

Supplementary Table 1 – Primers used for site-directed mutagenesis of *aglD*

Mutant	Primers
D110A	CGACACGCTCGTCTACTTC GCC ACGGACCTCGCCACGGAC (Fwd) GTCCGTGGCGAGGTCCGT GGC GAAGTAGACGAGCGTGTCG (Rev)
D110E	GACACGCTCGTCTACTTC GAG ACGGACCTCGCCACGGACATG (Fwd) CATGTCCGTGGCGAGGTCCGT CTC GGAAGTAGACGAGCGTGTC (Rev)
D110K	GACACGCTCGTCTACTTC AA GACGGACCTCGCCACGGACATG (Fwd) CATGTCCGTGGCGAGGTCCGT CTT GGAAGTAGACGAGCGTGTC (Rev)
D110N	GACACGCTCGTCTACTTC AA CACGGACCTCGCCACGGACATG (Fwd) CATGTCCGTGGCGAGGTCCGT GTT GGAAGTAGACGAGCGTGTC (Rev)
D112A	CACGCTCGTCTACTTCGACACG GCC TCGCCACGGACATGCGACACC (Fwd) GGTGTGCGATGTCCGTGGCGAG GGC CGTGTCTGAAGTAGACGAGCGTG (Rev)
D112E	CACGCTCGTCTACTTCGACACG GAG CTCGCCACGGACATGCGACACC (Fwd) GGTGTGCGATGTCCGTGGCGAG CTC CGTGTCTGAAGTAGACGAGCGTG (Rev)
D112K	CACGCTCGTCTACTTCGACACG AA GCTCGCCACGGACATGCGACACC (Fwd) GGTGTGCGATGTCCGTGGCGAG CTT CGTGTCTGAAGTAGACGAGCGTG (Rev)
D112N	CACGCTCGTCTACTTCGACACG AA CTCGCCACGGACATGCGACACC (Fwd) GGTGTGCGATGTCCGTGGCGAG GTT CGTGTCTGAAGTAGACGAGCGTG (Rev)
D133A	GCGTCCGCTCCGGCGAGTAC GCC GCCGCGACCGGGTTCGCGCTG (Fwd) CAGCGGACCCGGTTCGCGGC GGC GTAAGTAGACGAGCGGACGC (Rev)
G137A	GCGAGTACGACGCCGCGAC GCC TCGCGCTGGATGCCCGACCGC (Fwd) GCGGTCCGGCATCCAGCGGAG GGC GGTTCGCGGCGTCTACTCGC (Rev)
S138A	GAGTACGACGCCGCGACCGGG GCC CGTGGATGCCCGACCGCGTC (Fwd) GACCGGTTCGGGCATCCAGCG GGC CCCCGGTTCGCGGCGTCTACTC (Rev)
R139A	GAGTACGACGCCGCGACCGGGTTC GCC TGGATGCCCGACCGCGTCGCCGAC (Fwd) GTCGGGACGCGGTTCGGGCATCC AGC CGACCCGGTTCGCGGCGTCTACTC (Rev)
R139D	GAGTACGACGCCGCGACCGGGTTC GACT TGGATGCCCGACCGCGTCGCCGACC (Fwd) GGTCCGGGACGCGGTTCGGGCATCC AGTCC GACCCGGTTCGCGGCGTCTACTC (Rev)
R139E	GAGTACGACGCCGCGACCGGGTTC GAGT TGGATGCCCGACCGCGTCGCCGACC (Fwd) GGTCCGGGACGCGGTTCGGGCATCC ACTCC GACCCGGTTCGCGGCGTCTACTC (Rev)
R139K	GAGTACGACGCCGCGACCGGGTTC AA GTGGATGCCCGACCGCGTCGCCGACC (Fwd) GGTCCGGGACGCGGTTCGGGCATCC CTT CGACCCGGTTCGCGGCGTCTACTC (Rev)
R139M	GAGTACGACGCCGCGACCGGGTTC AT GTGGATGCCCGACCGCGTCGCCGACC (Fwd) GGTCCGGGACGCGGTTCGGGCATCC CAT CGACCCGGTTCGCGGCGTCTACTC (Rev)
R152A	GTCGCCGACCGTCCGCGGAAA GCC GGCGTGCCGAGTCGCGCATA (Fwd) GTATGCGGACTCGGCACGCC GCC TTTCCGCGGACGGTTCGGCGAC (Rev)
R152D	GTCGCCGACCGTCCGCGGAAA GAC GGCGTGCCGAGTCGCGCATA (Fwd) GTATGCGGACTCGGCACGCC GTC TTTCCGCGGACGGTTCGGCGAC (Rev)
R152K	GTCGCCGACCGTCCGCGGAAA AA GGCGTGCCGAGTCGCGCATA (Fwd) GTATGCGGACTCGGCACGCC CTT TTTCCGCGGACGGTTCGGCGAC (Rev)

