

APPENDIX 1

Codon	Primer	Primer sequence
<i>KRAS12/13</i>	PCR-F	GGCCTGCTGAAAATGACTGA
	PCR-R*	AGCTGTATCGTCAAGGCACTCT
	Sequencing	AAACTTGTGGTAGTTGGA
<i>KRAS61</i>	PCR-F	AATTGATGGAGAACCTGTCTCTT
	PCR-R*	TCCTCATGTAAGTGGTCCCTCATT
	Sequencing	GGATATTCTCGACACAGC
<i>KRAS146</i>	PCR-F*	TCAGGACTTAGCAAGAAGTTATGG
	PCR-R	TGCAGAAAACAGATCTGTATTTAT
	Sequencing	GTGTTACTTACCTGTCTTGT
<i>BRAF</i>	PCR-F	TGAAGACCTCACAGTAAAAATAGG
	PCR-R*	TCCAGACAAGTGTCAAAGTATGAT
	Sequencing	TGATTTTGGTCTAGCTACA
<i>NRAS12/13</i>	PCR-F	CTTGCTGGTGTGAAATGACTGAG
	PCR-R*	TGGATTGTCAGTGCCTTTTC
	Sequencing	CTGGTGGTGGTTGGA
<i>NRAS61</i>	PCR-F*	GAAACCTGTTTGTGGACATACTG
	PCR-R	TCGCCTGTCCTCATGTATTG
	Sequencing	CTCTCATGGCACTGTACT
<i>PIK542</i>	PCR-F*	AAAGCAATTTCTACACGAGATCC
	PCR-R	GCACTTACCTGTGACTCCATAGA
	Sequencing	TTCTCCTGCTCAGTGAT
<i>PIK545-6</i>	PCR-F	ACAGCTCAAAGCAATTTCTACACG
	PCR-R*	TCCATTTTAGCACTTACCTGTGAC
	Sequencing	GATCCTCTCTCTGAAATC
<i>PIK1047</i>	PCR-F*	TGAGCAAGAGGCTTTGGAGTAT
	PCR-R	TGCTGTTTAATTGTGTGGAAGATC
	Sequencing	GTTGTCCAGCCACCA

A: Pyrosequencing primer sequences used in the Leeds laboratory. PCR-F, forward PCR primer sequence; PCR-R, reverse PCR primer sequence; *indicates the biotinylated primer.

Codon	Primer	Primer sequence
<i>KRAS12/13</i>	PCR-F	GACTGAATATAAACTTGTGGTAGTTGG
	PCR-R*	TTGGATCATATTCGTCCACAA
	Sequencing	CTTGTGGTAGTTGGAG
	Sequencing ¹	TGTGGTAGTTGGAGCTG
<i>KRAS61</i>	PCR-F	CAGGAAGCAAGTAGTAATTGATGG
	PCR-R*	AAGAAAGCCCTCCCCAGTC
	Sequencing	GGATATTCTCGACACAGC
<i>KRAS146</i>	PCR-F	AGGCTCAGGACTTAGCAAGAAGTT
	PCR-R*	GATTAAGAAGCAATGCCCTCTC
	Sequencing	GGAATTCCTTTTATTGAAAC
<i>BRAF</i>	PCR-F	AAGACCTCACRGTA AAAAATAGGTG
	PCR-R*	CCAGACA ACTGTTCAA ACTGAT
	Sequencing	ATAGGTGAYTTTGGTCTAG
<i>NRAS12/13</i>	PCR-F	GGTTTCCAACAGGTTCTTGCTGGTG
	PCR-R*	ACAGGATCAGGTCAGCGGGCT
	Sequencing	TGGTGGTGGTTGGAG
	Sequencing ² -P2	TGGTGGTGGTTGGAGCA
	Sequencing ³ -P3	TGGTGGTTGGAGCAGG
<i>NRAS61</i>	PCR-F*	TCCACACCCCAGGATTCTT
	PCR-R	CGCCTGTCCTCATGTATTGGTCT
	Sequencing	CTCATGGCACTGTACTCT
<i>PIK542-6</i>	PCR-F	GCACTTACYTGTGACTCCATAGAA
	PCR-R*	GAAAATGACRAAGAACAGCTCAA
	Sequencing	CCTGTGACTCCATAGAAAA
<i>PIK1047</i>	PCR-F	GTTCAATGCATGCTGTTTAATTGT
	PCR-R*	CGAAAGACYCTAGCCTTAGATAAA
	Sequencing	TTTGTTGTCCAGCCA

B: Pyrosequencing primer sequences used in the Cardiff laboratory. PCR-F, forward PCR primer sequence; PCR-R, reverse PCR primer sequence; *indicates the biotinylated primer; ¹used to distinguish between c.35G>T or c.37G>T; ^{2,3}used for characterisation of unusual mutations (P refers to position of mutation).