

Table S1. qRT-PCR primer sequence.

Gene	Primer
LOC:103430380-F	CAAATCCGACTACCCATCA
LOC:103430380-R	GACCGTTTAAGCCTCCTG
LOC:103437824-F	GGTTGATGCGGTGATTGG
LOC:103437824-R	CCTTGGCTCTGTTTCTTGTT
LOC:103404203-F	ATTGTAAGGAACGGGACG
LOC:103404203-R	TCTTGGGTGTCATCATCG
MdPAO-F	GTGGTTCCTAGATGGCAAGA
MdPAO-R	ATTGACGGTAAGGGTTGTTG
MdNYC1-F	GAGGAAAGTGCGAGAAAGCG
MdNYC1-R	CCACCTGACAACTGAAACCC
MdPPH-F	GAGATAGTGAAAGAACCGACAG
MdPPH-R	CCTCAGACTCCTTGGCTAC
MdRCCR-F	CCGAAGCGTAGTGTCTCC
MdRCCR-R	GATTCCCAGCACCTCCTT
MdHCAR-F	GAAGGCTGCGAGTAGTGA
MdHCAR-R	TACCGTAACATACTGTGGAT
MdSGR2-F	GGCTGCTGCTTCTGTGCTTCCT
MdSGR2-R	CCGAGCCACAACCTTCATCTCTTT
MdActin-F	TGACCGAATGAGCAAGGAAATTACT
MdActin-R	TACTCAGCTTTGGCAATCCACATC

Table S2. Statistics of comparison between samples and reference genomes.

Sample Name	Total reads	Total mapped reads	Total mapped (%)	Uniquely mapped reads	Uniquely mapped (%)	Multiply mapped reads	Multiply mapped (%)
GDY1	48697818	45589210	93.62	44417120	91.21	1172090	2.41
GDY2	42388050	40002999	94.37	38919532	91.82	1083467	2.56
GDY3	50209792	47141972	93.89	45920511	91.46	1221461	2.43
GSG1	46390926	42619369	91.87	41377590	89.19	1241779	2.68
GSG2	43456306	40064564	92.20	38906834	89.53	1157730	2.66
GSG3	53412110	48979276	91.70	47761426	89.42	1217850	2.28

Table S3. Differential genes in the metabolic pathways of porphyrin and chlorophyll.

Gene id	Gene description
LOC103444548	Glutamate--tRNA ligase%2C chloroplastic/mitochondrial
LOC103448940	NYC1
LOC103404203	protoporphyrinogen oxidase%2C mitochondrial-like
LOC103424694	uroporphyrinogen-III synthase%2C chloroplastic-like%2C
LOC103400421	heme oxygenase 1%2C chloroplastic-like
LOC103425927	frataxin%2C mitochondrial
LOC103434858	magnesium-chelatase subunit ChII%2C chloroplastic-like
LOC103410551	ferrochelatase-2%2C chloroplastic-like
LOC103444879	uroporphyrinogen decarboxylase 1%2C chloroplastic
LOC103448109	heme oxygenase 1%2C chloroplastic-like
LOC103430380	protochlorophyllide reductase%2C chloroplastic
LOC103437824	geranylgeranyl diphosphate reductase%2C chloroplastic
LOC103437475	magnesium protoporphyrin IX methyltransferase%2C chloroplastic-like
LOC103402026	glutamyl-tRNA reductase 1%2C chloroplastic-like
LOC103446341	magnesium-chelatase subunit ChII%2C chloroplastic
LOC103424137	HCAR
LOC103441572	chlorophyllide a oxygenase%2C chloroplastic
LOC103431022	magnesium-chelatase subunit ChIH%2C chloroplastic
LOC103424544	geranylgeranyl diphosphate reductase%2C chloroplastic-like
LOC103453222	chlorophyllase-2%2C chloroplastic
LOC103421204	phospholipase SGR2-like%2C transcript variant X3
LOC103454888	magnesium protoporphyrin IX methyltransferase%2C chloroplastic-like
LOC103434245	ferrochelatase-2%2C chloroplastic-like