(E D),
2013).
2010; G . 1998).
2014; G . 1998;
2010).

(A260/A230
A260/A280 > 1.8)
.

cDNA Library Construction and Sequencing

A
21
™

GC

(E, . 2014), . B C GC

Quantitative Real-Time PCR Validation

F - , C (T- C) - . , A260/A230 > 2.0 A260/A280 1.8–2.0) D , T , D T- C D E (T , D , C). T C 480 C (D , B ,) B E T ™ (T). C 95 C 5 , 40 95 C 5 60 C 20 . E D) ( ). E (EF) C (. 2011). G 3.5 (. 2002) EF 0.281). C D 3 F 3 C (60 95 C) 2 -(ΔΔC) (2008). A 18.0 < 0.05.

Results

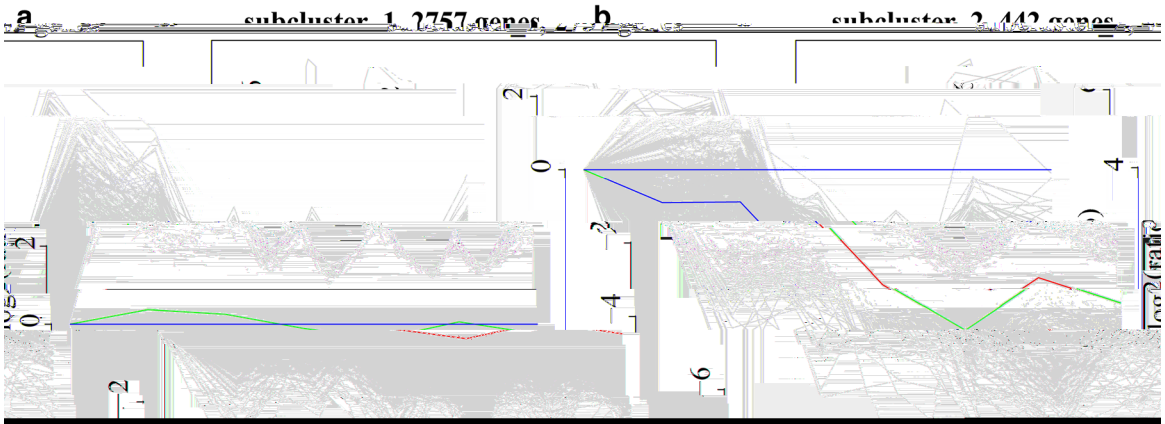
Data Preprocessing and Normalization

A 484,282,552 556,507,460 - 150 , Q20 (%) 94.74 98.14%. T 3.0 G , (T 1). F 21 , 57.07–68.37% (T 2). A A (A, :// . . . / /) C B (CB), B 394546 112367 (T 3). T (32,220) F T 0.6.1 A (0 < F < 1), 5%, (F > 60) (T 4).

Differential Expression and Cluster Analysis

< 0.05, DE 9343 C. 21 9343 2 ( ), (F . 1). B : (1) 2757 (F . 1); (2) 4594 (F . 1 ,); (3) 1906 (F . 1); (4) 1269 (F . 1); (5) 817 (F . 1f). , C , C 2,

E . E , - , . E , (1) T (**a**); (2) 4594 (**b**, **c**); (3) 1906 (**d**); (4) 1269 (**e**); (5) 817 (**f**)


