

Figure S1. The length distribution of the unigenes.

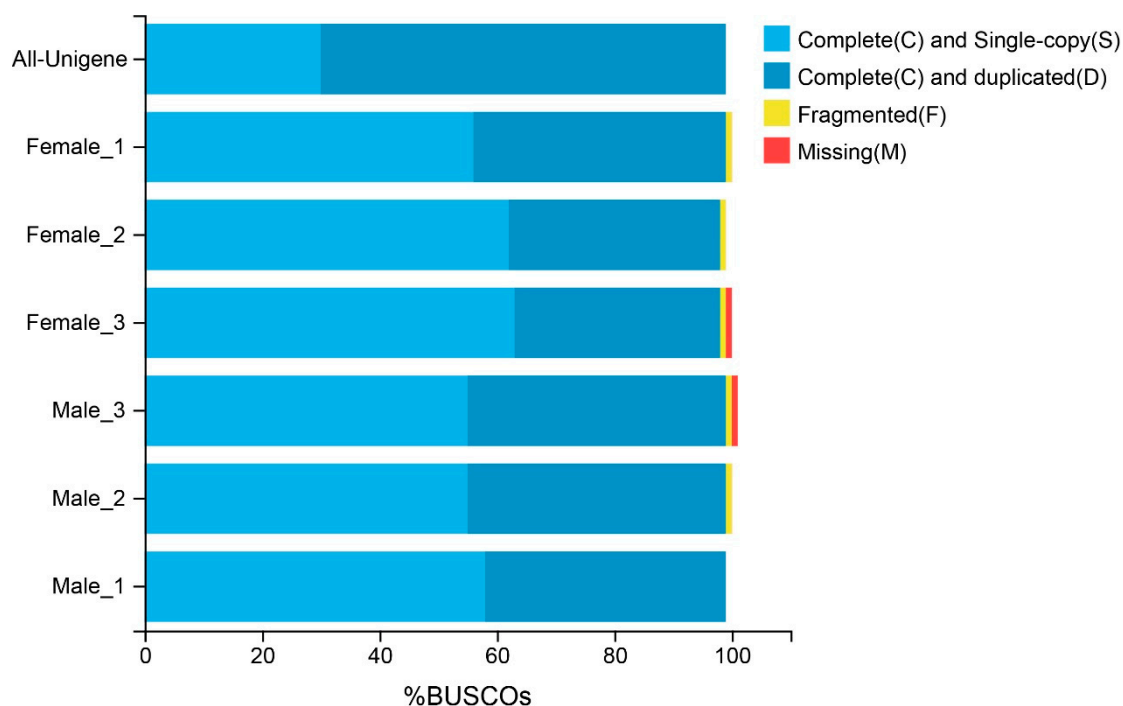


Figure S2. Completeness of the assembly and annotations.

