

Supplementary Table 1

Mutant	Forward primer	Reverse primer
S253A	5' CAA AAA CCT CTG ACA GAT GCC CAA CGC GTA AAG TTT ACC AAA GAA 3'	5' TTC TTT GGT AAA CTT TAC GCG TTG GGC ATC TGT CAG AGG TTT TTG 3'
S253D	5' CAA AAA CCT CTG ACA GAT GAC CAA CGC GTA AAG TTT ACC AAA GAA 3'	5' TTC TTT GGT AAA CTT TAC GCG TTG GTC ATC TGT CAG AGG TTT TTG3'
T303A	5' C CCG CTG CAG CAG GAG AGT GGC CAG GCG GTG GAG TGC GCG GTG GCC CAG TAT TTC AAG 3'	5' CTT GAA ATA CTG GGC CAC CGC GCA CTC CAC CGC CTG GCC ACT CTC CTG CTG CAG CGG G 3'
T303D	5' C CCG CTG CAG CAG GAG AGT GGC CAG GAT GTG GAG TGC GCG GTG GCC CAG TAT TTC AAG 3'	5' CTT GAA ATA CTG GGC CAC CGC GCA CTC CAC ATC CTG GCC ACT CTC CTG CTG CAG CGG G 3'
T307A	5' C CCG CTG CAG CAG GAG AGT GGC CAG ACG GTG GAG TGC GCG GTG GCC CAG TAT TTC AAG 3'	5' CTT GAA ATA CTG GGC CAC CGC GCA CTC CAC CGT CTG GCC ACT CTC CTG CTG CAG CGG G 3'
T307D	5' C CCG CTG CAG CAG GAG AGT GGC CAG ACG GTG GAG TGC GAT GTG GCC CAG TAT TTC AAG 3'	5' CTT GAA ATA CTG GGC CAC ATC GCA CTC CAC CGT CTG GCC ACT CTC CTG CTG CAG CGG G 3'
S387A	5' ATT AGC AAA TTG ATG CGA TCG GCC GCT TTC AAC ACA GAT CCA TAC 3'	5' GTA TGG ATC TGT GTT GAA AGC GGC CGA TCG CAT CAA TTT GCT AAT 3'
S387D	5' ATT AGC AAA TTG ATG CGA TCG GCC GAT TTC AAC ACA GAT CCA TAC 3'	5' GTA TGG ATC TGT GTT GAA ATC GGC CGA TCG CAT CAA TTT GCT AAT 3'
Y393F	5' CGA AGT GCA AGT TTC AAC ACG GAT CCA TTC GTC CGT GAA TTT GGA ATC 3'	5' GAT TCC AAA TTC ACG GAC GAA TGG ATC CGT GTT GAA ACT TGC ACT TCG 3'
Y393E	5' CGA AGT GCA AGT TTC AAC ACG GAT CCA GAG GTC CGT GAA TTT GGA ATC 3'	5' GAT TCC AAA TTC ACG GAC CTC TGG ATC CGT GTT GAA ACT TGC ACT TCG 3'
Y529F	5' ATC CTG CCC GGC AAG ACG CCC GTG TTC GCC GAG GTC AAA CGC GTG GGA GAC ACG GTG CTG GGG 3'	5' CCC CAG CAC CGT GTC TCC CAC GCG TTT GAC CTC GGC GAA CAC GGG CGT CTT GCC GGG CAG GAT 3'
Y529E	5' ATC CTG CCC GGC AAG ACG CCC GTG GAA GCC GAG GTC AAA CGC GTG GGA GAC ACG GTG CTG GGG 3'	5' CCC CAG CAC CGT GTC TCC CAC GCG TTT GAC CTC GGC TTC CAC GGG CGT CTT GCC GGG CAG GAT 3'
S798A	5' CGC TGC ACA CGC TCC GTG GCC ATC CCG GCG CCA GCA TAC TAC GCT C 3'	5' G AGC GTA GTA TGC TGG CGC CGG GAT GGC CAC GGA GCG TGT GCA GCG 3'
S798D	5' CGC TGC ACA CGC TCC GTG GAC ATC CCG GCG CCA GCA TAC TAC GCT C 3'	5' G AGC GTA GTA TGC TGG CGC CGG GAT GTC CAC GGA GCG TGT GCA GCG 3'