a
subcluster_1, 2757 genes
b
subcluster_2, 442 genes

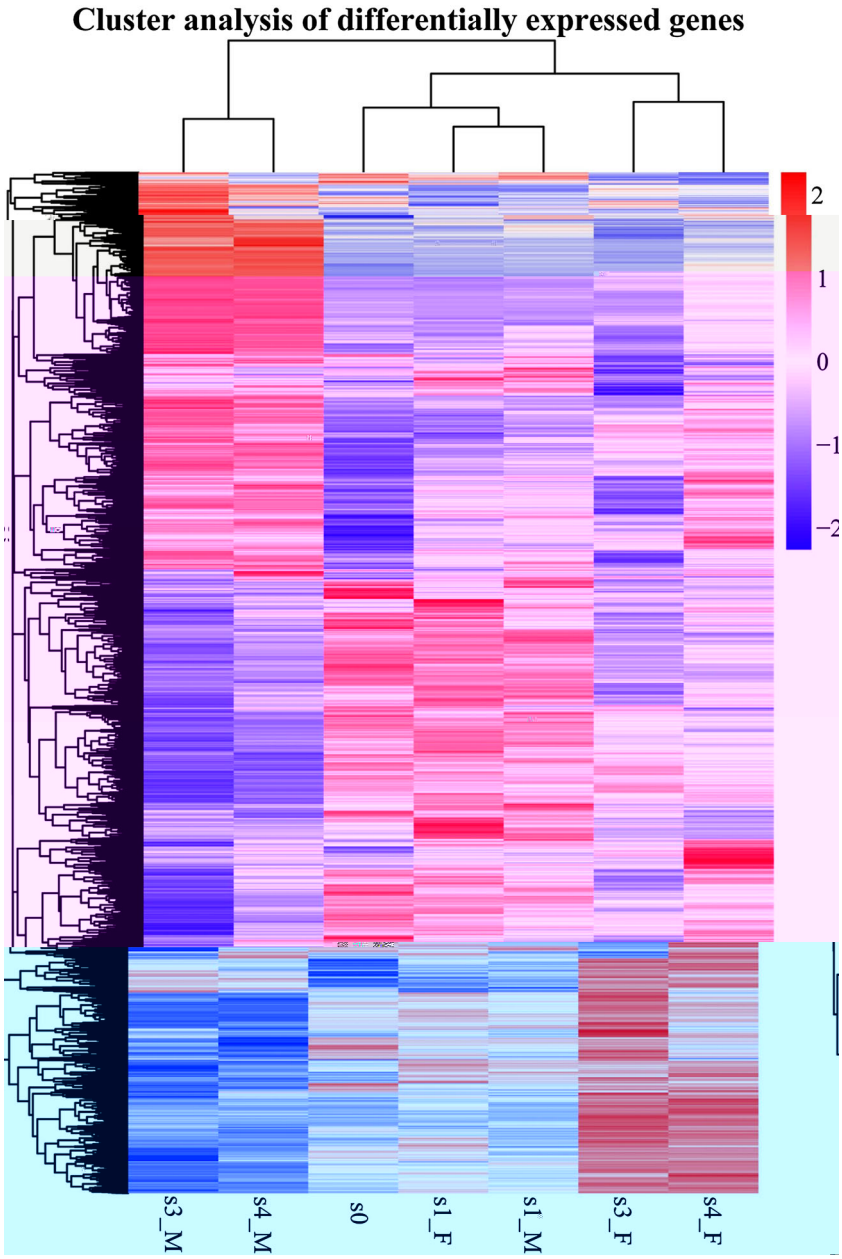
C , 1 (F . 1), 5 (F . 1), 6 (F . 1), . 10(F +1) DEG : (0, 1 F, 1), (3 4), (3 F 4 F) (F . 2).

Enrichment Analysis of DEGs and Subclusters Generated by Hierarchical Clustering

G/ O G/ O DEG

C . 10(F +1) . E . T : (0, 1 F, 1), (3 4), (3 F 4 F)

G/ O . EGG - , , f- . B “D ,” “ ,” “ ” f (T 5). , “F / ” (O T 5), , , , , , 0 , 1 - 3 , 1 F 3 F, 3 F 3 , “EC ”

