

Supplementary Materials

Supplementary Data S1: Sequences amplified from the L2 genome using primers L2-*cyp512a3*-F/R. The exons were marked with red letters. The PAM sequence and sgRNA-guiding sequence were highlighted in yellow and green, respectively. The red triangle indicated the cleavage site.

ATGACAGTGGAGGATCCTCAAGCTCTCATTCTGGCCGGCGTCGCCATCCTCGCTGTCCT
ATACGTCGTCGGATGGCAGACAGACCCCGTAAGTGGGTCCTCACAAAGCGCTATGGGG
TCAATGATAAACTAATTATCCGAACAGCTGAGGTCTATCCCCACAGTTGGTGGGCGTC
CGCACCAGGACTATCGATGCTGTCAGCGCTCAATTACCTGCGTAATGGGAAGAAGGTG
ATGACTGAGGGCTACCGGAAGGTCTGTCTATCTTCTCCACCGGCAGCTCCGCAGGGAC
TCTGCAGGAGCTCACAAATCCTGTTTAATAGTACCACGGAGGAGCCTTCAAGGTCGCA
CAGCTCGACAAATGGGTAGTCGTGGTTTCCGGGCGCAAGTTGGTCGACGAACTCTGGC
GGCGA^{CCGCACGAGGATTTATCGGCTCC}TGCGGCTGTTCAGGACGTATGAATACGCAT
GCAGCCGCACCTCTTGTCTACATTGACTTGGTCTCCTTCGTAGATCATCCAGATGAGA
TATACTCTCGGACACGAAGCATTGATGACCCGTATGAAACCGACATCATCAAGGAGA
AGCTTACGCGTTTCGTTCCGGTCATTTTCTGACGTCGTCGAGGAGATGAGGCTTGCC
GTGTCGGACTACATCCCCACAAAAGGAGACGGTAAGCAGTCTTTCAACCAGACCCTCT
TTTGACGGGCTCTCAACTGAATTCACAAAGAGTGGACCCCTGTCAATGGTATGGACAC
GGCGGTGAATATTGTCGCAAGAACCAGTAGCCGCGCCTTCGTGGGTCTCCCACTTTGT
AGGTCTCATTTTCACTTCATCAGCATACCGACCAGCTCATGCGGAAACGCTTCAGGCC
GCAACGAAGAATTCTTGCGTTGATTCTTCGTTTCACTATGGATGTGTTGAAGGATCGG
TTCTTTCTCAACACTTTCCTGACTTTTTGAAGCCGTGAGTCCAGTATTGGAAAGTAAT
GACAGGATTTCTCACGTTCTCTGGACAGTTACTTCGGGCACGCCTTCAGTAGAGCGAA
GAGGACTATCTATCAAGGACTGACATTCTCCAACCGTTGATCACCGAAAGAAGGATG
AATATGCGAGAGCTTGGGGACGACTGGTCTGACAAGCCGGTAAGAGTCCCGTCGAGG
GTCTGCGACAATGTGACTAAAGAGTGCTGTGTCAGGTTGATATGCTTCAGTGGGTGCG
TGGAAGCGGCAATGGCCAGGAAGAGCGATGATTATAGGATTGCGGAACGCATGTTCT
CGTTAACTTCGCAGCTCTCCACACAACCTCCACCGTGCGCCCAATCTTCCCTGTCTGCTGC
CAAGCGGTACTAATACCCTAGTTCAACCCGTATAGACCTTGCGCACGCGCTCTATGAT
CTCGCTGCCATGCCCAGCTCATTCCAGAACTGCGGGAAGAGGTCGATTCGCCCATCG
CGTCGGACGGTTGGTCCAAAGCGGCTGTAGGCAAAATGTGGAAGCTCGATAGCGTGT
GCAGAGAGGCGTTGCGTTACCATGGAATGAGCTTCAGTGTGTATCATATTATCTGTTAC
ACGAGCAGGCTCAGCGGTTCCCTGACTGACGGCCTACACCCCCCCCCCTCCACCAAGT
CGTCTTTTCCGCAAGGCAATGAAGGACGTCACGCTGAGCGACGGGACATTCATCCCG
AAAGGCACCACCGTAGTCGCCGACGAGGCCACGCACCACGAGGCGTCGATCTAC
CCCAACCCGGAGGTGCTCGACCCCTTCGCTTCGCAAAGTTGGGTGCAAGTGGCGGA
GAAGGCGGTTCCGTGAAGCTCCAAACCGTTTCCACGTCCATTGATTTCTGCCCCTTCG
GCCATGGCAAGCACGCTTGGTATGTCCTCTCTCCGCCACGCCCTGCTCGTGCTAAATCA
AGCGTTCTGACTGCCGTACAGCCCGGGACGGTGGTTCGCGGCAAACGAGGTGAAGAT
GATCTTAGCGCACATCGTGCTCAACTACGACCTGAAGCTCGGTGGAGACGGCAAACGG
CCTGGGGACACGCTCTTCGGTACCACCATACTTCCGCCCCGTGGGCAGGTATATTTAG
GAAACGCAAGGGGGTGTCCGAGTGA

