



SUPPLEMENTARY ONLINE DATA

Catalytic residues and a predicted structure of tetrahydrobiopterin-dependent alkylglycerol mono-oxygenase

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Table S1 Forward and reverse primer sequences for introduction of mutations by QuikChange® site-directed mutagenesis

(a) Alkylglycerol mono-oxygenase

Mutation	Forward primer (5'→3')	Reverse primer (5'→3')
D125A	GCCTTCTTAGGAGTTGCCTTTGGCTACTACTGG	CCAGTAGTAGCCAAAGGCAACTCCTAAGAAGGC
E137A	CCATCGTATGGCGCATGCAGTTAATATTATGTGGGCC	GGCCACATAAATTAACATGCATGCGCCATACGATGG
Q146A	ATGTGGCCGGGCATGCAACACATCATAGTTCTGAAGAC	GTCTTCAGAATCATGATGTGTGTCATGCCCGCCACAT
E152A	CACATCATAGTTCTGCAGACTATAACTTATCCACAGC	GCTGTGGATAAGTTATAGTCTGCAGAACTATGATGTG
D153A	CACATCATAGTTCTGAAGCTTATAACTTATCCACAGCACTGAG	CTCAGTGTGTGGATAAGTTATAAGCTTCAGAACTATGATGTG
Q162A	CTTATCCACAGCACTGCGCGCTGTCTCCTCCAGATAT	ATATCTGGAGGACAGACGCGCAGTGTGTGGATAAG
Q166A	CACTGAGACAGTGTCTCCTCGGATATATACTTCTGTGG	CCAGGAAGTATATATCGCGAGGACAGACTGTCTCAGTG
Y174A	CTTCTGGATTTTCGCGAGTCCCTGGCCCTCTTC	GAAGAGGGCCAGGGACTCGCGAAAATCCAGGAAG
H189A	CCCCCTTCAGTATATGCTGTAGCGCTCAATTCATCTTTTACC	GGTAAAGAAGATTGAATTAAGCGCTACAGCATATACTGAAGGGGG
Q191A	CCCCTTCAGTATATGCTGTATCTTGCATTCAGTCAATCTTCTTACC	GGTAAAGAAGATTGAATTAAGCGCTACAGCATATACTGAAGGGGG
Q197A	CTTCAATTCATCTTCTTACGCGTTTTGGATCCATACAGAGGTC	GACCTCTGTATGGATCCAAAACGCGTAAAGAAGATTGAATGAAG
H201A	CTTTACCAATTTTGGATCGCTACAGAGGTCATCAATAACC	GGTTATTGATGACCTCTGTAGCGATCCAAAATTTGGTAAAG
E203A	GGATCCATACAGCTGTATCAATAACCTTGGTCC	GGACCAAGGTTATTGATGACAGCTGTATGGATCC
E212A	CCTTGGTCCTTTAGCGCTGATTCCTTAATACTCCTAGCC	GGCTAGGAGTATAAGAATCAGCGCTAAAGGACCAAGG
H220A	GATTCCTAATACTCCTAGCGCTCATAGGGTTCATCATGGCAG	CTGCCATGATGAACCCATATGAGCGCTAGGAGTATAAGAATC
Y230A	CATGGCAGAAATCGTGCATGCATAGACAAAATATGCTGGTG	CACAGCATAAATTTTTGTCTATGATGCACGATTTCTGCCATG
C231A	CATCATGGCAGAAATCGGTACGCCATAGACAAAATATGCTGGTG	CCAGCATAAATTTTTGTCTATGGCGTACCGATTTCTGCCATGATG
D233A	CATGGCAGAAATCGTATTGATCGCGAAAATATGCTGGTGTTCC	GAACACCAGCATAAATTTTTCGCGATGCAATAACGATTTCTGCCATG
N235A	GGCAGAAATCGTATTGATAGACAAAAGCTTATGCTGGTGTTCC	GAACACCAGCATAAAGCTTTGTCTATGCAATAACGATTTCTGCC
Y236A	CGTTATTGATAGACAAAATGCGCGCGGTCTTATTATTGGG	CCCAAATAAAGAACACCGCGCATTTTTGTCTATGCAATAACG
Y338A	CATCTCAGCTATAAAGATAGCTACAGTTGTACAGTTTGTCTCG	CAGAGCAAACCTGTACAACCTGTAGCTATCTTTAATAGCTGAGATG
W243A	GCTGGTGTCTTATTATTGCGGATAAGATTTTTGGGACATTTGAAGC	GCTTCAAATGTCCAAAATCTTATCCGCAATAAAGAACCACCGC
D244A	GCTGGTGTCTTATTATTGGGCTAAGATTTTTGGGACATTTGAAGC	GCTTCAAATGTCCAAAATCTTATCCGCAATAAAGAACCACCGC
D384A	GACTTCCATTGGATTTCTGCTAGCTCAAAGACCCAAAGGCAGC	GCTGCTTGGGCTTTTGTAGCTAGCAGAAATCCAAATGGAAGTC
R396A	GGCAGCTATTATGAAACTCTCGCATGCTTGTATGTTCTTAATGC	GCATTAAGAATCATCAGCATGCGAGAGTTTCCATAATAGCTGCC
C397A	GGAAACTCTCCGAGCGCTGATGTTCTTAATGCTGTACCCG	CGGTACAGCATTAAAGAATCAGCGCTCGGAGAGTTTCC

(b) Phenylalanine hydroxylase

Mutation	Forward primer (5'→3')	Reverse primer (5'→3')
E286A	CCTGAACCTGACATCTGCCACGCGTGTGGGACATGTGCC	GGCAGATGTCCCAACACGCGTGGCAGATGTCAGGTTCCAGG

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