

Supplementary Table S1. The primers of insecticide resistant-related P450 genes.

Types of primers	Primer	Sequence (5'-3')	Length
RT-qPCR	<i>CYP408A3-F</i>	CGGCAGCTCCCATACTGATT	105
	<i>CYP408A3-R</i>	GCAGACCGTAGATAGGCACC	
	<i>CYP6CS3-F</i>	TGTACCCTTGGTCCTGTGGA	159
	<i>CYP6CS3-R</i>	CAGGGATGTCAGTGGGTGTC	
	<i>CYP4CE3-F</i>	CCTGTGTACGGTTGTGCTGA	135
	<i>CYP4CE3-R</i>	AAAGTCGGCGAGTGTCCAAA	
	<i>CYP4DD1-F</i>	CGGATGCTCGGCAGTTCTAA	145
	<i>CYP4DD1-R</i>	TCCAGCACTGAATGGACAGT	
	<i>CYP6AX3-F</i>	CAGCGCTACTGATCCGATGT	150
	<i>CYP6AX3-R</i>	GCATTCTCCACTTCTCGCCT	
	<i>CYP6AY3-F</i>	GACGAGGGAATTGAGGCGAA	132
	<i>CYP6AY3-R</i>	TCTTGCCAACTCGTACAGGC	
	<i>CYP6ER4-F</i>	CGGCAGCTCCCATACTGATT	105
	<i>CYP6ER4-R</i>	GCAGACCGTAGATAGGCACC	
	<i>CYP6FJ3-F</i>	AGCGTTCTGGGAGTCCTGAT	148
	<i>CYP6FJ3-R</i>	TGAAGCTCTCTTTGGAGCGT	
	<i>CYP417A4-F</i>	GGCCTCCAACAGTTCCCATT	123
	<i>CYP417A4-R</i>	CCAGCCAAACTCTGACGGTA	
	<i>CYP418A2-F</i>	TGTACCCTTGGTCCTGTGGA	159
	<i>CYP418A2-R</i>	CAGGGATGTCAGTGGGTGTC	
Full-length primer	<i>CYP408A3-F</i>	TCATAAGATTCCACATATACAAT	1491
	<i>CYP408A3-R</i>	AAATTCCACTGGAAATTGAGAA	
	<i>CYP6CS3-F</i>	ATGGAACCTTAAGAAGTACATCAA	1460
	<i>CYP6CS3-R</i>	TTACAGCTTTTCGAACCTAGCAT	
Reference gene	<i>RPL9F</i>	TGTGTGACCACCGAGAACAACCTCA	142
	<i>RPL9R</i>	ACGATGAGCTCGTCCTTCTGCTTT	

Supplementary Table S2. This study used in vitro primers for dsRNA synthesis of insecticide resistant-related P450 genes.

RNAi	<i>dsCYP6CS3-F</i>	TAATACGACTCACTATAGGGACTTGTCCCTC	715
		AGTTTGGCAAT	
	<i>dsCYP6CS3-R</i>	TAATACGACTCACTATAGGGCCGAAAACA	708
		TGCGGTAACCC	
	<i>dsCYP408A3-F</i>	TAATACGACTCACTATAGGGTGGTGGTGA	708
		TTCTGTTACTGT	
	<i>dsCYP408A3-R</i>	TAATACGACTCACTATAGGGACAGTCGGA	
		CTTATGAGCGT	

Supplementary Table S3. The dsRNA synthesis concentration of P450 gene

Gene	Concentration(ng/μL)
<i>dsCYP6CS3</i>	1193.7
	1865.4
	2021.1
	2508.5
<i>dsCYP408A3</i>	2337.0
	2465.7