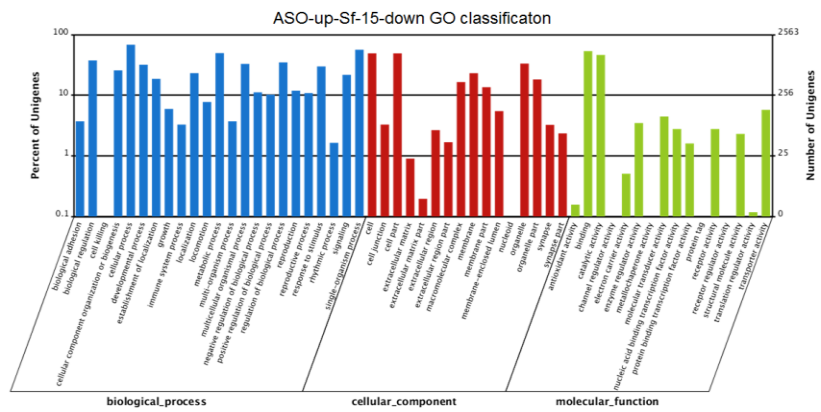
Additional file 2:

Small nucleolar RNA Sf-15 regulates proliferation and apoptosis of *Spodoptera frugiperda* Sf9 cells

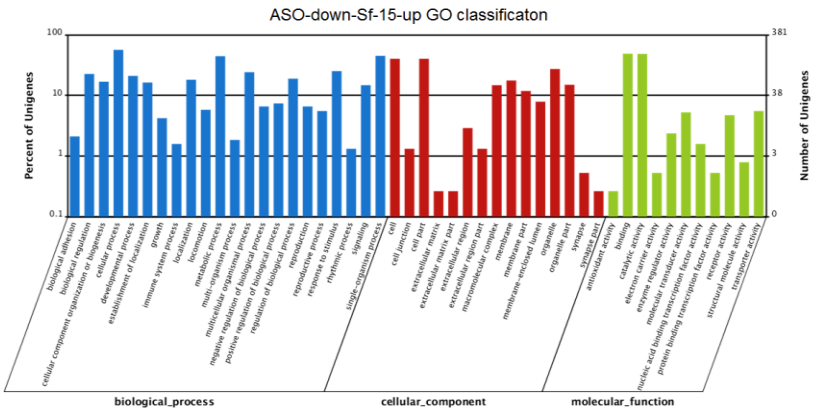
Bo Wu, Lei Huang, Wujie Qiu, Xiao Liu, Yawen Shen, Yiping Lu, Zonglin Yang, Xinmei Li, Bin Cui, Shidong Xu, Huili Qiao, Reng Qiu, Lunguang Yao, Yunchao Kan, Dandan Li

Content

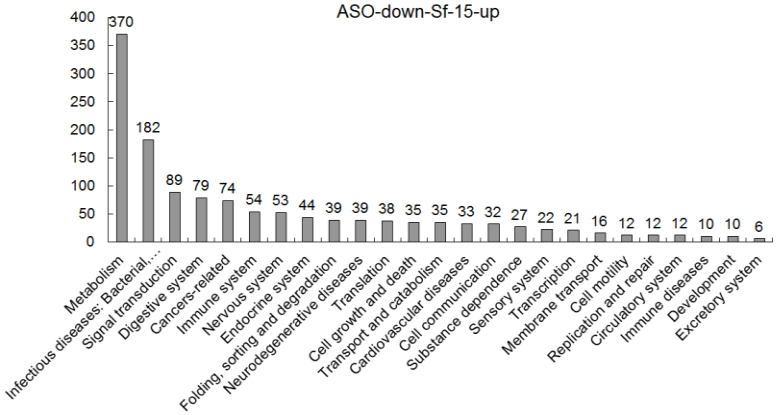
A


ASO-up-Sf-15-down GO classificaton
Percent of Unigenes
Number of Unigenes
biological_process
cellular_component
molecular_function