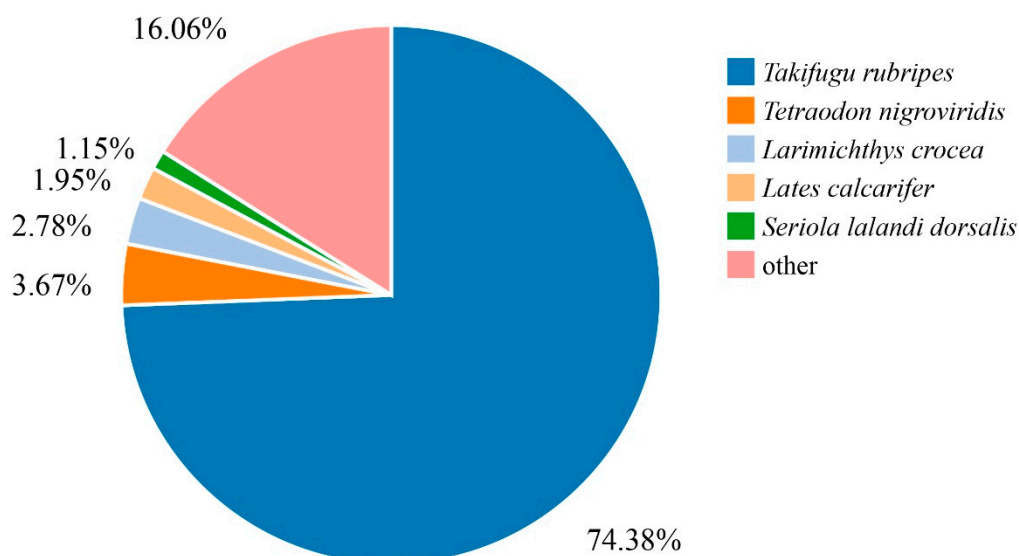


Figure S3. Distribution of the unigene hits by species in the NR database.

