

## Additional file 1. PCR primer sequences and reaction conditions

Gene	Primer name	Primer sequence	PCR conditions	PCR product size (bp)	Ref. sequences (Genbank No.)
<i>Pocyt b</i>	Pocytb-F1	GATATATGCATGCAACTGGTGCA	The first PCR: 94 °C for 5 min; 94 °C for 1 min, 50 °C for 1 min, 70 °C for 2 min, 30 cycles; 70 °C 10 min. The second PCR: 94 °C for 5 min; 94 °C for 50 sec, 55 °C for 50 sec, 70 °C for 2 min, 35 cycles; 70 °C 10 min.	508	FJ409567
	Pocytb-R1	GAACACATAAACCATATAATTGGAA			
	Pocytb-F2	CAATTCAGCCTTAGTTATATGGT			
	Pocytb-R2	GAATATTCTCTAGCACCAATGCCA			
<i>Pocox1</i>	Pocox1-F1	ATGCCCTGGATTATTGGAGGA	The first PCR: 94 °C for 5 min; 94 °C for 1 min, 50 °C for 1 min, 70 °C for 2 min, 30 cycles; 70 °C 10 min. The second PCR: 94 °C for 5 min; 94 °C for 50 sec, 55 °C for 50 sec, 70 °C for 2 min, 35 cycles; 70 °C 10 min.	861	FJ409571
	Pocox1-R1	TCCTATAATGGCACCAATAG			
	Pocox1-F2	TACCTATTTIATGTGGATCACC			
	Pocox1-R2	CATGTAATGCTATATCAATAGCT			
<i>Pog3p</i>	Pog3p-F1	GCAGGAATAATATTTTGTAAGGCACA	The first PCR: 94 °C for 5 min; 94 °C for 1 min, 50 °C for 1 min, 70 °C for 2 min, 30 cycles; 70 °C 10 min. The second PCR: 94 °C for 5 min; 94 °C for 50 sec, 55 °C for 50 sec, 70 °C for 2 min, 35 cycles; 70 °C 10 min.	359	KP050383
	Pog3p-R1	GCATGTTACCGTTGGCGATAAGAA			
	Pog3p-F2	CCTTAGATGGTCCATCAACTACTA			
	Pog3p-R2	GTACACAGCGAGAAGGATCCAGCT			
<i>Pomsp1</i>	PoMSP1-outerF1	ATGAAGGTGTTTCGTATTGCGCTC	The first PCR: 95 °C for 5 min; 95 °C for 30 sec, 62 °C for 5 min, 30 cycles; 72 °C 10 min. The second PCR: 95 °C for 5 min; 95 °C for 40 sec; 62 °C for 1 min, 72 °C for 150 sec, 35 cycles; 72 °C 10 min.	5157	FJ824670
	PoMSP1-outerR1	GGATCAATAAGACTGCCAATAAGA			
	PoMSP1-innerF1	GTTTCGTATTGCGCTCTCTTTTCAT			
	PoMSP1-innerR1	CTACATTAGATAAATGGTAAGGTAGA			
	PoMSP1-innerF2	CTACCTTACCATTATCTAATGTAGTA			
	PoMSP1-innerR2	CACAGTTTCCACTTTTGGGAAGCAA			
	PoMSP1-innerF3	CTTCCAAAAGTGGAAACTGTGGCT			
PoMSP1-innerR3	GCCAATAAGAAAGATAAGCTAAGGA				
<i>Pmmsp1</i>	PmMSP1-outerF	GTCACCTGTGAAACAATGAAGAT	The first PCR: 95 °C for 5 min; 95 °C for 40 sec, 55 °C for 1 min, 72 °C for 5 min, 30 cycles; 72 °C 10 min. The second PCR: 95 °C for 5 min; 95 °C for 40 sec, 60 °C for 1 min, 72 °C for 2 min, 35 cycles; 72 °C 10 min.	5150-5160	FJ824669
	PmMSP1-outerR	CCTCTTGCTCAGTCTTAATCCTT			
	PmMSP1-innerF1	GGAAAACCTGGAGGAAGTACTAGTTGT			
	PmMSP1-innerR1	GTCTTCTAAATACATAAGTTGCT			
	PmMSP1-innerF2	CTTGATAATAGCATTACAACAGAGA			
	PmMSP1-innerR2	GCTCACACTGTCATACATTGAA			
	PmMSP1-innerF3	GGAATCGTTGTTCCGACATTGT			
	PmMSP1-innerR3	GCATTATCCGGTTGCTCTTCT			
	PmMSP1-innerF4	CCTACTTATCTGGTGGATTACAT			
PmMSP1-innerR4	CTCATTTTATGTTCAATCGTATCCT				
<i>Podhfr</i>	Podhfr-outerF	CGCGATATGCGCGTGTGCAAA	The first PCR: 94 °C for 5 min; 94 °C for 40 s; 55 °C for 1 min; 72 °C for 120 sec, 30 cycles; 72 °C 10 min. The second PCR: 94 °C for 5 min; 94 °C for 40 sec, 60 °C for 1 min, 72 °C for 120 sec, 35 cycles; 72 °C 10 min.	1673-1757	EU266605
	Podhfr-outerR	CGTGGTGGACATAAATCTCTAT			
	Podhfr-innerF	GAGATTGGAAGAAGAGTGAATCGT			
	Podhfr-innerR	TTCCGGGTTTAGTTTAAAGCGTG			
<i>Pmdhfr</i>	Pmdhfr-outerF	ATGGAGGAAGTCTCAGACGTATTTCGAT	The first PCR: 94 °C for 5 min; 94 °C for 40 s; 55 °C for 1 min; 72 °C for 120 sec, 30 cycles; 72 °C 10 min. The second PCR: 94 °C for 5 min; 94 °C for 40 sec, 60 °C for 1 min, 72 °C for 120 sec, 35 cycles; 72 °C 10 min.	1685-1779	EF188271
	Pmdhfr-outerR	TAGGCGGCCATATCCATTGTTA			
	Pmdhfr-innerF	CATCTGCGCTTGCTGTAAAGTGCCA			
	Pmdhfr-innerR	GTAATAATCCGATATGTAAAGTCTTCA			
<i>Pmdhps</i>	Pmdhps-outerF	ATACCTAATTATAAACATATTG	The first PCR: 94 °C for 5 min; 94 °C for 30 sec, 45 °C for 45 sec, 70 °C for 120 sec, 30 cycles; 72 °C 10 min. The second PCR: 94 °C for 5 min; 94 °C for 30 sec, 52 °C for 45 sec, 72 °C for 120 sec, 35 cycles; 72 °C 10 min.	962	KJ400020
	Pmdhps-outerR	ACCACATATAATTTTCTGTATAT			
	Pmdhps-innerF	GATACGATAAACACATTGTATT			
	Pmdhps-innerR;	TGGTCTTTATCCTTGCGCAT			