Supplementary Data S2: The sgRNA transcription cassettes (T7 promoter-Spacer-sgRNA scaffold)
of *cyp512a3*.

TTCTAATACGACTCACTATAGACGAGGATTATCGGCTCCGTTTTAGAGCTAGAAATAG
CAAGTTAAAATAAGGCTAGTCCGTTATCAACTTGAAAAAGTGGCACCGAGTCGGTGCT
TTT

Supplementary Data S3: Donor DNA sequences of *cyp512a3*. The sequence of 5' flank, *ura3* cassette and 3' flank was marked with green, red and blue letters, respectively.

ATTTAGCAGCTGCTGTTCCCCGTTTCCTCATTCTCGCTCCATGGCATGATCAACCTCGCTT
TCTAGGCTTTACATCGGGGCATGCACGGTCATCCAGGGGCATGCGTGGCAACTTAAATC
GACATGGGCTTCCAGTAACCCGGCGAAAAACAGACATACCTGTGCGGTCTGAGCAAATG
AAGCAAGTGCCCTACCAAACCATCCTATATCTCGGAGCGCGGTACCTGGATCAGTAG
ATGTGAGTAAGGACCATTACACACGCAACCTTCCATACGCCCCAGAGTCGTCCGAGTT
GGCAGCAGGCATGCGTCGCCATAAGTATCCTCTATCACCTTCCGCCTATCTTGTTACTTC
CCTCCTCTCTCAGCCAACTGGACCGTTGGACTCGTGCGCCATCTCTCTGATGACAGTG
GAGGATCCTCAAGCTCTCATTCTGGCCGGCGTCGCCATCCTCGCTGTCTTATACGTCGT
CCGATGGCAGACAGACCCCGTAAGTGGGTCTCACAACCTCCACTCCCTCCAACTATTT
TCGCCTGTCGGCCTGCCCAGCCGCTGTCACTCACGAATGGCGGTTCTGGTCCCTCAAG
ATACAGGTCCTTGACACGGGCAATAAGGGCTTCTGACAAGAAGGGTTTGAGTGATTCA
GTGAAGCGTTCGGGCCATGGCTCGTCCTCTTGTGGAGTGTCCTCGTCAACTTTTCGTTC
ATCCGTTGCGGGTGGCTGCGCGGCGTCCGGTTCGGGGTTCGGCGACAACAGCGTCGCT
AACTTGCTCTGCAGTGGTGGCAGAAGTTTCGGGCTCGTTGTTCTCACCGACGGCTTGA
TCAGCTGGCTTAGACGTAGTGGAGACTCCTGCAGGCGTCACATCCGCCCCGTTCTTCG
ATGAGGATGGCATAGCGAGCGTCTTCAAATGGATGACCTGACTGTCTTGGTCGACCTC
GAATACCAAGAAGTCCGTGAACCTGGAAGGCCATATGAACTAAATAAACGAACGCGA
GTATGACCTTACCACGCACCTCTGCTTGATGATGCCCTCGATTTTGGGCACATCAAAAC
CAATGTACTCAGATATACCAACGTCCGTTTCCATGATTTGCTGTATAGAGCCATCTGGAC
CATGCACTGGGGGTTTTGTGTTGAGCAGCGCATGACTTGGCGGAAGAAGAGTCTCCGG
TTCGTCGTTCTTCACGTCAACGTCCATATCGTCCTGTTCTCTGCTCTTCGACGTCGGCGAT
GCTGACAACCGTGACGGTGCTGTCCGTGCTCATAGGCATGACTCCGTCCCCGTCTCTA
CTTTTGCTCGCTTGGCATTTCGGTTCATCCGCTAGATCTGGCTCGCGAGGGCGAGTTTTT
GGCGAGGACGACATTCGGTGTCAGTGAAGCGGAGGGGAGTAGAGACGGTCACTGGA
GAGATGGGAGAGCCTCGTTCGAGGCAAACTGGAAAACAGCGCGCTTATCTAATCTCA
CAAGTCACCCAGCAACCACCCGTCCGCCACAAAACAAAATTGAAAGAATGGTGGCCG
TGGCCAAGCAAACATACGCGCAGAGGGCCACCAGACATCCCAACCCAGCTGCGAAAG
CTCTCCTCGAGACGATCGAGCGCAAGCGCACAAATCTGTCTGTTAGCGTCGATGTGAC
GAAACGGGAGGACTTCTTCAGGATTGTGGACATCGTGGGTCCATACGTCTGCCTAGTA
AAGGTAGGTGTACTATGTCCAAATGGTTGATATGCACTTGGGTGAATATAATCCAAAGA
CCCACATAGACATCATCGAGGACTTTGATCCATCCGCGATCGAACGCCTCAAGGCACTC
AGCGAGAAGCATGACTTCCTCATCTTTGAAGACAGAAAATTTGCCGACATTGGTAGGA
TGTAAGTCCCTTTGCGCCCGCTACATACGATGTTGACAAGAATATAGGAAACACGGTGGC
ACTTCAATATTCTGCAGGCGTGACAAAATCGCTAGCTGGTCGCACATCACGAACGCA
CACCTGTCCCAGGACCGTCCATCATCTCCGGCCTCAAGGCTGTGCGGTCTGCCCCTTG