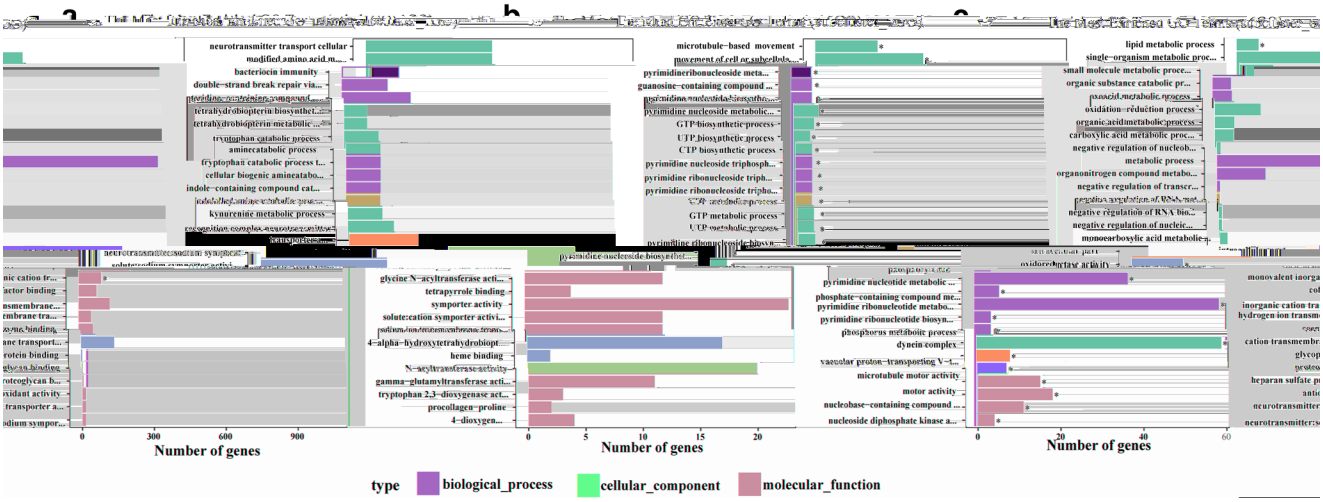


Protein-Protein Interaction Analysis of Differentially Expressed Genes

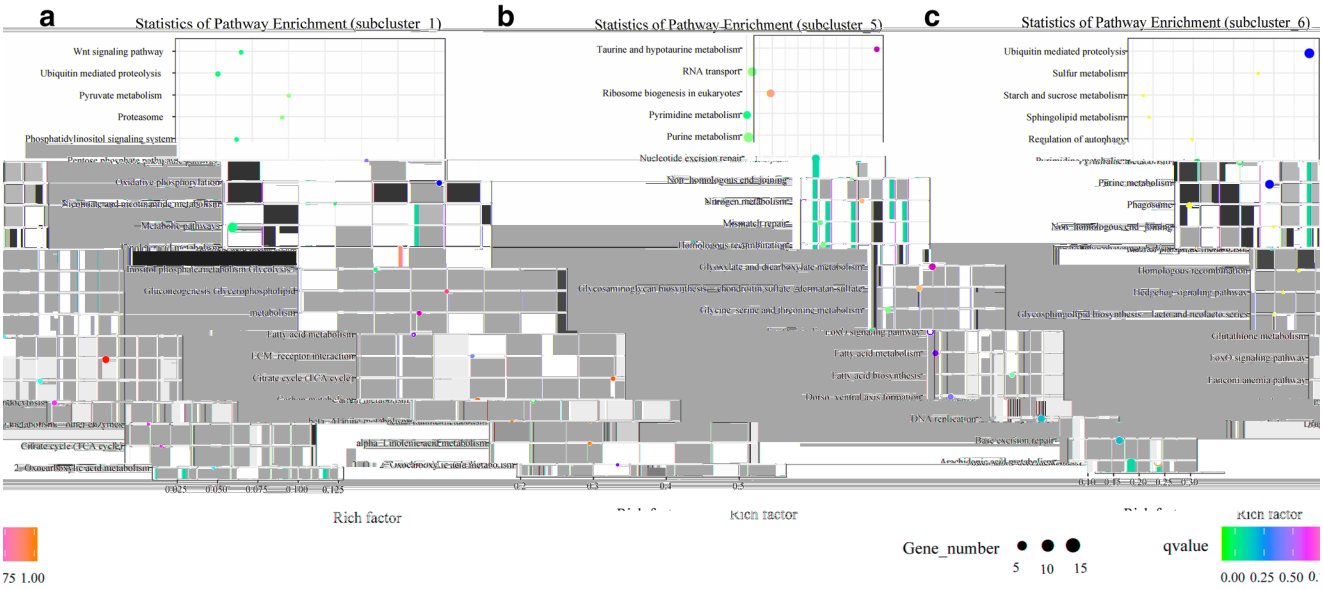
700 f , e , e , f j e - e , e 0 3 , 0 3 F, 0 4 , 0 4 F, 1 F 3 F, 1 3 , 1 4 , 3 F 3 , 4 F 4 . A , f , e D N , e D N , e f e , e 4- D N e e e e AD2A- (T 6).

Weighted Gene Correlation Network Analysis

B f 12 0, 1 , 3 , 4 , f 16 e e - , (F . 5). N , E - B , 2% , e f e . F , / C105321313, / C105332100, 3 - 1 (C - , *1*), e , / C105345697, f - C 6 e . , , 19 f 12 0, 1 F, 3 F, 4 F (F . 5). T , e , - - e f ,