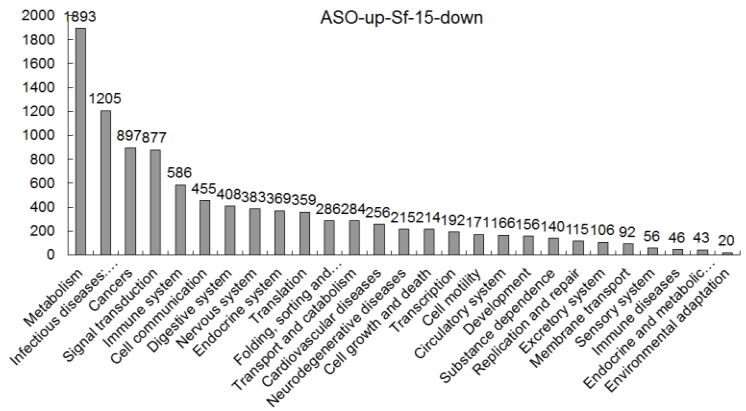
B


ASO-down-Sf-15-up GO classificaton
Percent of Unigenes
Number of Unigenes
biological_process
cellular_component
molecular_function

C


ASO-down-Sf-15-up
370
182
89
79
74
54
53
44
39
39
38
35
35
33
32
27
22
21
16
12
12
12
10
10
6
Metabolism
Infectious diseases: Bacterial,...
Signal transduction
Digestive system
Cancers: Related
Immune system
Nervous system
Endocrine system
Folding, sorting and degradation
Neurodegenerative diseases
Translation
Cell growth and death
Transport and catabolism
Cardiovascular diseases
Cell communication
Substance dependence
Sensory system
Transcription
Membrane transport
Cell motility
Replication and repair
Circulatory system
Immune diseases
Development
Excretory system

D


ASO-up-Sf-15-down
1893
1205
897
877
586
455
408
383
369
359
286
284
256
215
214
192
171
166
156
140
115
106
92
56
46
43
20
Metabolism
Infectious diseases:...
Cancers
Signal transduction
Immune system
Cell communication
Digestive system
Nervous system
Endocrine system
Translation
Folding, sorting and...
Transport and catabolism
Cardiovascular diseases
Neurodegenerative diseases
Cell growth and death
Transcription
Cell motility
Circulatory system
Development
Substance dependence
Replication and repair
Excretory system
Membrane transport
Sensory system
Immune diseases
Endocrine and metabolic...
Environmental adaptation

Additional file 2: Fig. S1. Functional classification of genes with reverse expression pattern upon Bm-15 repression and overexpression. (A) GO classification of genes with expression increased as Sf-15 was knocked down but decreased when Sf-15 was overexpressed. (B) GO classification of genes with expression repressed when Sf-15 was knocked down but induced when Sf-15 was overexpressed. (C) Statistic analysis of the numbers of genes in figure A. (D) Statistic analysis of the numbers of genes in figure B. ASO and Sf-15 means cells were transfected with antisense oligonucleotides of Sf-15 and overexpression vector *pBac[A3-EGFP-A3-Sf-15]*, respectively. Up means the expression of genes were increased, down means the expression of genes were decreased.

Additional file 2: Table S2. Primer set used in the experiment

Gene	**Forward primer**	**Reverse primer**
U6	CTAAAATTGGAACGATACAG	ATTTTGCGTGTCATCCTT
actinA3	TAGACAATGGCTCCGGTAT	CCAGTTAGTGACGATTCC
Sf-15	ATTCAATGATGATACAATGCTTTATG	AAATTCAGCCATCCAAGGAAGTT
Sf-15 primer for vector construction	CATGCCATGGATTCAATGATGATACAATG	GGGGTACCCCAAATTCAGCCATC
actinA3 promoter primer for vector construction	CGGGATCCCGCGTTACCATATATGGTGA	CATGCCATGGCCCGTACGAGTCCTTCT
P53	TATGATATGCCGTATGAAGAACTGG	ATTCGACAATTGATGCGGAT
Apoptosis inhibitor 5	CAAGAAACTTTTGGAGTTGCAG	CATGTTGTGTGCACTGGATAACT
Caspase 1	ATGCTGGACGGAAAACAAGACAA	GGCATTTCTATCAACTGGCATCCTA
Cn	TCACCCATACTGGTTGCC	CTGAGATTTGCTTCCTCC
Bad	CGTGAGAATGCGTAGAAA	ACGAGACCACCGTAACAA

Additional file 2: Table S3. Unigenes were subjected to Blastx against public protein database in Sf9 cells

Public protein database	NR	NT	Swiss-Prot	KEGG	COG	GO	ALL
Numbers	19,823	21,957	15,313	13,606	7,477	9,291	26,693