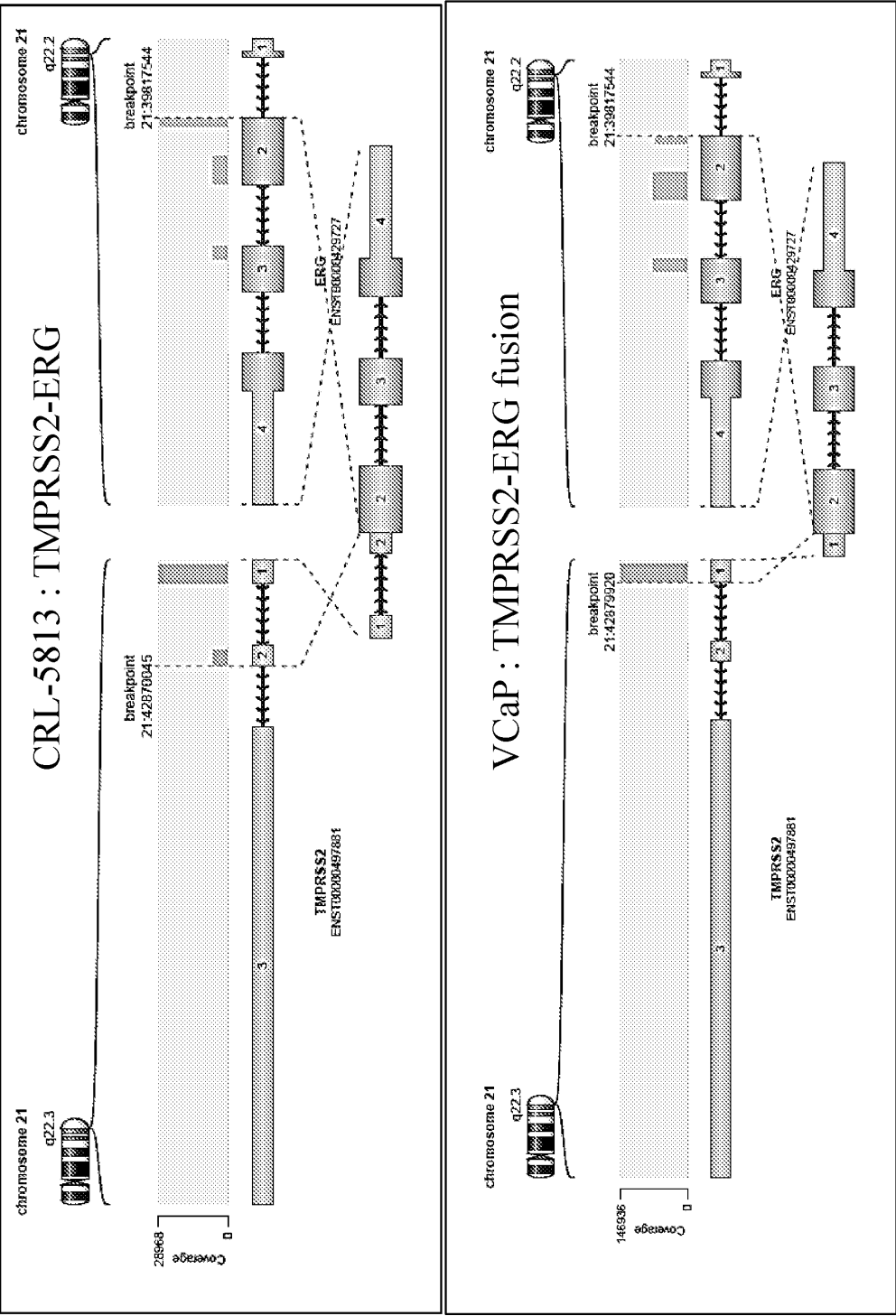


Fig. 7

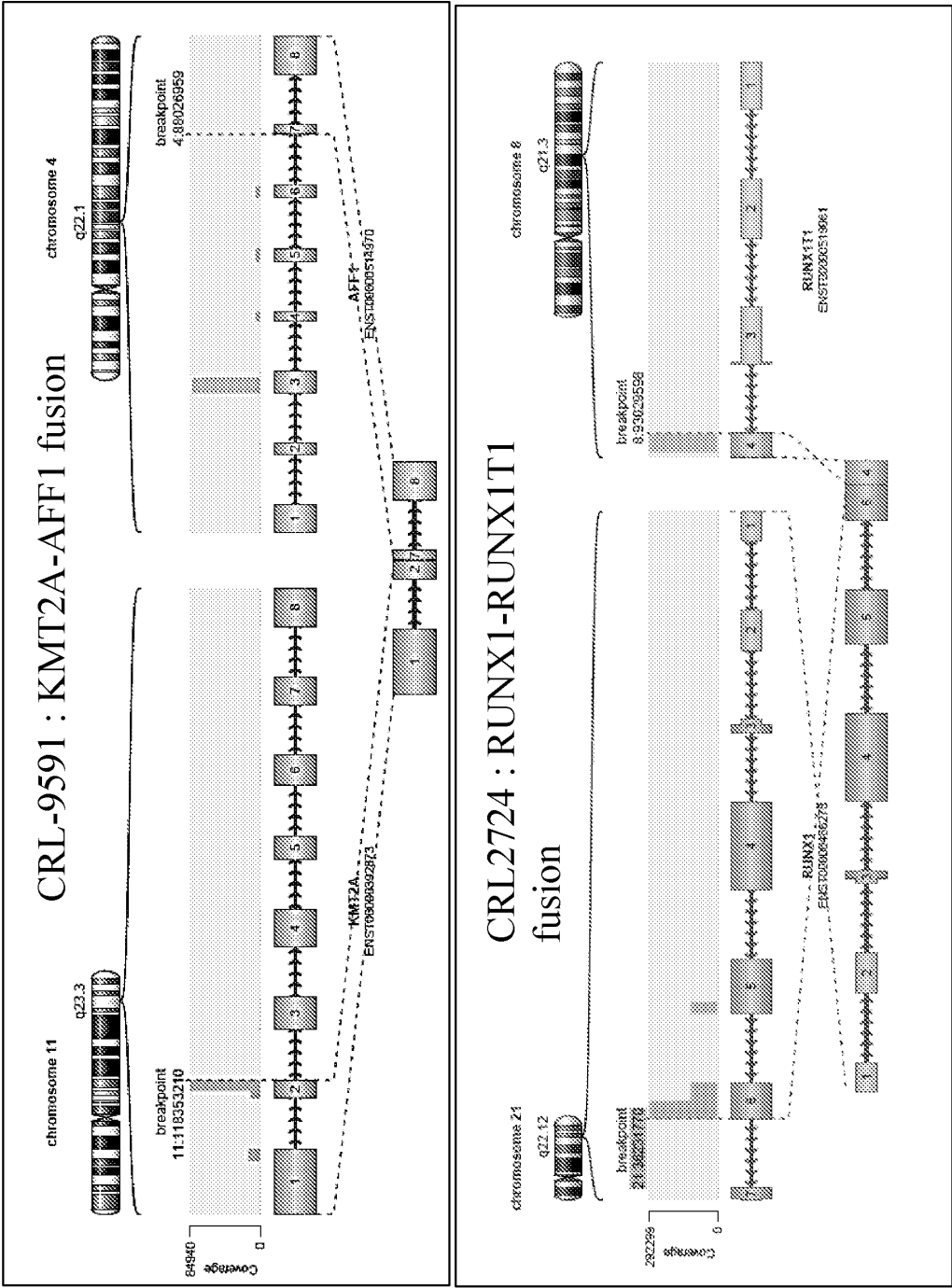


Fig. 7 (Continued)