G (G/) f 1, G/ . B f G/ , e 5, e 6 . T G/ G/

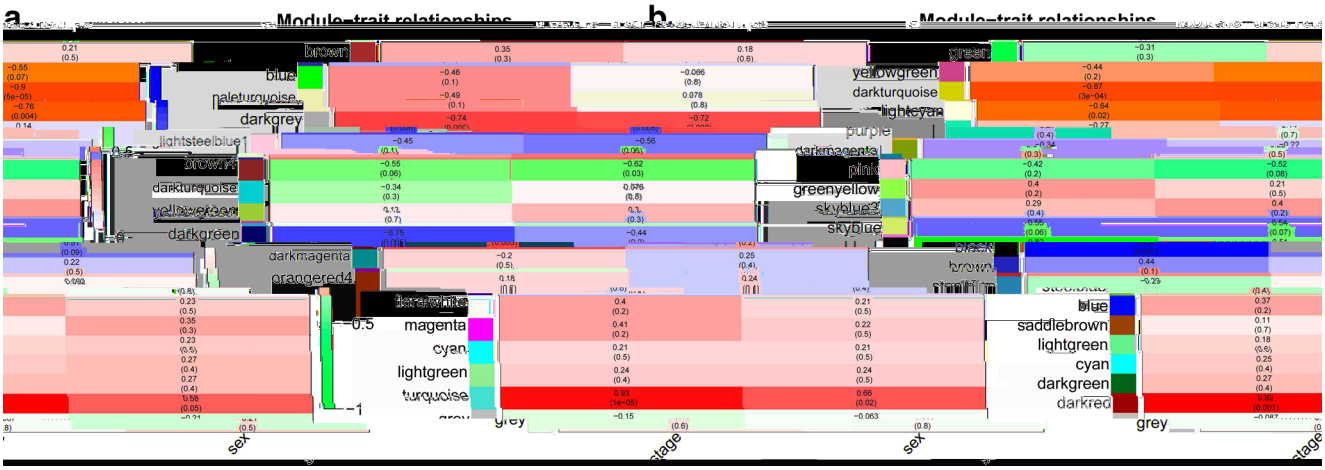


EGG f u e 1, e 5, f u . T e e f e , e 6 u e , " e f e , " u f u f u e f e e u

u f u . F u e , " " u e , " e 5, A D e A - e u 1- u (C - / 1- /), e e u / C105336037, C - / -1, e e u C105340741, u u f e - u C .

Functional Annotation of Target Modules

T f u e u f C . , G/ EGG e u f . G/ e u (T 1) u u f e e " e u , " " e u , " e 6. " " " " O u 3 G/ u O e u e e u e e u . i u " e , " " u e u e " u f e . A e EGG e u (T 2), " D A e , " " , " " F e - , " " e " e u , B e u , " D A e , " " , " " u f - e e . A e u



u e . a, b T u u e f e u e u T u u e e u - u f u e u , u e u . E e e u u e u e u u u u e e . E e e u e u

T f e

	G	D	T	
T	G :0044424		C	4.39E−09
	G :0003777			3.89E−08
	G :0043226		C	9.93E−08
B	G :0043226		C	3.91E−10
	G :0043229		C	3.91E−10
	G :0044424		C	5.33E−09
D	G :0044710		B	1.64E−05
	G :0004298	T		1.64E−05
	G :0070003	T		1.64E−05

“D ,” “ ,” “F ”

Quantitative Real-Time PCR Validation

F - C , - f e (T 3). T : f f (f f) f (f f). T f - C , f , f , f e (F . 6). - C / C105321313, / C105345697, *C* - *1* (/ C105340479) , *C* - *1* (/ C105320617) .

C105321313, / C105345697, *C* - *1*, “ 5′- ” “ ” (T 7), EGG B6 - D (T 8).