GCAGGGGGCTTCTGCTCCTCGCCGAGATGAGCACCAAGGGCAGCCTCGCAACCGGCT
CATACACGGAAGAGGCCGTCCGTATGGCTCGCGCCAACCGCGACTTCGTGATCGGCTT
CATTGCCCAGCAACGCATGGACAGCGTCGGTCTGCGGGAGGGCGAGTCCTCGCCGGA
CGAAGACTTCCTTATCCTTACTCCAGGAGTCGGACTGGATACTAGGGGAGATAGCATGG
GGCAGCAATACCGAACGCCAAGGGAGGTGGTCATCGAGTCCAATTGCGATGTCATCAT
AGTTGGTCGGGGTGTTTACGGGAACGATAACGGCACGAATGCGGAGGCAGTCCGCGC
ACAGGCGGAGAGGTACCGCGCAGAAGGCTGGAAGGCATACCAGGAAAGGGTTGGGA
TCTCGGATTAGGGCTAGCATTGTGCAGAGACGGGTATAGTAGCACAGTGTATATGTAAA
CAAAACATCCTACCGCTACAATCGCAATACATATACATACTTATCGTTAAATCAGGCA
GTCGTTCCCTCCACTTCCGCCTTCCCTTCTCTCCTCTTTCCTCTTTGGCTTCGCGCTCTTCT
TCCTCTACAACTTCGATGTCCAGTGGGAAGGTCAAAATTGCAGCGATGCCCCGTTAGTT
GGTTCAACTCTGCATGAAATTGACCATGTTCAGTGGTACGGTAAGCATCAGGATGGGAA
AACTCTTACGCTGGCCAGACTCGTGCATACTAGAGAAGATCAAGACCTCCCCGCCTTT
CTGTTGGACGTCTTCCACTATGCGCACGTACTTTTTGCGCACCGTAGCGTTGCTTGACC
TGGGATTATGATCAAGACTACGTTTCATCGGAAGGAGTCAGCTGGGCTAACCTGAACAA
CTCGTCCGAGATCATAAGTGTGCCGATGGCGCCTCGATCTGAAGCAAGAGCGACATGA
TCGGGACCATAACCAGGCTCGCATCTCGTCCGAGGCTAGCATCTTGAAGAACCTGTGAC
ATTGACTTGGTCTCCTTCGTAGATCATCCAGATGAGATATACTCTCGGACACGAAGCATT
TGATGACCCGTATGAAACCGACATCATCAAGGAGAAGCTTACGCGTTTCGCTTCCGGTC
ATTTTTCCTGACGTTCGTCGAGGAGATGAGGCTTGCCGTGTCGGACTACATCCCCACAA
AAGGAGACGGTAAGCAGTCTTTCAACCAGACCCTCTTTTGACGGGCTCTCAACTGAAT
TCACAAAGAGTGGACCCCTGTCAATGGTATGGACACGGCGGTGAATATTGTCGCAAGA
ACCAGTAGCCGCGCCTTCGTGGGTCTCCCACTTTGTAGGTCCTCATTTTCACTTCATCA
GCATACCGACCAGCTCATGCGGAAACGCTTCAGGCCGCAACGAAGAATTCTTGGCGTT
GATTCTTCGTTTCACTATGGATGTGTTGAAGGATCGGTTCTTTCTCAACACTTTCCCGTA
CTTTTGAAGCCGTGAGTCCAGTATTGGA