cfRNA
4123 supporting reads

chr 21:42,870,025-42,870,065 chr 21:39,817,524-39,817,564

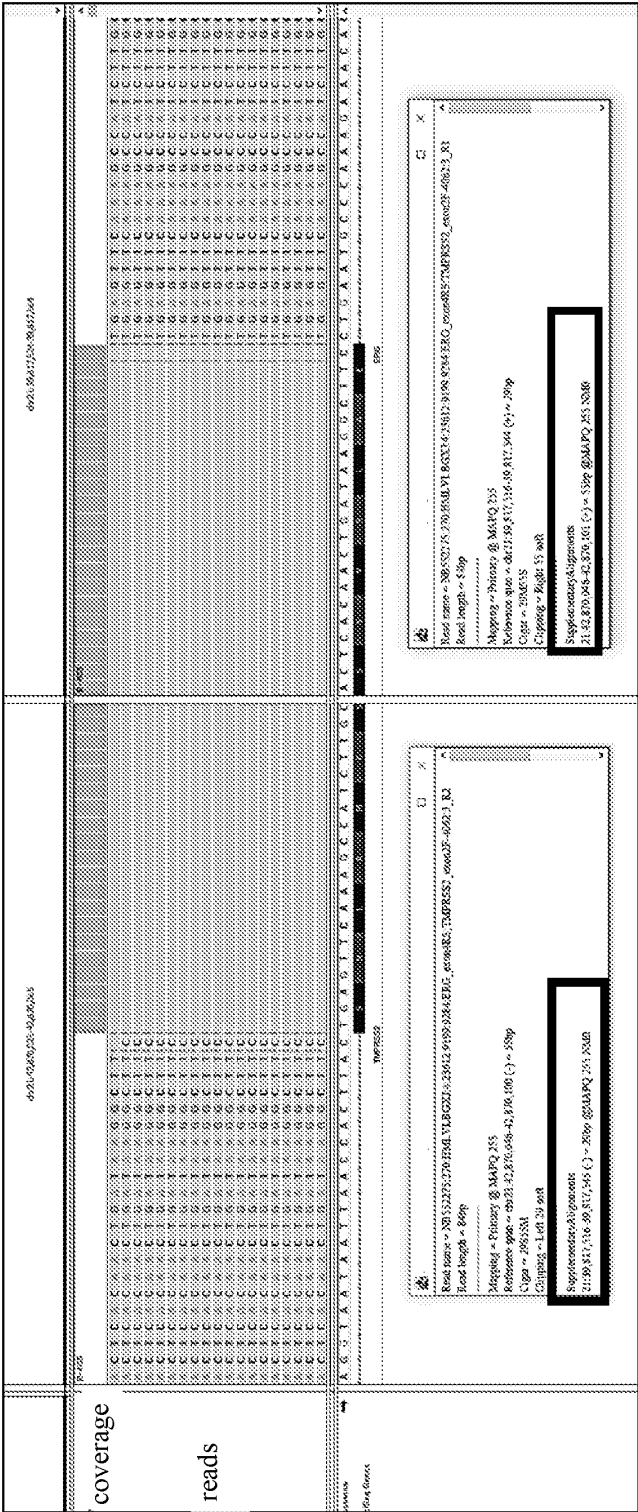


Fig. 8B

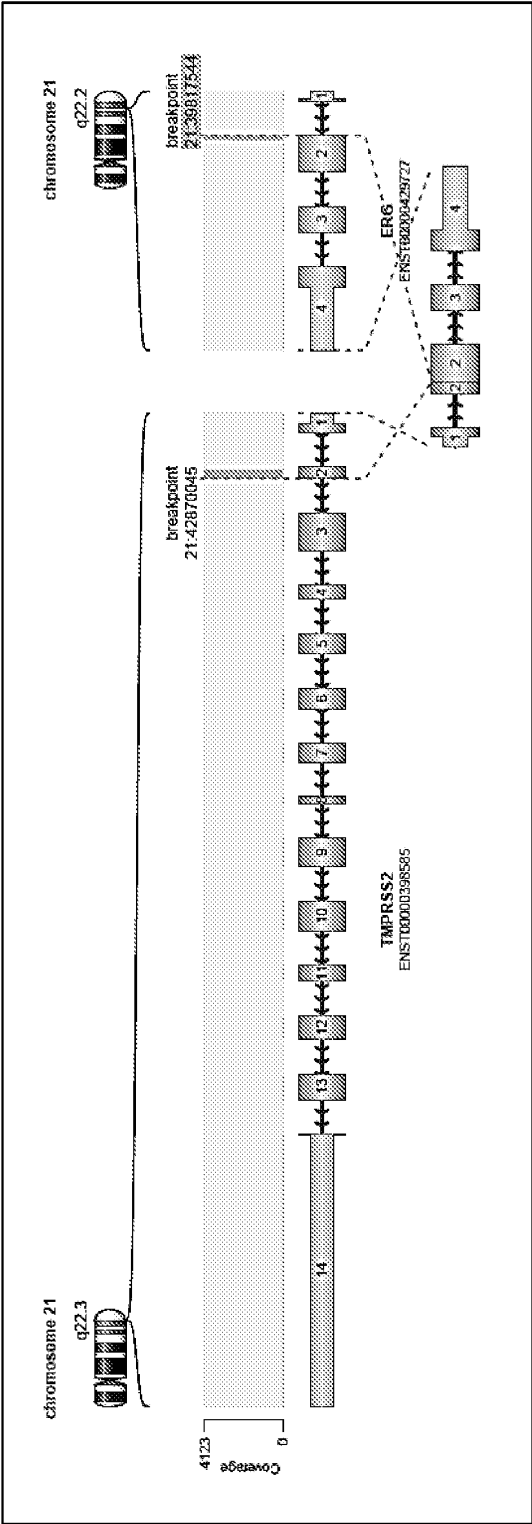


Fig. 8C

cfDNA
12 supporting reads

chr 10:43,611,008-43,611,166 chr 10:61,623,102-61,623,260