D173A CTCCGCTCGGACCTCCGC**GCC**CACCAGTGCGGCTTCAAG (Fwd)
 CTTGAAGCCGCACTGGT**GGC**GCGGAGGTCCGAGCGGAG (Rev)

D173E CTCCGCTCGGACCTCCGC**GAG**CACCAGTGCGGCTTCAAGG (Fwd)
 CCTGAAGCCGCACTGGT**GCT**GCGGAGGTCCGAGCGGAG (Rev)

D173K CTCCGCTCGGACCTCCGC**AAG**CACCAGTGCGGCTTCAAGG (Fwd)
 CCTGAAGCCGCACTGGT**GCTT**GCGGAGGTCCGAGCGGAG (Rev)

D173N CTCCGCTCGGACCTCCGC**AAC**CACCAGTGCGGCTTCAAGG (Fwd)
 CCTGAAGCCGCACTGGT**GTT**GCGGAGGTCCGAGCGGAG (Rev)

Q175A GCTCGGACCTCCGCGACCAC**GCGT**GCGGCTTCAAGGCGTTCAG (Fwd)
 CTGAACGCCTTGAAGCCGC**ACGCT**GGTGCGGAGGTCCGAGC (Rev)

C176A CGGACCTCCGCGACCACCAG**GCC**GGCTTCAAGGCGTTCAGCCGCG (Fwd)
 CGCGGCTGAACGCCTTGAAGCC**GGC**CTGGTGGTTCGCGGAGGTCCG (Rev)

G177A GACCTCCGCGACCACCAGTGC**GCC**TTCAGGCGTTCAGCCGCGAG (Fwd)
 CTCGCGGCTGAACGCCTTGA**AGC**GCACTGGTGGTTCGCGGAGGTC (Rev)

F178A GACCTCCGCGACCACCAGTGC**GCC**AAGGCGTTCAGCCGCGAGGCG (Fwd)
 CGCCTCGCGGCTGAACGCCTT**GGC**GCCGCACTGGTGGTTCGCGGAGGTC (Rev)

K179A GCGACCACCAGTGC**GCG**GCGTTCAGCCGCGAGGCGTTC (Fwd)
 GAACGCCTCGCGGCTGAACGC**CGC**GAAGCCGCACTGGTGGTTCGC (Rev)

D195A GCTCCGCGACGACGTAGAG**GAG**AACCACTGGTTTTGGGACAC (Fwd)
 GTGTCCAAAACCACTGGTT**CTC**CTCTACGTCGTCGCGGAGC (Rev)

D195E GCTCCGCGACGACGTAGAG**GAG**AACCACTGGTTTTGGGACAC (Fwd)
 GTGTCCAAAACCACTGGTT**CTC**CTCTACGTCGTCGCGGAGC (Rev)

D201A GAGGACAACCACTGGTTTTGG**GCC**ACGGAGATGCTCGTCCGCGCCC (Fwd)
 GGGCGCGGACGAGCATCTCCGT**GGC**CCAAAACCACTGGTTGTCTC (Rev)

D201E GAGGACAACCACTGGTTTTGG**GAG**ACGGAGATGCTCGTCCGCGCCC (Fwd)
 GGGCGCGGACGAGCATCTCCGT**CTC**CCAAAACCACTGGTTGTCTC (Rev)

D201K GAGGACAACCACTGGTTTTGG**AAG**ACGGAGATGCTCGTCCGCGCCC (Fwd)
 GGGCGCGGACGAGCATCTCCGT**CTT**CCAAAACCACTGGTTGTCTC (Rev)

D201N GAGGACAACCACTGGTTTTGG**AAC**ACGGAGATGCTCGTCCGCGCCC (Fwd)
 GGGCGCGGACGAGCATCTCCGT**GTT**CCAAAACCACTGGTTGTCTC (Rev)

Fwd – forward primer; Rev – reverse primer. The codon containing the introduced mutation is shown in bold.