Supplementary Data S4: Sequences of the mutant edited through the *G. lucidum* CRISPR system, amplified in L2- $\Delta cyp512a3$ using primers V-KO-*cyp512a3*-F/R. The sequence of 5' flank, *ura3* cassette and 3' flank was marked with green, red and blue letters, respectively.

CTTACGCCTCTTCATCCCCATTTATATTGCACCATGGAATTTAGCAGCTGCTGTTCCCCG
TTCCTCATTCTCGCTCCATGGCATGATCAACCTCGCTTTCTAGGCTTTACATCGGGGCAT
GCACGGTCATCCAGGGGCATGCGTGGCAACTTAAATCGACATGGGCTTCCAGTAACCC
GGCGAAAACAGACATACCTGTGCGGTCTGAGCAAATGAAGCAAGTGCCCTACCAAAC
CATCCTATATCTCGGAGCGCGGTACCTGGATCAGTAGATGTGAGTAAGGACCATTACA
CACGCAACCTTCCATACGCCCCAGAGTCGTCCGAGTTGGCAGCAGGCATGCGTCGCCA
TAAGTATCCTCTATCACCTTCCGCCTATCTTGTTACTTCCCTCCTCTCTCAGCCAACTGG
ACCGTTGGACTCGTGCGCCATCTCTCTGATGACAGTGGAGGATCCTCAAGCTCTCATTC
TGGCCGGCGTCGCCATCCTCGCTGTCCTATACGTCGTCCGATGGCAGACAGACCCCGTA
AGTGGGTCCTCACAACTCCACTCCCTCCAACTATTTTCGCCTGTCGGCTGCCAGCCG
CTGTCACTCACGAATGGCGGTTCTGGTCCCTCAAGATACAGGTCCTTGACACGGGCAA
TAAGGGCTTCTGACAAGAAGGGTTTGAGTGATTCAGTGAAGCGTTCGGGCCATGGCTC
GTCCTCTTGTTGGAGTGTCCTCGTCAACTTTTCGTTTCATCCGTTGCGGGTGGCTGCGCGG
CGTCCGGTGCAGGGGTCGGCGACAACAGCGTCGCTAACTTGCTCTGCAGTGGTGGCAG
AAGTTTCGGGCTCGTTGTTCTCACCGACGGCTTGATCAGCTGGCTTAGACGTAGTGGA
GACTCCTGCAGGCGTCACATCCGCCCCGTTCTTCGATGAGGATGGCATAGCGAGCGTC
TTCAAATGGATGACCTGACTGTCTTGGTGCGACCTCGAATACCAAGAAGTCCGTGAACC
TGGAAGGCCATATGAACTAAATAAACGAACGCGAGTATGACCTTACCACGCACCTCTG
CTTGATGATGCCCTCGATTTTGGGCACATCAAAACCAATGTACTCAGATATACCAACGT
CCGTTTCCATGATTTGCTGTATAGAGCCATCTGGACCATGCACTGGGGGTTTTGTGTTG
AGCAGCGCATGACTTGGCGGAAGAAGAGTCTCCGGTTCGTCGTTCTTCACGTCAACGT
CCATATCGTCCTGTTCTGCTCTTCGACGTCGGCGATGCTGACAACCGTGACGGTGCTG
TCCGTGCTCATAGGCATGACTCCGTCCCCGTCTCTACTTTTGCTCGCTTGGCATTCCGGT
TCATCCGCTAGATCTGGCTCGCGAGGGCGAGTTTTTGGCGAGGACGACATTCGGTGTC
AGTGAAGCGGAGGGGAGTAGAGACGGTCACTGGAGAGATGGGAGAGCCTCGTTCGA
GGCAAACTGGAAAACAGCGCGCTTATCTAATCTCACAAGTCACCCAGCAACCACCCG
TCGGCCACAAAACAAAATTGAAAGAATGGTGGCCGTGGCCAAGCAAACATACGCGCA
GAGGGCCACCAGACATCCCAACCCAGCTGCGAAAGCTCTCCTCGAGACGATCGAGCG
CAAGCGCACAAATCTGTCTGTTAGCGTCGATGTGACGAAACGGGAGGACTTCTTCAGG
ATTGTGGACATCGTGGGTCCATACGTCTGCCTAGTAAAGGTAGGTGTACTATGTCCAAA
TGTTGATATGCACTTGGGTGAATATAATCCAAAGACCCACATAGACATCATCGAGGAC

