

SUPPORTING MATERIAL

Sequences of P53 wild type and mutant type genes

A. P53 wild type gene sequence

1 ATGGAGGAGC CGCAGTCAGA TCCTAGCGTC GAGCCCCCTC TGAGTCAGGA AACATTTTCA
61 GACCTATGGA AACTACTTCC TGAAAACAAC GTTCTGTCCC CCTTGCCGTC CCAAGCAATG
121 GATGATTTGA TGCTGTCCCC GGACGATATT GAACAATGGT TCACTGAAGA CCCAGGTCCA
181 GATGAAGCTC CCAGAATGCC AGAGGCTGCT CCCC GCGTGG CCCCTGCACC AGCAGCTCCT
241 ACACCGGCGG CCCCTGCACC AGCCCCCTCC TGGCCCCTGT **CATCTTCTGT CCCTTCCCAG**
301 **AAAACCTACC AGGGCAGCTA CGGTTTCCGT CTGGGCTTCT TGCATTCTGG GACAGCCAAG**
361 **TCTGTGACTT GCACGTACTC CCCTGCCCTC AACAAGATGT TTTGCCAACT GGCCAAGACC**
421 **TGCCCTGTGC AGCTGTGGGT TGATTCCACA CCCCCGCCG GCACCCGCGT CCGCGCCATG**
481 **GCCATCTACA AGCAGTCACA GCACATGACG GAGGTTGTGA GCGCTGCCC CCACCATGAG**
541 **CGCTGCTCAG ATAGCGATGG TCTGGCCCCT CCTCAGCATC TTATCCGAGT GGAAGGAAAT**
601 **TTGCGTGTGG AGTATTTGGA TGACAGAAAC ACTTTTCGAC ATAGTGTGGT GGTGCCCTAT**
661 **GAGCCGCTG AGGTTGGCTC TGA CTGTACC ACCATCCACT ACAACTACAT GTGTAACAGT**
721 **TCCTGCATGG GCGGCATGAA CCGGAGGCC ATCCTCACCA TCATCACACT GGAAGACTCC**
781 **AGTGGTAATC TACTGGGACG GAACAGCTT **GAGGTGCGTG TTTGTGCCTG TCCTGGGAGA****
841 GACCGGCGCA CAGAGGAAGA GAATCTCCGC AAGAAAGGGG AGCCTCACCA CGAGCTGCCC
901 CCAGGGAGCA CTAAGCGAGC ACTGCCAAC AACACCAGCT CCTCTCCCA GCCAAAGAAG
961 AAACCACTGG ATGGAGAATA TTTCACCCTT CAGATCCGTG GCGGTGAGCG CTTCGAGATG
1021 TTCCGAGAGC TGAATGAGGC CTTGGAATC AAGGATGCC AGGCTGGGAA GGAGCCAGGG
1081 GGGAGCAGGG CTCACTCCAG CCACCTGAAG TCCAAAAAGG GTCAGTCTAC CTCCCGCCAT
1141 AAAAACTCA TGTTCAAGAC AGAAGGGCCT GACTCAGACT GA

B. P53 R type mutant gene sequence (R175H G-A)

1 ATGGAGGAGC CGCAGTCAGA TCCTAGCGTC GAGCCCCCTC TGAGTCAGGA AACATTTTCA
61 GACCTATGGA AACTACTTCC TGAAAACAAC GTTCTGTCCC CCTTGCCGTC CCAAGCAATG
121 GATGATTTGA TGCTGTCCCC GGACGATATT GAACAATGGT TCACTGAAGA CCCAGGTCCA
181 GATGAAGCTC CCAGAATGCC AGAGGCTGCT CCCC GCGTGG CCCCTGCACC AGCAGCTCCT
241 ACACCGGCGG CCCCTGCACC AGCCCCCTCC TGGCCCCTGT **CATCTTCTGT CCCTTCCCAG**

301 AAAACCTACC AGGGCAGCTA CGGTTTCCGT CTGGGCTTCT TGCATTCTGG GACAGCCAAG
 361 TCTGTGACTT GCACGTACTC CCCTGCCCTC AACAAGATGT TTTGCCAACT GGCCAAGACC
 421 TGCCCTGTGC AGCTGTGGGT TGATTCCACA CCCCCGCCG GCACCCGCGT CCGCGCCATG
 481 GCCATCTACA AGCAGTCACA GCACATGACG GAGGTTGTGA GGC**ACTGCCC** CCACCATGAG
 541 CGCTGCTCAG ATAGCGATGG TCTGGCCCCT CCTCAGCATC TTATCCGAGT GGAAGGAAAT
 601 TTGCGTGTGG AGTATTTGGA TGACAGAAAC ACTTTTCGAC ATAGTGTGGT GGTGCCCTAT
 661 GAGCCGCTG AGGTTGGCTC TGA**CTGTACC** ACCATCCACT ACAACTACAT GTGTAACAGT
 721 TCCTGCATGG GCGGCATGAA CCGGAGGCC ATCCTCACCA TCATCACACT GGAAGACTCC
 781 AGTGGTAATC TACTGGGACG GAACAG**CTTT GAGGTGCGTG TTTG**TGCCTG TCCTGGGAGA
 841 GACCGGCGCA CAGAGGAAGA GAATCTCCGC AAGAAAGGGG AGCCTCACCA CGAGCTGCCC
 901 CCAGGGAGCA CTAAGCGAGC ACTGCCAAC AACACCAGCT CCTCTCCCA GCCAAAGAAG
 961 AAACCACTGG ATGGAGAATA TTTCACCCTT CAGATCCGTG GCGGTGAGCG CTTCGAGATG
 1021 TTCCGAGAGC TGAATGAGGC CTTGGA**ACTC** AAGGATGCC AGGCTGGGAA GGAGCCAGGG
 1081 GGGAGCAGGG CTCACTCCAG CCACCTGAAG TCCAAAAAGG GTCAGTCTAC CTCCCGCCAT
 1141 AAAAACTCA TGTTCAAGAC AGAAGGGCCT GACTCAGACT GA

All the bases between the two primers (marked in red) are amplified by PCR. The total number of amplified bases is **545** for both the P53 wild and R type mutant.

The first group of bases highlighted in red has the same sequence as Primer 1 and the second group of bases highlighted in red are complementary to the sequence of Primer 2. On line 481, three bases are highlighted in black to indicate the position of the mutation: the three highlighted bases are **CGC** in the wild type and **CAC** in the R type mutant. The single base mutation is the base G replaced by base A. The same primers are used to amplify the P53 R type mutant gene.

PCR primers for amplification of P53 wild type and mutant type genes:

Primer 1: 5'-biotin-TCATCTTCTGTCCCTTCCC-3'

Primer 2 : 5'-CAAACACGCACCTCAAAG-3'