

**Table 1. PCR primers used for site-directed mutagenesis (Lee et al., 2002)**

Targeted mutagenesis	Primer	Sequence
Glu35Ala	Fwd Rev	5'-CGGGTTTATGCTGGTAGCAGTCGTTGGTGGTTTTTC-3' 5'-GAAAACCACCAACGACTGCTACCAGCATAAACCCG-3'
Glu35Asp	Fwd Rev	5'-GGGTTTATGCTGGTAGACGTCGTTGGTGGTTTTCT-3' 5'-AGAAAACCACCAACGACGTCTACCAGCATAAACCC-3'
His53Arg	Fwd Rev	5'-GCTGGCCGATGCGGGTCGTATGTTGACCGATACTG-3' 5'-CAGTATCGGTCAACATACGACCCGCATCGGCCAGC-3'
Met54Leu	Fwd Rev	5'-TGGCCGATGCGGGTCATCTGTTGACCGATACTGCC-3' 5'-GGCAGTATCGGTCAACAGATGACCCGCATCGGCCA-3'
His159Arg	Fwd Rev	5'-ACGAGCAGCGGCACTGCGTGTGCTCGGGGACCTGC -3' 5'-GCAGGTCCCCGAGCACACGCAGTGCCGCTGCTCGT -3'
Asp163Ala	Fwd Rev	5'-ACTGCATGTGCTCGGGGCCCTGCTGGGTTTCGGTTG-3' 5'-CAACCGAACCAGCAGGGCCCCGAGCACATGCAGT-3'
Asp163Glu	Fwd Rev	5'-CTGCATGTGCTCGGGGAGCTGCTGGGTTTCGCTTGG-3' 5'-CCAACCGAACCAGCAGCTCCCCGAGCACATGCAG-3'
Asp186Ala	Fwd Rev	5'-TGGCTGGACACCTGCTGCCCCATTCTCTCGATAC-3' 5'-GTATCGAGAGAATGGGGCAGCAGGTGTCCAGCCA-3'
Glu214Ala	Fwd Rev	5'-CGTGAATGAATTACTTGCAGGTGCACCGGTATCGC-3' 5'-GCGATACCGGTGCACCTGCAAGTAATTCATTACG-3'
Asp221Ala	Fwd Rev	5'-TGCACCGGTATCGCTGGCTATCGCTGAACTGAAGC-3' 5'-GCTTCAGTTCAGCGATAGCCAGCGATACCGGTGCA-3'
His240Arg	Fwd Rev	5'-GGAAGTCCGCAATGTGC GCCATGTACATGTATGGA-3' 5'-TCCATACATGTACATGGCGCACATTGCGGACTTCC-3'
His241Asp	Fwd Rev	5'-AAGTCCGCAATGTGCACGATGTACATGTATGGATA-3' 5'-CATCCATACATGTACATCGTGCACATTGCGCACTT-3'
Gly248Thr	Fwd Rev	5'-ATGTACATGTATGGATGGTAACCGAGAAGCCGGTGATGACGT-3' 5'-ACGTCATCACCGGCTTCTCGGTTACCATCCATACATGTACAT-3'
Cys294Ser	Fwd Rev	5'-CAGATGGAATATCAACCTTCTCATGGGCCAGACTGCCA-3' 5'-GGTGGCAGTCTGGCCCATGAGAAGGTTGATATCCATC-3'
ΔMet1-His11	Fwd	5'-TCCGAATTCCTGCCAGAAGATAATAATGCTCGTCG-3'
ΔCI Cys294His313	Rev	5'-CCCCTGCAGAGGTTGATATTCCATCTGAATGGTGG-3'
ΔCII His308- His313	Rev	5'-ATGCTGCAGGCCAGACACCCCTTCATTCAG-3'

Δ CI and CII are two C-terminal deletions. Shaded nucleotides were altered for site-directed mutagenesis.