TTTGATCCATCCGCGATCGAACGCCTCAAGGCACTCAGCGAGAAGCATGACTTCCTCA
TCTTTGAAGACAGAAAATTTGCCGACATTGGTAGGATGTAGTCCCTTTGCGCCCGCTAC
ATACGATGTTGACAAGAATATAGGAAACACGGTGGCACTTCAATATTCTGCAGGCGTGC
ACAAAATCGCTAGCTGGTCGCACATCACGAACGCACACCCTGTCCCAGGACCGTCCAT
CATCTCCGGCCTCAAGGCTGTCGGTCTGCCCTTGGCAGGGGGCTTCTGCTCCTCGCC
GAGATGAGCACCAAGGGCAGCCTCGCAACCGGCTCATACACGGAAGAGGCCGTCCGT
ATGGCTCGCGCCAACCGCGACTTCGTGATCGGCTTCATTGCCCAGCAACGCATGGACA
CGCTCGGTCTGCGGGAGGGCGAGTCCTCGCCGGACGAAGACTTCCTTATCCTTACTCC
AGGAGTCGGACTGGATACTAGGGGAGATAGCATGGGGCAGCAATACCGAACGCCAAG
GGAGGTGGTCATCGAGTCCAATTGCGATGTCATCATAGTTGGTCGGGGTGTTTACGGGA
ACGATAACGGCACGAATGCGGAGGCAGTCCGCGCACAGGCGGAGAGGTACCGCGCAG
AAGGCTGGAAGGCATACCAGGAAAGGGTTGGGATCTCGGATTAGGGCTAGCATTGTGC
AGAGACGGGTATAGTAGCACAGTGTATATGTAAACAAAACATCCTACCGCTACAATCGC
AATACATATACATACTTATCGTTAAATCAGGCAGTCGTTCCCTTCCACTTCCGCCTTCC
TTCTCTCCTCTTCCTCTTTGGCTTCGCGCTCTTCTTCTCTACAACCTTCGATGTCCAGTG
GGAAGGTCAAAATTGCAGCGATGCCCGTTAGTTGGTTCAACTCTGCATGAAATTGACC
ATGTCAGTGGTACGGTAAGCATCAGGATGGGAAAACCTTACGCTGGCCAGACTCGTG
CATACTAGAGAAGATCAAGACCTCCCCGCCTTTCTGTTGGACGTCTTCCACTATGCGCA
CGTACTTTTTGCGCACCGTAGCGTTGCTTGACCTGGGATTATGATCAAGACTACGTTCA
TCGGAAGGAGTCAGCTGGGCTAACCTGAACAACTCGTCCGAGATCATAAGTGTGCCGA
TGGCGCCTCGATCTGAAGCAAGAGCGACATGATCGGGACCATAACCAGGCTCGCATCTC
GTCCGAGGCTAGCATCTTGAAGAACCTGTGACATTGACTTGGTCTCCTTCGTAGATCAT
CCAGATGAGATATACTCTCGGACACGAAGCATTTGATGACCCGTATGAAACCGACATCA
TCAAGGAGAAGCTTACGCGTTCGCTTCCGGTCATTTTTCCTGACGTCGTCGAGGAGAT
GAGGCTTGCCGTGTCGGACTACATCCCCACAAAAGGAGACGGTAAGCAGTCTTTCAAC
CAGACCCTCTTTTGACGGGCTCTCAACTGAATTCACAAAGAGTGGAACCCCTGTCAATG
GTATGGACACGGCGGTGAATATTGTCGCAAGAACCAGTAGCCGCGCCTTCGTGGGTCT
CCCACCTTTGTAGGTCCTCATTTTCACTTCATCAGCATACCGACCAGCTCATGCGGAAAC
GCTTCAGGCCGCAACGAAGAATTCTTGCGGTTGATTCTTCGTTTCACTATGGATGTGTT
GAAGGATCGGTTCTTTCTCAACACTTTCCCGTACTTTTGAAGCCGTGAGTCCAGTATT
GGAAGTAATGACAGGATTTCTCACGTTCTCTGGACAGTTACTTCGG