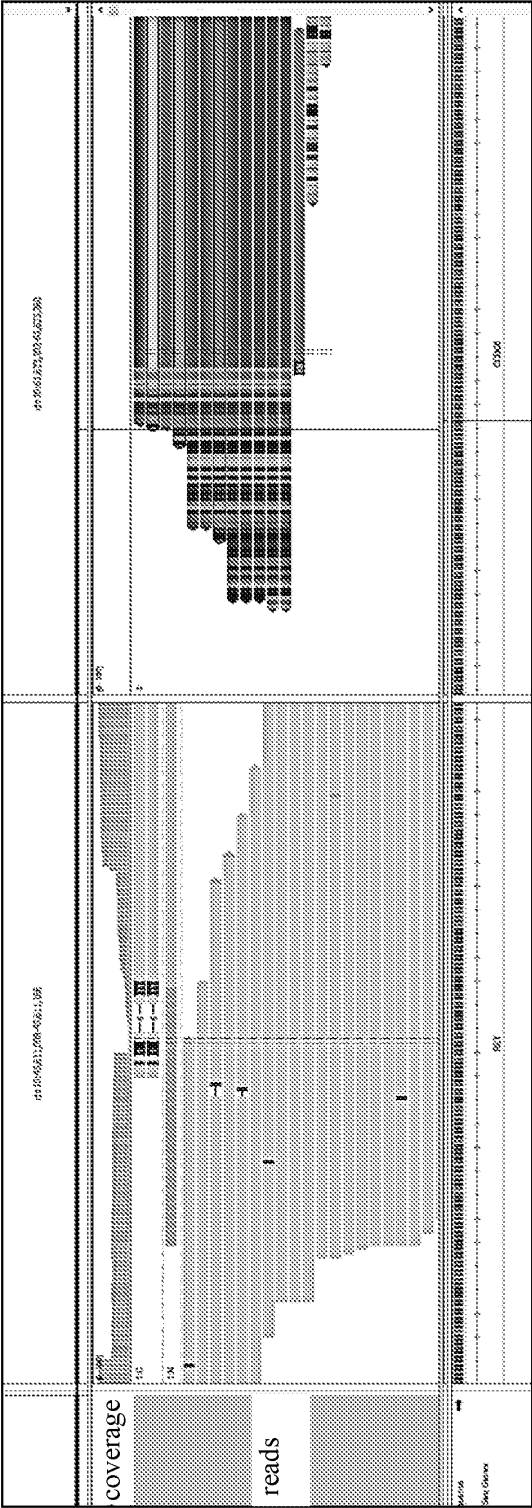


Fig. 9A

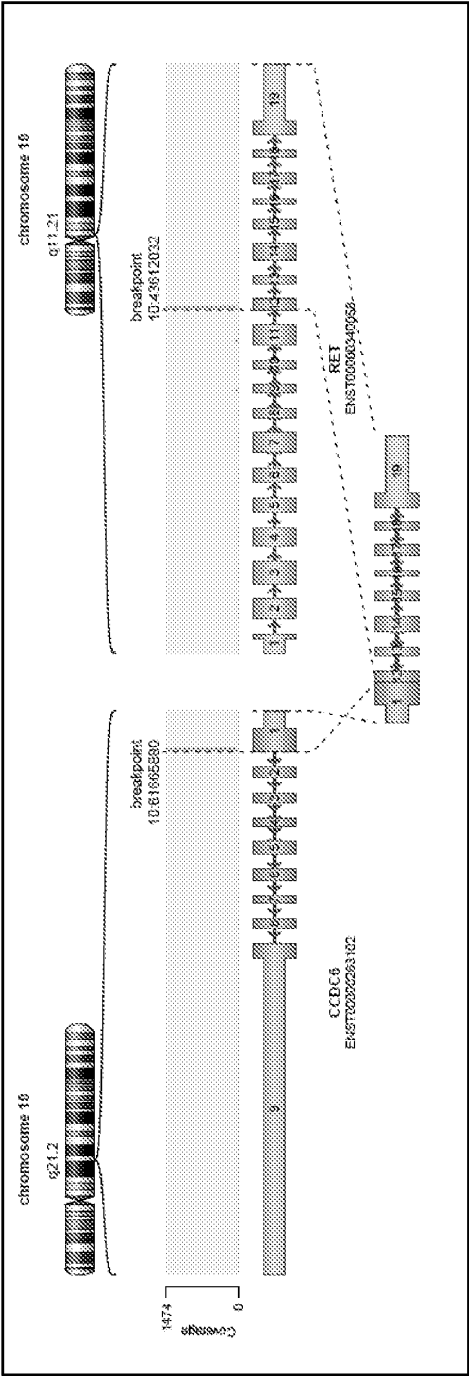


Fig. 9C

Cellular RNA
159,106 supporting reads

chr 22:23,632,580-23,632,620 chr 9:133,729,430-133,729,470

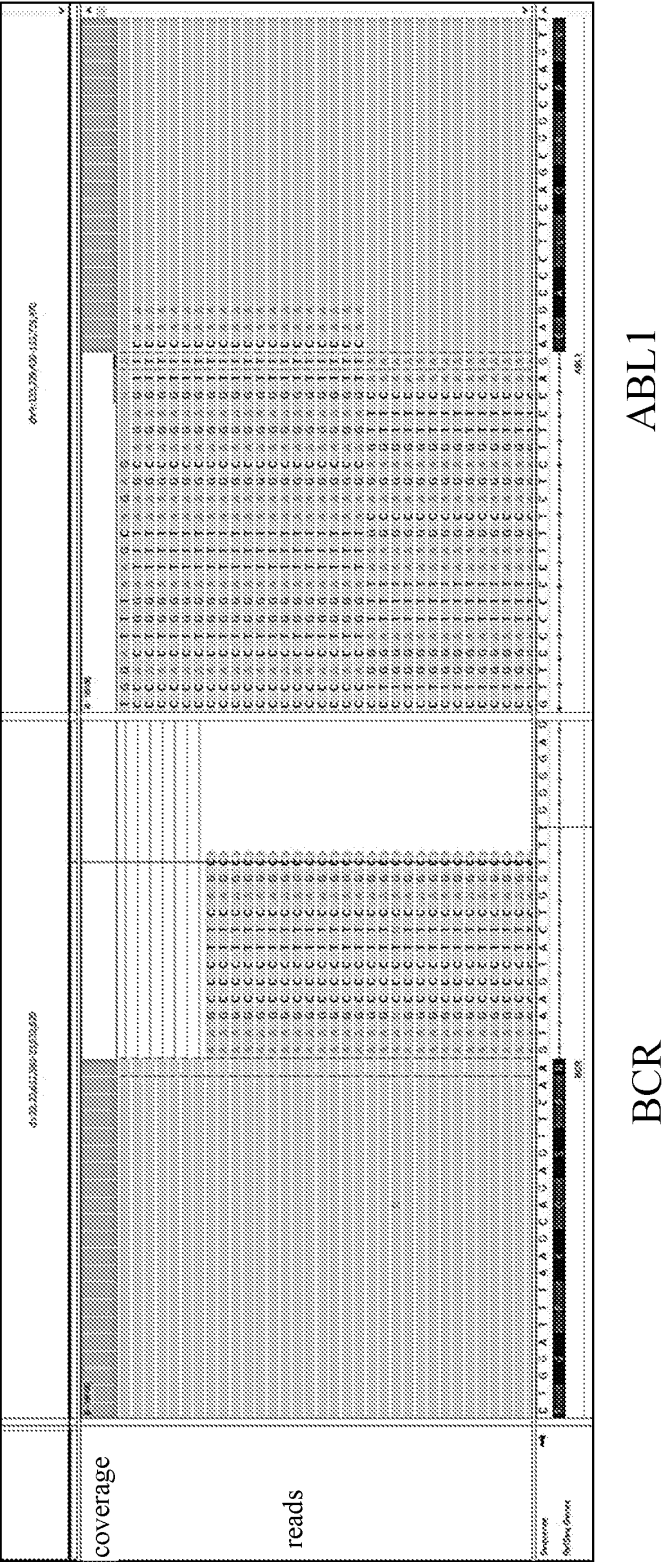


Fig. 10A

