Table SI. Sequences of the forward and reverse primers and the thermocycling conditions.

Amplified fragment	Column temperature (˚C)	Primer sequence (5'→3')
EGFR-S18	61.2	F: TTTCCAGCATGGTGAGGG R: ACAGCTTGCAAGGACTCT
EGFR-S19	57.7	F: AGCATGTGGCACCATCTC R: AGACATGAGAAAAGGTGG
EGFR-S20	61.7	F: CATGTGCCCCTCCTTCTG R: CTATCCCAGGAGCGCAGA
EGFR-S21	61.2	F: AATTCGGATGCAGAGCTT R: TACAGCTAGTGGGAAGGC
BRAF-E11	55.2	F: TTTCTGTTTGGCTTGACT R: TTATTGATGCGAACAGTG
BREF-E15	56.5	F: CATCTGTTTTCCTTTACT R: GTAAGAATTGAGGCTAT
KRAS-E2	59.0	F: TTAACCTTATGTGTGACATGTTCTAA R: CTTTATCTGTATCAAAGAATGGTCCT
KRAS-E3	53.4	F: TTTTTGAAGTAAAAGGTGCACTGTA R: ATATTATATGCATGGCATTAGCAAAG
P53-E5	60.5, 61.5 64.5, 65.5	F: CACTTGTGCCCTGACTTTCAAC R: GCAACCAGCCCTGTCGTCTC
P53-E6	60.7, 61.2	F: GGTTGCCCAGGGTCCCCAG R: GGCCACTGACAACCACCCTTAACC
P53-E7	62.2, 63.2	F: GCCACAGGTCTCCCCAAGGC R: TGGGGCACAGCAGGCCAGTG
P53-E8	58.7, 62.7	F: GGACCTGATTTCCTTACTGCC R: GAATCTGAGGCATAACTGCAACC
D2S123	50.0	F: AAACAGGATGCCTGCCTTTA R: GGACTTTCCACCTATGGGAC
D5S346	50.0	F: ACTCACTCTAGTGATAAATCGGG R: AGCAGATAAGACAGTATTACTAGTT
D17S250	50.0	F: GGAAGAATCAAATAGACAAT R: GCTGGCCATATATATATTTAAACC
BAT25	50.0	F: CTAAAGAGTTTTGTGTTTTG R: GGCTCTAAAATGCTCTG
BAT26	50.0	F: GCAGTCAGAGCCCTTAAC R: CCATTCAACATTTTTAACCC

F, forward; R, reverse.

Table SII. PCR reaction conditions.

Gene	PCR conditions
P53	95˚C 5 min →95˚C 30" 60˚C 30" 72˚C 30" 50 cycles →72˚C 10 min →10˚C keep
EGFR	95˚C 5 min →95˚C 30" 58˚C 45" 72˚C 45" 50 cycles →72˚C 10 min →10˚C keep
KRAS	95˚C 5 min →95˚C 30" 58˚C 45" 72˚C 45" 50 cycles →72˚C 10 min →10˚C keep
BRAF	95˚C 5 min →95˚C 30" 57˚C 45" 72˚C 45" 50 cycles →72˚C 10 min →10˚C keep
D2S123	95˚C 5 min →95˚C 45" 55˚C 30" 72˚C 45" 50 cycles →72˚C 7 min →4˚C keep
D5S346	95˚C 5 min →95˚C 45" 55˚C 30" 72˚C 45" 50 cycles →72˚C 7 min →4˚C keep
D17S250	95˚C 5 min →95˚C 45" 55˚C 30" 72˚C 45" 50 cycles →72˚C 7 min →4˚C keep
BAT25	95˚C 5 min →95˚C 45" 55˚C 30" 72˚C 45" 50 cycles →72˚C 7 min →4˚C keep
BAT26	95˚C 5 min →95˚C 45" 55˚C 30" 72˚C 45" 50 cycles →72˚C 7 min →4˚C keep

Table SIII. DHPLC was used to detect the temperature pattern of PCR products.

Step	Hold	Ramp
Denaturing	95.0˚C for 10 min	
Step 1	95.0˚C for 1 min	-2.0˚C/sec to 85.0˚C
Step 2	85.0˚C for 1 min	-0.3˚C /sec to 75.0˚C
Step 3	75.0˚C for 1 min	-0.3˚C/sec to 65.0˚C
Step 4	65.0˚C for 1 min	-0.3˚C/sec to 55.0˚C
Step 5	55.0˚C for 1 min	-0.3˚C/sec to 45.0˚C
Step 6	45.0˚C for 1 min	-0.3˚C/sec to 35.0˚C
Step 7	35.0˚C for 1 min	-0.3˚C/sec to 25.0˚C
Step 8	25.0˚C for 1 min	-0.3˚C/sec to 15.0˚C
Step 9	15.0˚C for 1 min	-0.3˚C/sec to 4.0˚C
Step 10 (hold)	4.0˚C	

DHPLC, denaturing high-performance liquid chromatography.