Supplementary Data S5: Sequences amplified in L1-KO-*cyp512a3* and L2-KO-*cyp512a3* using primers *ura3*-SNP-F/R. The SNP site was marked with red.

>Sequences amplified from the L1 genome using primers *ura3*-SNP-F/ R

TTTGCGGAGGACGACATTCGGTGTCTAGTGAAGCGGAGGGGAGTAGAGACGGTCACTG
GAGAGATGGGAGAGCCTCGTTCGAGGCAAACTGGAAAACAGCGCGCTTATCTAATCT
CACAAGTCACCCAGCAACCACCCGTCGGCCACAAAACAAAATTGAAAGAATGGTGGC
CGTGGCCAAGCAAACATACGCGCAGAGGGCCACCAGACATCCCAACCCAGCCGCGAA
AGCTCTCCTCGAGACGATCGAGCGCAAGCGCACAAATCTGTCTGTTAGCGTCGATGTG
ACGAAACGGGAGGACTTCTTCAGGATTGTGGACATCGTGGGTCCATACGTCTGCCTAG
TAAAGGTAGGTGTACTATGTCCAAATGGTTGATATGCACTTGGGTGAATATAATCCAAA
GACCCACATAGACATCATCG

>Sequences amplified from the L2 genome using primers *ura3*-SNP-F/R

TTTGCGGAGGACGACATTCGGTGTCTAGTGAAGCGGAGGGGAGTAGAGACGGTCACTG
GAGAGATGGGAGAGCCTCGTTCGAGGCAAACTGGAAAACAGCGCGCTTATCTAATCT
CACAAGTCACCCAGCAACCACCCGTCGGCCACAAAACAAAATTGAAAGAATGGTGGC
CGTGGCCAAGCAAACATACGCGCAGAGGGCCACCAGACATCCCAACCCAGCTGCGAA
AGCTCTCCTCGAGACGATCGAGCGCAAGCGCACAAATCTGTCTGTTAGCGTCGATGTG
ACGAAACGGGAGGACTTCTTCAGGATTGTGGACATCGTGGGTCCATACGTCTGCCTAG
TAAAGGTAGGTGTACTATGTCCAAATGGTTGATATGCACTTGGGTGAATATAATCCAAA
GACCCACATAGACATCATCG

Supplementary Data S6: Sequences amplified from the L1 genome using primers V-OE-*cyp512a3*-F/R. The partial promoter sequence, whole intron sequence and partial *cyp512a3* gene sequence were highlighted in green, yellow and red, respectively.

GCAGCTCAGCACAAAGTTTCTGTGGTGCTGTTGCAGGCACTGAGGAACGTGAGCAGGC
TTTAGAGGGAGCTAGGCTGGGCGACGTTGGTCTGGGTATGCGAGGAAGACATCGGAG
AGATGGCAAGGGCGAGGGACGGGCCGAGTCTAGGCTGAGGCTGAAGAGTCAGACGC
AACTAGCGCTCATTGGCGGGAGACCGCCCCAGTCCGGCAAGCGCCGAGTGACGCAGG
TGGTGACGCCCCGCCAGTCGCCCAGTCCGTAGTAGTGTGCCCCGATTGGATCTGCGATAA
CATCGGTCGAGGCGTATAAATGCTCTCTCTGCCCTCTCTCCTTGTCCAGCCTCATCTCCT
TACTCACTCTTCATCCCCCTCTCAACATGCCCCGTGAGTCCTGCATCCCCATCGTGCACC
GTATTACCTCATCGTTTGGCCCCCTTCTCACAGGTCAAGGT