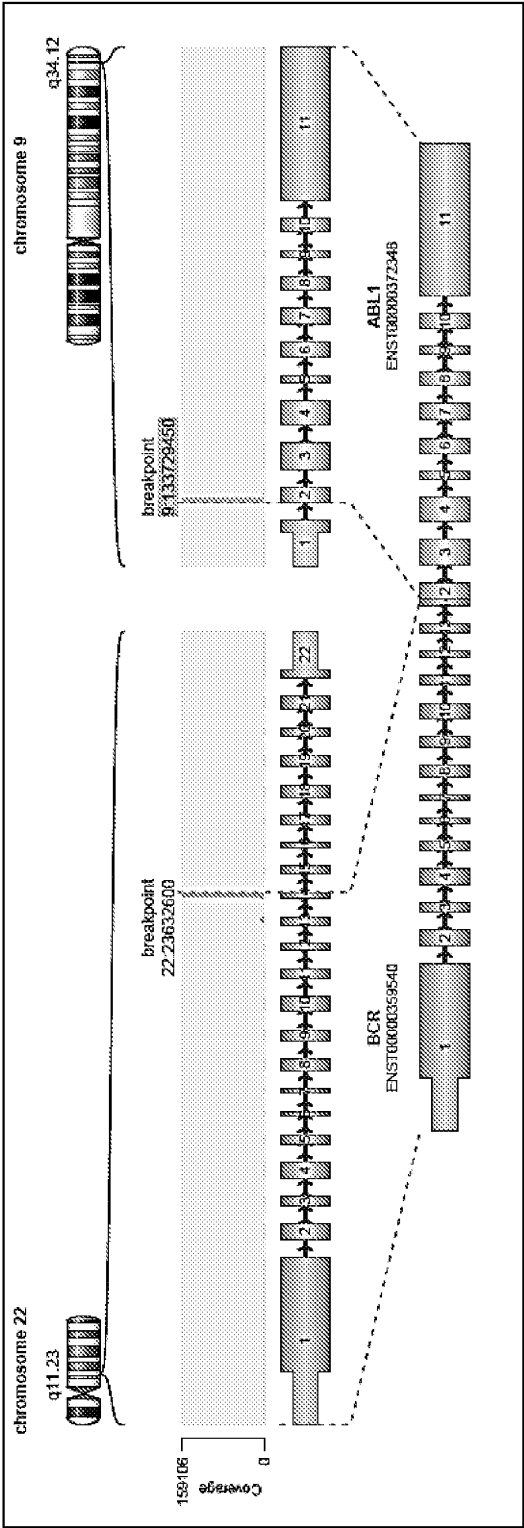


Fig. 10B

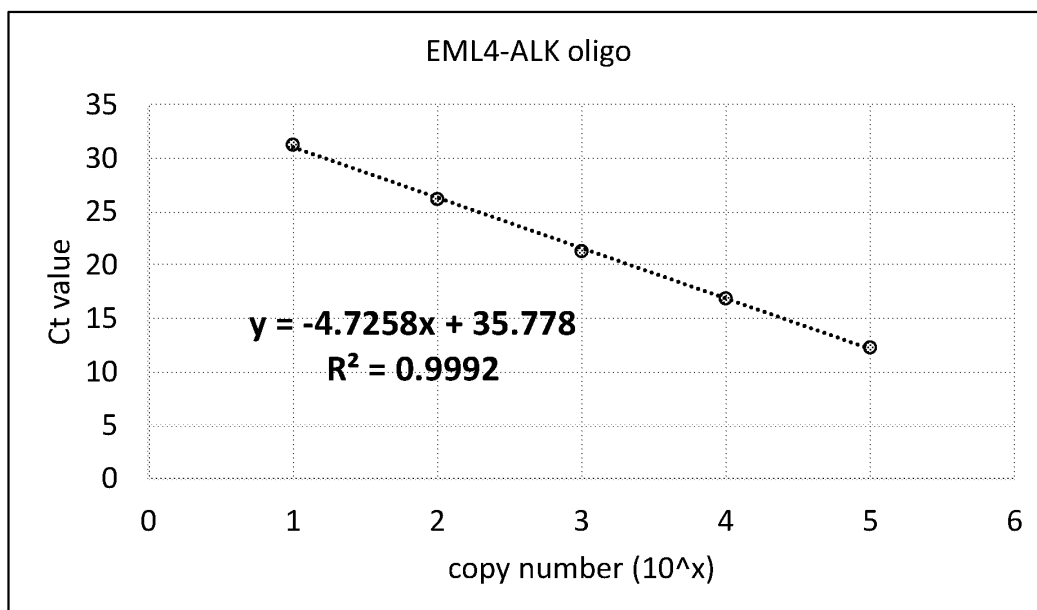


Fig. 11

Sample	Type	RNA (ng)
C_20-146	Metastatic Lung Cancer	35
C_20-347	Metastatic Prostate Cancer	24
C_20-126.1	Metastatic Lung Cancer	33
C_20-126.2		83
