

Table S1: DNA oligonucleotide primers used in the study.

Primer name	Oligonucleotide sequence (5'-3')	Primer length (mer)
E113A	F: ggacagtttcgatttccattcagctcttttctttctgccaacatg	48
	R: catgttggcagaaaagaaaagagctgaatgggaaatcgaaaactgtcc	48
E113Q	F: cagtttcgatttccattcttcttttctttctgccaacatg	45
	R: catgttggcagaaaagaaaagacaagaatgggaaatcgaaaactg	45
E116A	F: ttctcagatggacagtttcgatagcccattcttcttttctttctg	50
	R: cagaaaagaaaagagaagaatgggctatcgaaaactgtccatctgaagaa	50
E116Q	F: cagatggacagtttcgatttccattcttcttttctttc	43
	R: gaaaagaaaagagaagaatggcaaatcgaaaactgtccatctg	43
E124A	F: tatagatatcgatcatttcttgcttagcttcagatggacagtttcgatttc	52
	R: gaaatcgaaaactgtccatctgaagctaagcaagaaatgatcgatatctata	52
E124Q	F: gatatcgatcatttcttgctttgttcagatggacagtttcgattt	47
	R: aaatcgaaaactgtccatctgaacaaaagcaagaaatgatcgatc	47
E127A	F: gtactattcatatagatatcgatcatagcttgcttttcttcagatggacagttt	56
	R: aaaactgtccatctgaagaaaagcaagctatgatcgatatctatatgaataagtac	56
E127Q	F: attcatatagatatcgatcatttgttgcttttcttcagatggacagt	47
	R: actgtccatctgaagaaaagcaacaaatgatcgatatctatatgaat	47
E165A	F: cttcgtttgtaacgattaaacccaagcttcagacatcatatgttccaaaa	52
	R: ttttggacatgatgtctgaagcttgggttaatcgttacaacgaag	52
E165Q	F: gtttgtaacgattaaacccaattgttcagacatcatatgttccaaaa	47
	R: ttttggacatgatgtctgaacaattgggttaatcgttacaac	47
M161A	F: attaaacccaattcttcagacatagcatgttccaaaaagaaattcttatttctaaaagtgattcaacca	70
	R: tgggtgaaatcacttttagaaataagaattcttttggacatgctatgtctgaagaattgggttaat	70
M161L	F: taaacccaattcttcagacatcaaatgttccaaaaagaaattcttatttctaaaagt	57
	R: acttttagaaataagaattcttttggacattgatgtctgaagaattgggtta	57
M161C	F: attaaacccaattcttcagacatacaaatgttccaaaaagaaattcttatttctaaaagtgattcaacca	70
	R: tgggtgaaatcacttttagaaataagaattcttttggacattgatgtctgaagaattgggttaat	70

M161E	F: attaaaccaattcttcagacattcatgttccaaaaagaaattcttatttctaaaagtgattcaacca	70
	R: tggttgaaatcaccttttagaaataagaatttcttttggacatgaaatgtctgaagaattgggttaat	70
M162A	F: ttcgttgtaacgattaaaccaattcttcagaagccatatgttccaaaaagaaattcttatttctaaa	69
	R: tttagaaataagaatttcttttggacatatggcttctgaagaattgggttaatcgttacaacgaa	69