

**Table S6.** The top 10 significantly enriched GO descriptions of BP, CC and MF and regulated the targets genes of lnc-RNAs.

GO ID	GO description	Total gene count	Corrected p-value
<b>Biological processes</b>			
GO:0048518	positive regulation of biological process	2245	2.31E-31
GO:0048522	positive regulation of cellular process	2004	2.11E-29
GO:0048856	anatomical structure development	2113	2.66E-29
GO:0032502	developmental process	2268	5.73E-26
GO:0007275	multicellular organismal development	1910	1.27E-25
GO:0048731	system development	1752	1.43E-25
GO:0032501	multicellular organismal process	2887	3.43E-24
GO:0048519	negative regulation of biological process	1849	2.21E-23
GO:0051239	regulation of multicellular organismal process	1226	1.29E-21
GO:0048869	cellular developmental process	1616	1.16E-20
<b>Cellular components</b>			
GO:0044464	cell part	6937	2.38E-61
GO:0005575	cellular_component	8177	4.29E-44
GO:0044424	intracellular part	5831	7.94E-42
GO:0005622	intracellular	5892	5.08E-39
GO:0043226	organelle	5098	1.37E-35
GO:0043229	intracellular organelle	5081	4.57E-35
GO:0005737	cytoplasm	4251	7.33E-35
GO:0043231	Intracellular membrane-bounded organelle	4488	6.81E-28
GO:0044444	cytoplasmic part	3328	3.22E-22

GO:0005634	nucleus	2810	2.97E-17
<b>Molecular function</b>			
GO:0042802	identical protein binding	661	8.32E-06
GO:0019899	enzyme binding	766	3.95E-10
GO:0044212	transcription regulatory region DNA binding	425	3.54E-06
GO:0001067	regulatory region nucleic acid binding	425	4.09E-06
GO:0001012	RNA polymerase II regulatory region DNA binding	346	1.70E-05
GO:0000976	transcription regulatory region sequence-specific DNA binding	364	2.04E-05
GO:0008134	transcription factor binding	253	3.03E-05
GO:0000987	core promoter proximal region sequence-specific DNA binding	232	0.00034545
GO:0001159	core promoter proximal region DNA binding	232	0.00034545
GO:0003700	sequence-specific DNA binding transcription factor activity	498	0.002096