C_20-1069.1	Metastatic Lung Cancer	10.9
C_20-1069.2		27
C_21-7	Metastatic Breast Cancer	25
C_21-93	Metastatic Lung Cancer	30.2
H_A_1	Healthy	4.1
H_A_2	Healthy	3.5
H_B	Healthy	2.43
H_C	Healthy	3.7

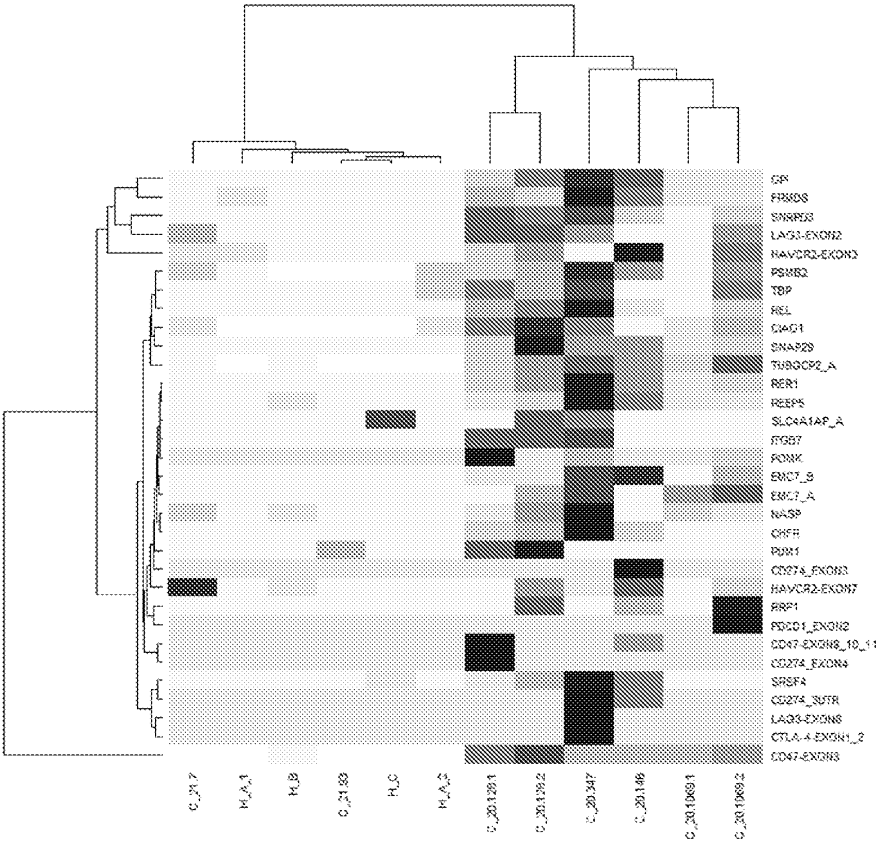
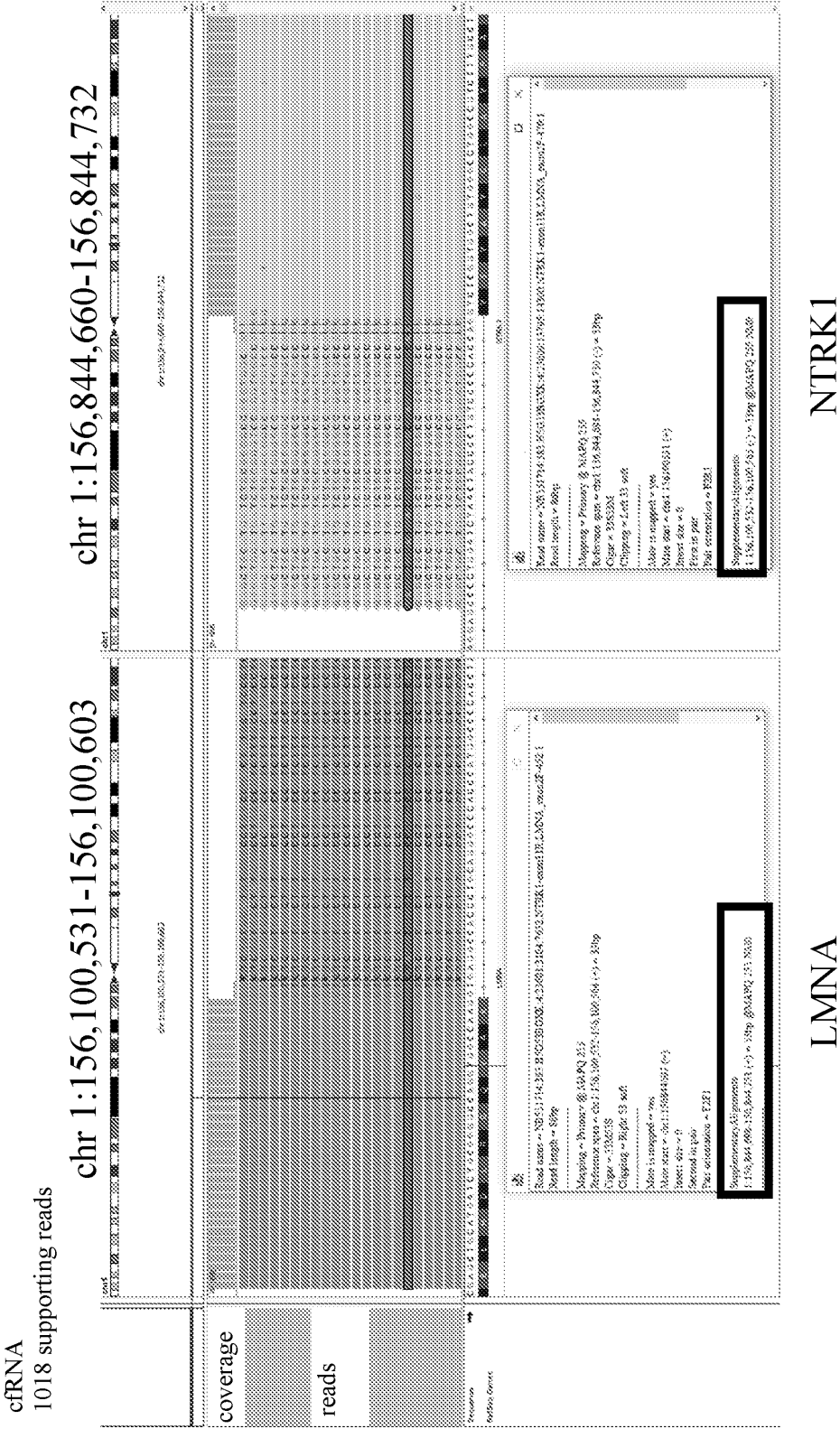