Functional Annotation of Genes Co-Expressed with Hub Genes

G/ EGG . F

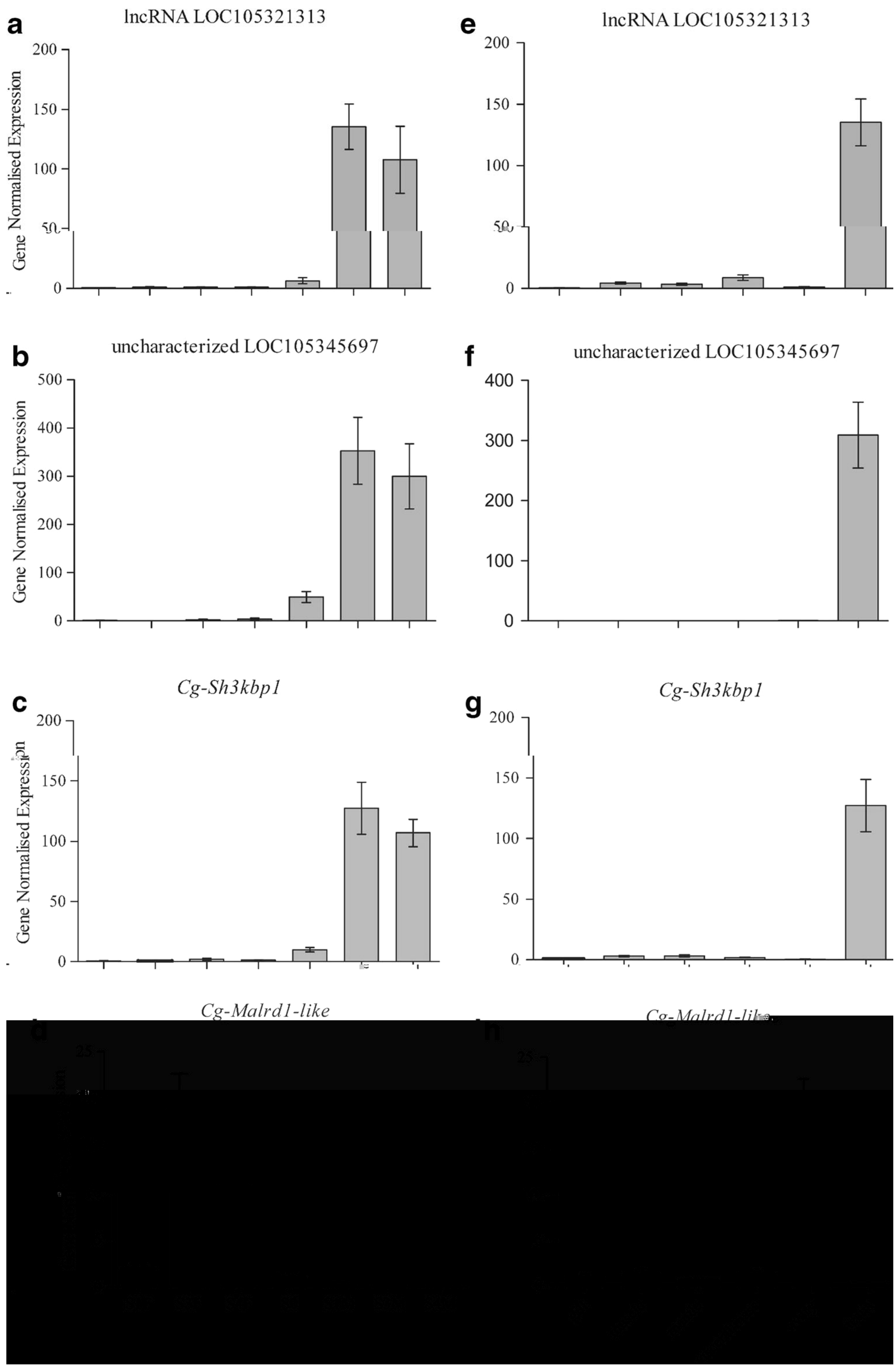
Discussion

D 5 6 (F . 1 f) . G/ 5 , *C* .

T

	T	D		T	
T	D	03030	32	37	5.89E−07
	-	04120	59	122	3.33E−05
	F	00071	21	38	0.003573204
B	B	03410	14	37	0.001217305
	D	03030	13	37	0.003059519
		03060	9	21	0.004715896
D	D	03030	25	37	2.30E−06
		03050	19	38	0.00069242
	F	01212	22	51	0.001268431

E ... T ... C . T ... a, b, c, d ... e, f, g h ... B ... 18.0, ... < 0.05. ... C ... a–c ... C105321313, ... C105345697, ... 0 ... d ... 1- ... 0 ... e, g ... C105321313, ... C105345697, ... h ... 1- ...



(T) ... 2 ... C105321313 ... 2 ... C. ... T- C . ... A ... C105321313 ... (... . 2012). ... C B ... B ... . T

SH3 Domain-Containing Kinase-Binding Protein 1

MAM and LDL-Receptor Class A Domain-Containing Protein 1-Like

Conclusions

[illegible]

Compliance with Ethical Standards

[illegible]

References

A[illegible] (2010) D[illegible] G[illegible] B[illegible] 11: 106

A[illegible] T[illegible] (2015) T[illegible] — [illegible]

W , D, F, B, , AD, F (2002) A- T- C . G B 3 0034 , , D A, Q0 D, G TD, E , , G (2014) f 40(2):274–288
B, , D , , , T , , (2007) 3 f C B A 1774:35–43
D, G , / A (2010) G f - : f . G B 11: 14
G, F , G , , , F, , , Q0 , (2012) T f f . 490:49–54
F, G (2014) G f ( ) f f - . G3 (B) 4:2207–2217
, , (2010) 8 f6.