

Supplementary Table S1. Oligos for dPCR assay.

A. Oligos for GEF-dPCR analysis

	sequence (5' – 3')
Primer 1	CAGCTCCCGTGCCTTATGGTTAC
Primer 2	CTCCGCGGGGTACGCGGCCA
NHEJ-sensitive probe	HEX-TGGAGGCGGGTACTACTCCTGCCG-BHQ1
NHEJ-insensitive probe	FAM-ccctgtgccaggcagccacc-BHQ1

B. Oligos for get-dPCR analysis in indel-frequency quantification

indel-sensitive amplicon	sequence (5' – 3')
Primer 1 (<i>watching primer</i>)	GTGCCTTATGGTTACTTTGGAGGC
Primer 2	CTCCGCGGGGTACGCGGCCA
Probe	FAM-ccctgtgccaggcagccacc-BHQ1

indel-insensitive amplicon	sequence (5' – 3')
Primer 1	GTTTCATCACCAAGGACAAGAGGCG
Primer 2	TGTTCTTCACCTTGGCGAGAACCT
Probe	HEX-CTCGGCAGCCACCAGCCTCTCG-BHQ1

C. Oligos for get-dPCR analysis in site-mutation detection

KRAS c.35G>T mutation-sensitive amplicon	sequence (5' – 3')
Primer 1 (<i>watching primer</i>)	AAGGCACTCTTGCCTACGCCAA
Primer 2	CACATTTTCATTATTTTATTATAAGGCCTGCTG
Probe	CY5-AGCTCCAACCTACCACAAGTT-MGB

BRAF c.1799T > A mutation-sensitive amplicon	sequence (5' – 3')
Primer 1 (<i>watching primer</i>)	AAATAGGTGATTTTGGTCTAGCTACAGA
Primer 2	CCATCCACAAAATGGATCCAGACAACCTG
Probe	FAM-TCTCGATGGAGTGGGTCCC-MGB

BRAF c.1391G>T mutation-sensitive amplicon	sequence (5' – 3')
Primer 1 (<i>watching primer</i>)	TTGTAGACTGTTCCAAATGATCCAGATA
Primer 2	CGGGACTCGAGTGATGATTGGGAGA
Probe	ROX-TGTCCCCTGTAATCTGCCC-MGB

mutation-insensitive amplicon	sequence (5' – 3')
Primer 1	GCTCGGCCAGTACTCCCGGC
Primer 2	CCGCCGCCTTCAGTGCCTGC
Probe	HEX-CGCCATTTCGGACTGGGAG-3' MGB

Supplementary Table S2. Mutation information of cancer cell lines

Cell line	Gene	Protein Change	Chromosome	HGVSc [*]	Mutation Type	Allele Frequency	Variant Reads	Ref Reads
SW620	KRAS	G12V	12	ENST00000311936.3:c.35G>T	Missense_Mutation	1	291	0
HT-29	BRAF	V600E	7	ENST00000288602.6:c.1799T>A	Missense_Mutation	0.244763	222	685
MDA-MB-231	BRAF	G464V	7	ENST00000288602.6:c.1391G>T	Missense_Mutation	0.586667	88	62

* Human Genome Variation Society (HGVSc)

Information obtained from the cBioPortal Database