Fig. 12



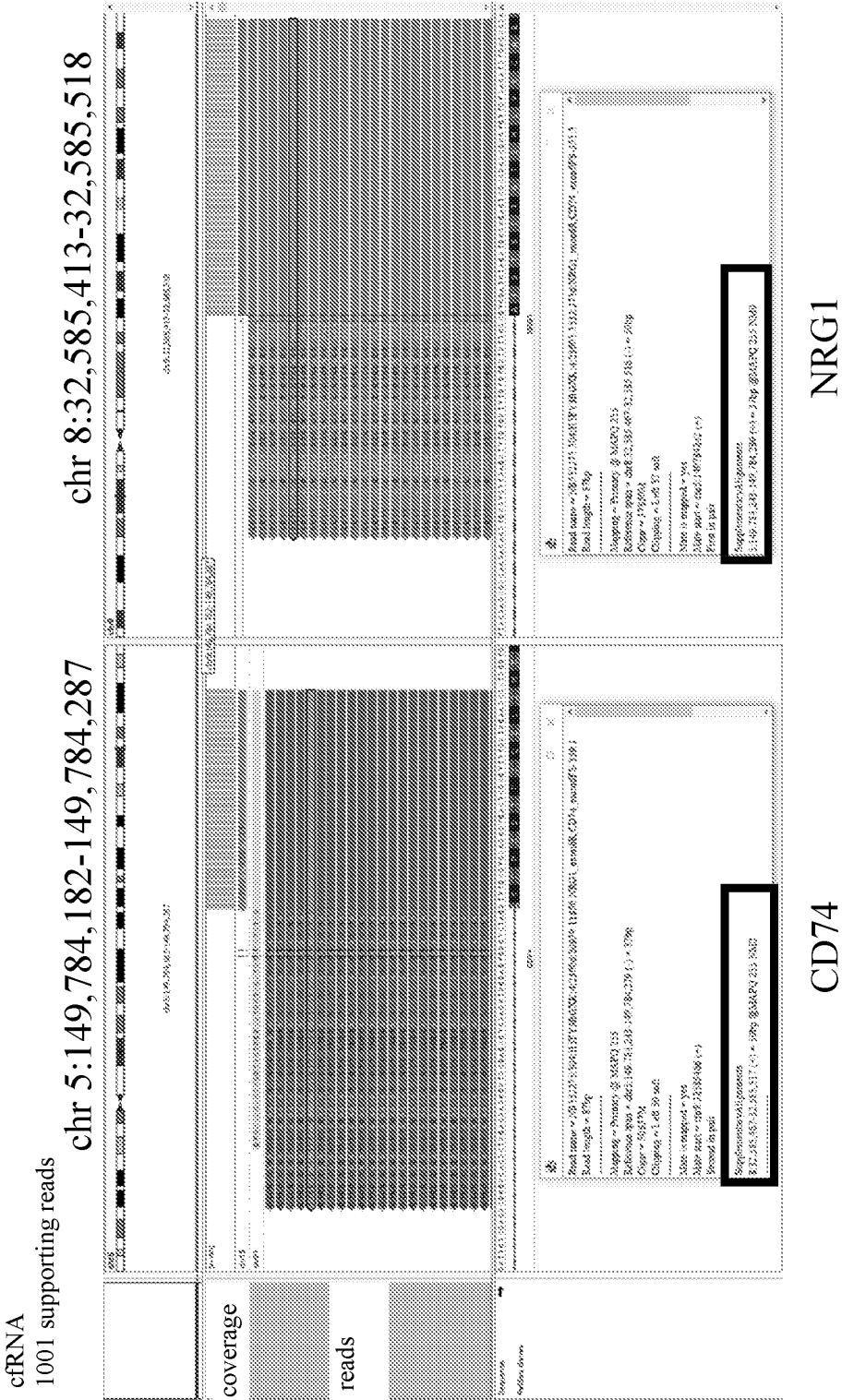


Fig. 13B

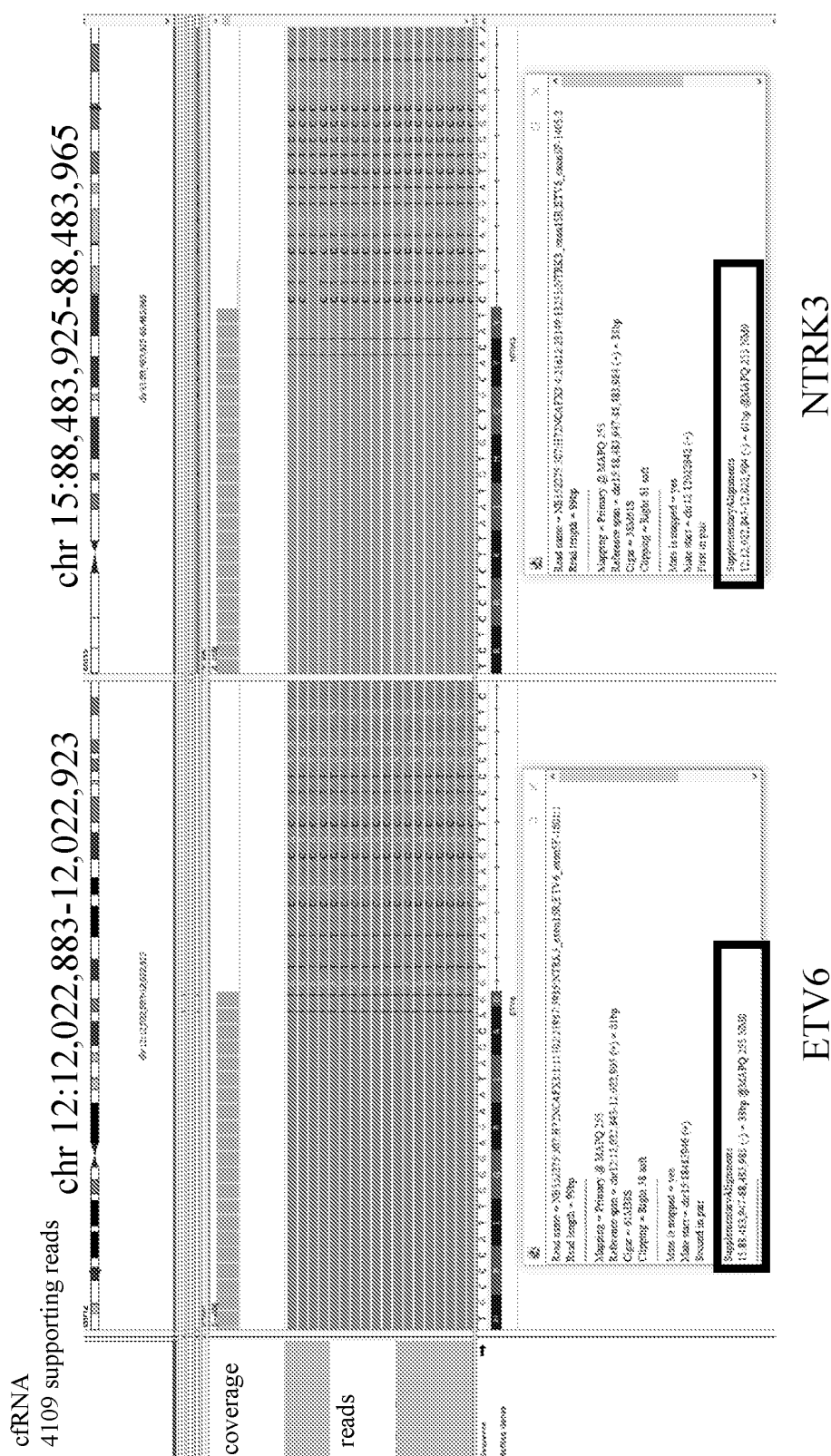


Fig. 13C

	cfDNA fusion+	cfDNA fusion-
cfRNA fusion+	12	5
cfRNA fusion-	1	27

Fig. 14A

cfDNA and cfRNA fusion+	Only cfRNA fusion+	Only cfDNA fusion-
EML4-ALK (n = 4)	LMNA-NTRK1 (n = 2)	KIF5B-RET (n = 1)
MET exon 14 skipping (n = 3)	CD74-NRG1 (n = 1)	
CD74-ROS1 (n = 2)	ETV6-MET (n = 1)	
NCOA4-RET (n = 1)	ETV6-NTRK3 (n = 1)	
CCDC6-RET (n=1)		
FGFR3-TACC3 (n=1)		
Co-occurring fusions detected in cfRNA		
EML4-ALK* and EWSR1-FLI1		
EML4-ALK*, SQSTM1-MET and CCDC6-RET		
CD74-ROS1* and SND1-BRAF		