CGCTCTAGAGATCTAGC
TAGCTAG

ATGACAGTGGAGGATCCTCAAGCTCTCATTCTGGCCGGCGTCGCCATCCTCG
CTGTCCTATACGTCGTCCGATGGCAGACAGACCCCGTAAGTGGGTCCTCACAAAGCGC
TATGGGGTCAATGATAAACTAATTATCCGAACAGCTGAGGTCTATCCCCACAGTTGGTG
GGCCGTCCGCACCAGGACTATCGATGCTGTCAGCGCTCAATTACCTGCGTAATGGGAA
GAAGGTGATGACTGAGGGCTACCGGAAGGTCTGTCTATCTTCTCCACCGGCAGCTCCG
CAGGGACTCTGCAGGAGCTCACAAATCCTGTTTAATAGTACCACGGAGGAGCCTTCAA
GGTCGCACAGCTCGACAAATGGGTAGTCGTGGTTTCCGGGCGCAAGTTGGTCGACGA
ACTCTGG

Table S1. Primer sequences

Primer	Sequence (5'→3')
L2- <i>cyp512a3</i> -F	ATGACAGTGGAGGATCCTCAAG
L2- <i>cyp512a3</i> -R	TCACTCGGACACCCCCTT
<i>cyp512a3</i> -UP-F	ttcgatcttccagagatcATTTAGCAGCTGCTGTTCCCCGT
<i>cyp512a3</i> -UP-R	GGCTAGCATCTTGAAGAACCTGTGTTGTGAGGACCCACTTACG
<i>cyp512a3</i> -URA3-F	CGTAAGTGGGTCCTCACAACACAGGTTCTTCAAGATGCTAGCC
<i>cyp512a3</i> -URA3-R	CTACGAAGGAGACCAAGTCAATGTCTCCACTCCCTCCAACATTTTTCG
<i>cyp512a3</i> -DOWN-F	CGAAAATAGTTGGAGGGAGTGGAGACATTGACTTGGTCTCCTTCGTAG
<i>cyp512a3</i> -DOWN-R	caactgccgttegacgatcTCCAATACTGGACTCACGGCTTC
V-KO- <i>cyp512a3</i> -F	CTTACGCCTCTTCATCCCCATT
V-KO- <i>cyp512a3</i> -R	CCGAAGTAACTGTCCAGAGAAC
<i>ura3</i> -SNP-F	TTTGGCGAGGACGACATTCG
<i>ura3</i> -SNP-R	CGATGATGTCTATGTGGGTC
<i>Pgpd</i> -intron-F	aattcgagctcggtaccccgTCCAAGCCGCTCTCATGGCAT
<i>Pgpd</i> -intron-R	ACCTTGACCTGTGAGAAGGG
OE- <i>cyp512a3</i> -F	TCACAGGTCAAGGTCGCTCTAGAGATCTAGCTAGCTAGATGGCAGTGG AGGATCCT
OE- <i>cyp512a3</i> -R	CGGTCGGCATCTACTTCCCCCGGGGGGATCACTCGGGCACCCCTTTG CGTTTC
<i>Ttrpc-sdhB</i> -F	AGTAGATGCCGACCGGGATC
<i>Ttrpc-sdhB</i> -R	ggtcgacgatggactagtccTGCTCTATGTCTTGCCTTGTCT
V-OE- <i>cyp512a3</i> -F	GCAGCTCAGCACAAGTTTCTGT
V-OE- <i>cyp512a3</i> -R	CCAGAGTTCGTCGACCAACTTG
RT- <i>RPL4</i> -F	GTCAACAAGGGCGTTCTCTT
RT- <i>RPL4</i> -R	AACAGCGTCTTGAGGAAGGT
RT- <i>cyp512a3</i> -F	CCTATACGTCTGTCGATGGC
RT- <i>cyp512a3</i> -R	TACTTCCGGTAGCCCTCAGT