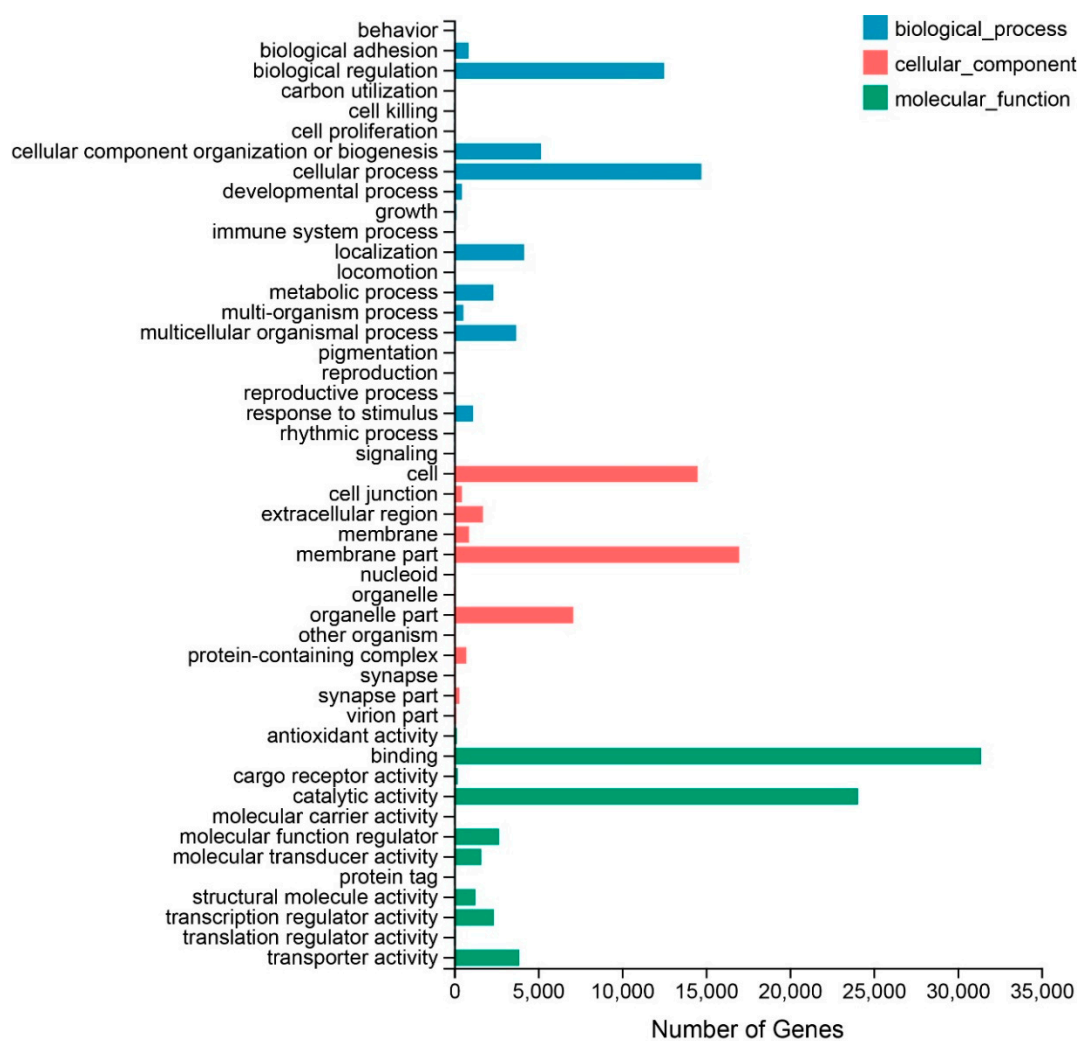


Figure S4. GO terms for the DEGs in the biological process, cellular component, and molecular Figure S1. Specific primers for the selected unigenes and reference genes.

Table S1. Characters of six specimen used in the present study

Sample	SL (mm)	BW (g)	Age (year)	MS
Female-1	213	231	4	IV
Female-2	146	210	3	IV
Female-3	143	213	3	IV
Male-1	137	142	3	IV
Male-2	145	207	3	IV
Male-3	141	182	3	IV

SL: standard length; BW: body weight; MS: maturation stage of gonad

Table S2. Top 20 pathways of GO enrichment analyses.

Access number	Classifications	Unigenes number
GO:0016021	Integral component of membrane	1093
GO:0005524	ATP binding	520
GO:0005634	Nucleus	388
GO:0046872	Metal ion binding	221
GO:0003677	DNA binding	220
GO:0003676	Nucleic acid binding	182
GO:0008270	Zinc ion binding	175
GO:0004672	Protein kinase activity	138
GO:0005737	Cytoplasm	132
GO:0005509	Calcium ion binding	125
GO:0003723	RNA binding	117
GO:0003700	DNA-binding transcription factor activity	103
GO:0005525	GTP binding	93
GO:0005886	Plasma membrane	90
GO:0004674	Protein serine/threonine kinase activity	88
GO:0043565	Sequence-specific DNA binding	77
GO:0005576	Extracellular region	77
GO:0003924	GTPase activity	74
GO:0006355	Regulation of transcription, DNA-Templated	70
GO:0003779	Actin binding	68

Table S3. Specific primers for the selected unigenes and reference genes.

Unigene	Primers Sequences (5'to3')	E (%)
CL12876	F-ACAGCAAAGAGGTGGTGGCA R-TTCTCCATTACAGTCGCGGC	95.39%
Unigene147	F-TCTTGCTGTTTGGCCTTGGA R-CCCAATTGTGTGCCTTGACC	102.59%
CL212	F-CAATGTGCGGAAGCAGATGT R-GCCATACAATGCCACCCTCT	100.45%
Unigene16662	F-CCGCCAGATGACCTTGTGTT R-CCAGCCCCTTGATCTCATCA	109.65%
Unigene15730	F-GTTTCAGCAATGGTGCGGTC R-AGCGGCTGCAACAAGACAGT	96.49%
CL5341	F-CGGTGTTTTTGCTCCTTTGC R-TGGAACCAAATACCCGATGC	106.61%
CL1574	F-TGACGCAACCACTGGATTCA R-CAGATTGAGCCGCAGAAAGG	95.13%
CL2700	F-ATGGTATCGGCTGGCTGACA R-GCTCCCCTCGTATGGCTTGT	101.76%
CL10581	F-GCTCATCTGATTCCCGCTCA R-GCACATGCAGGTGTTGCATC	94.62%
Unigene17155	F-CATTTTTCTGGCGACCATCG R-ATCTGCGCCGTCACAAATGTT	110.05%
β -actin	F-CAGCATCATGAAGTGCGACG R-TTCTGCATCCTGTCGGCAAT	90.81%
18S	F-AAGCGAAAGCATTGCGCAAG R-GGCATCGTTTATGGTCGGAA	94.86%

E: amplifying efficiency for each pair of primer