Fig. 14B

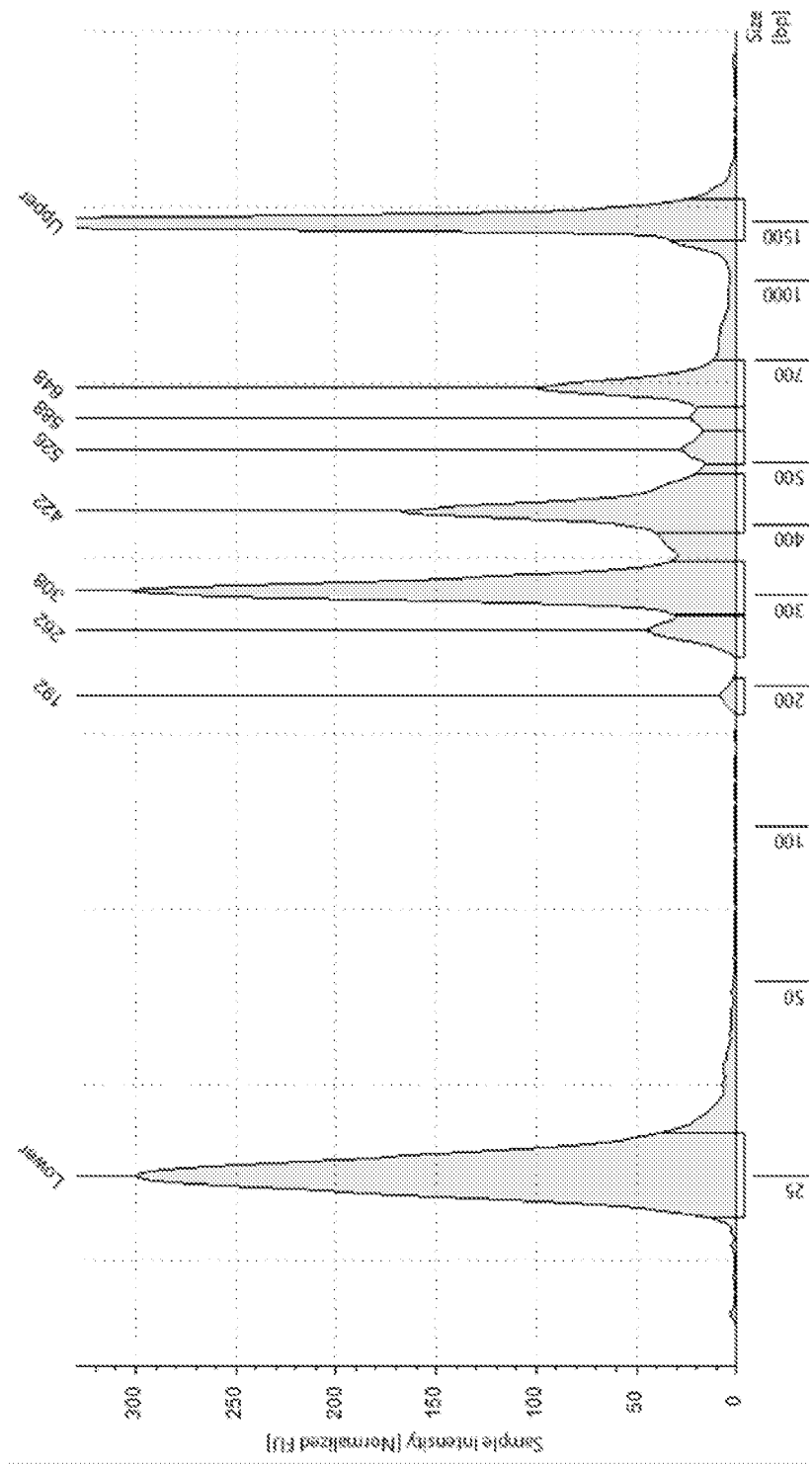


Fig. 15

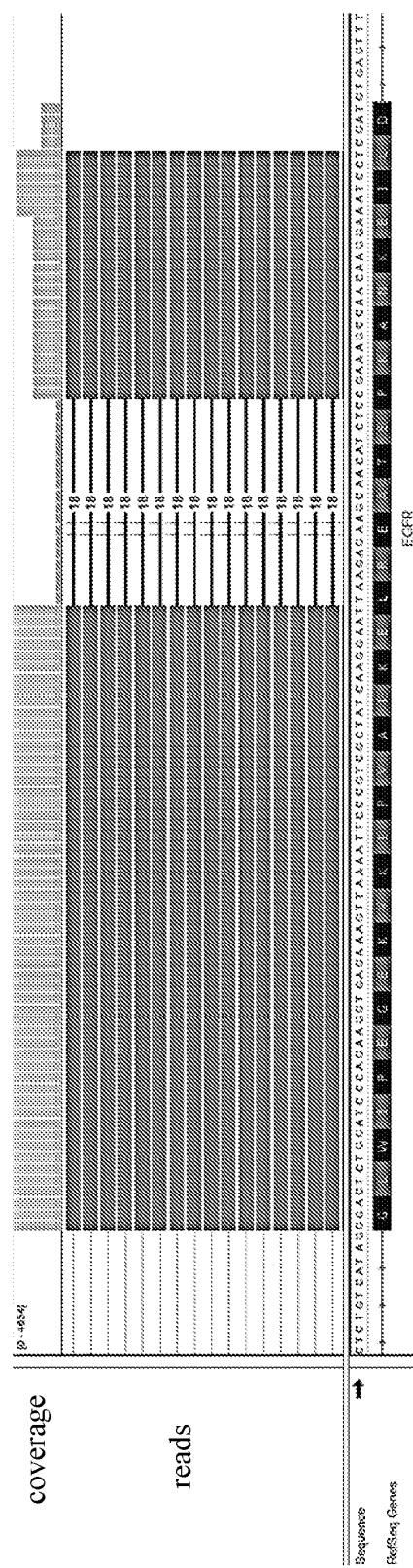


Fig. 16

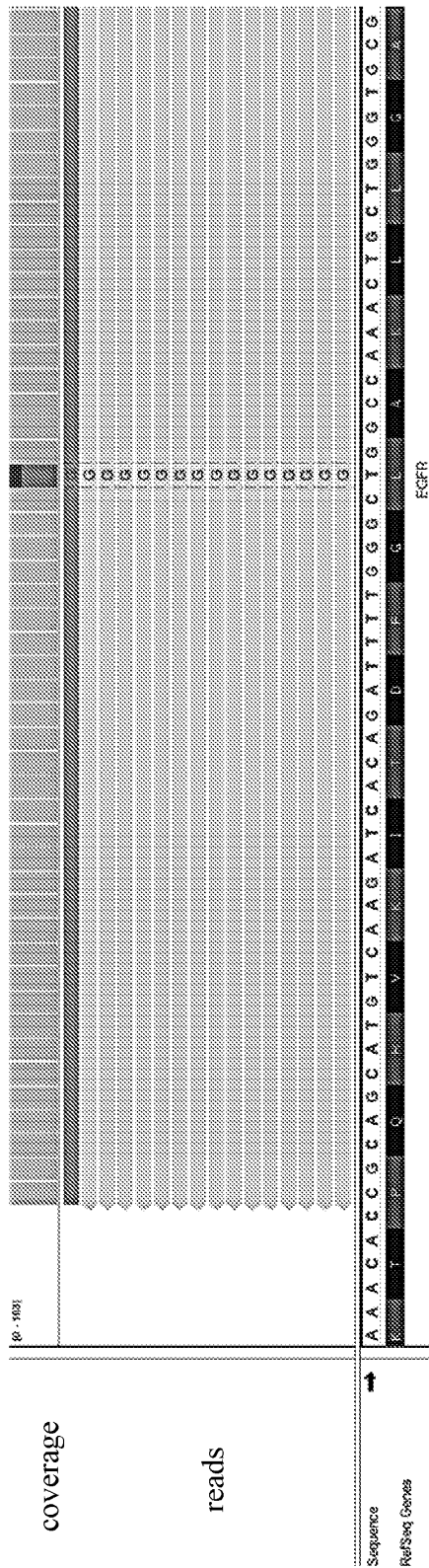


Fig. 17

Sample	Sample Type	Diagnosis	Mutation	Mutation Type	Mutant expression (Mutant read counts)	Wild-type expression (Wild-type read counts)	VAf (Mutant read counts)/(Total read counts)
F_22-274	FFPE Tumor Tissue	Metastatic Pancreatic Cancer	KRAS c.35G>A p.G12D	SNV	9142	13373	41%
F_22-83	FFPE Tumor Tissue	Metastatic Endometrial Cancer	KRAS c.35G>T p.G12V	SNV	424	885	32%
F_22-137	FFPE Tumor Tissue	Metastatic Lung Cancer	EGFR c.2311_2319dup p.N771_H773dup	Insertion	40628	26099	61%
F_22-55	FFPE Tumor Tissue	Localised Lung Cancer	EGFR c.2240_2257del p.L747_P753delinsS	Deletion	4266	369	92%

Fig. 18A

Sample	Sample Type	Diagnosis	Mutation	Mutation Type	Mutant expression (Mutant read counts)	Wild-type expression (Wild-type read counts)	VAf (Mutant read counts)/(Total read counts)
P_19-2372	Plasma	Metastatic Lung Cancer	KRAS c.34G>T p.G12C	SNV	67	1100	6%
P_20-953	Plasma	Metastatic Lung Cancer	EGFR c.2573T>G p.L858R	SNV	78	82	49%
P_22-265	Plasma	Metastatic Lung Cancer	EGFR c.2573T>G p.L858R	SNV	112	48	70%

Fig. 18B