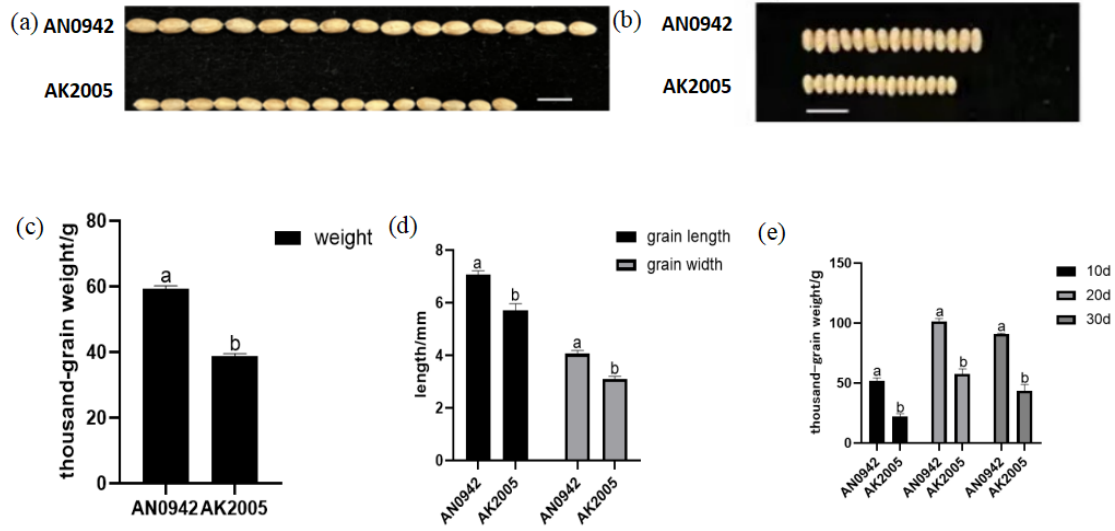
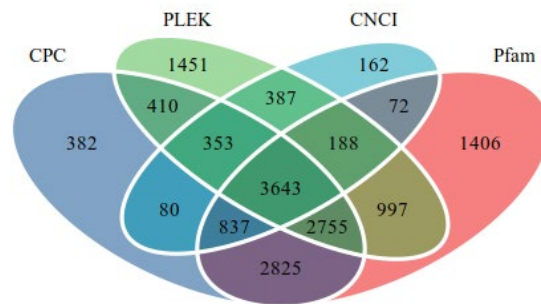


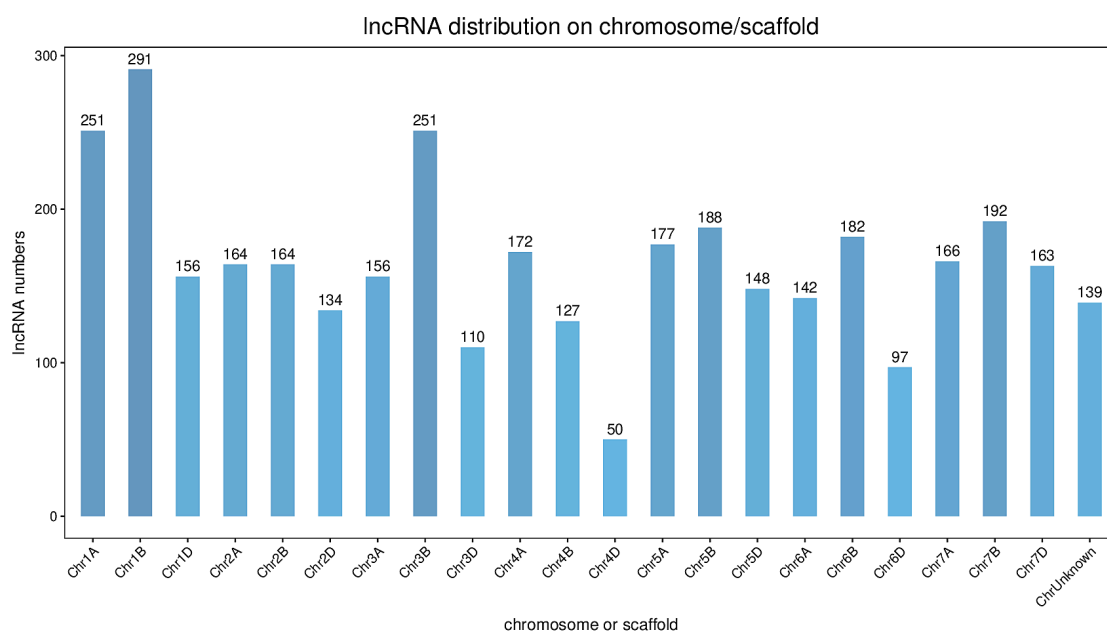
## Supplementary Materials



**Figure S1.** a and b showed the grain size of Annong 0942 and Anke 2005; c: the difference in thousand grain weight between Annong 0942 and Anke 2005; d: the difference in grain length and width between Annong 0942 and Anke 2005; e: the 1000-grain weight of wheat grains at 10d, 20d, and 30d after flowering in Annong 0942 and Anke 2005.



**Figure S2.** Wayne diagram of four software prediction results for candidate lncRNA encoding ability.



**Figure S3.** lncRNA distribution on chromosome or scaffold.

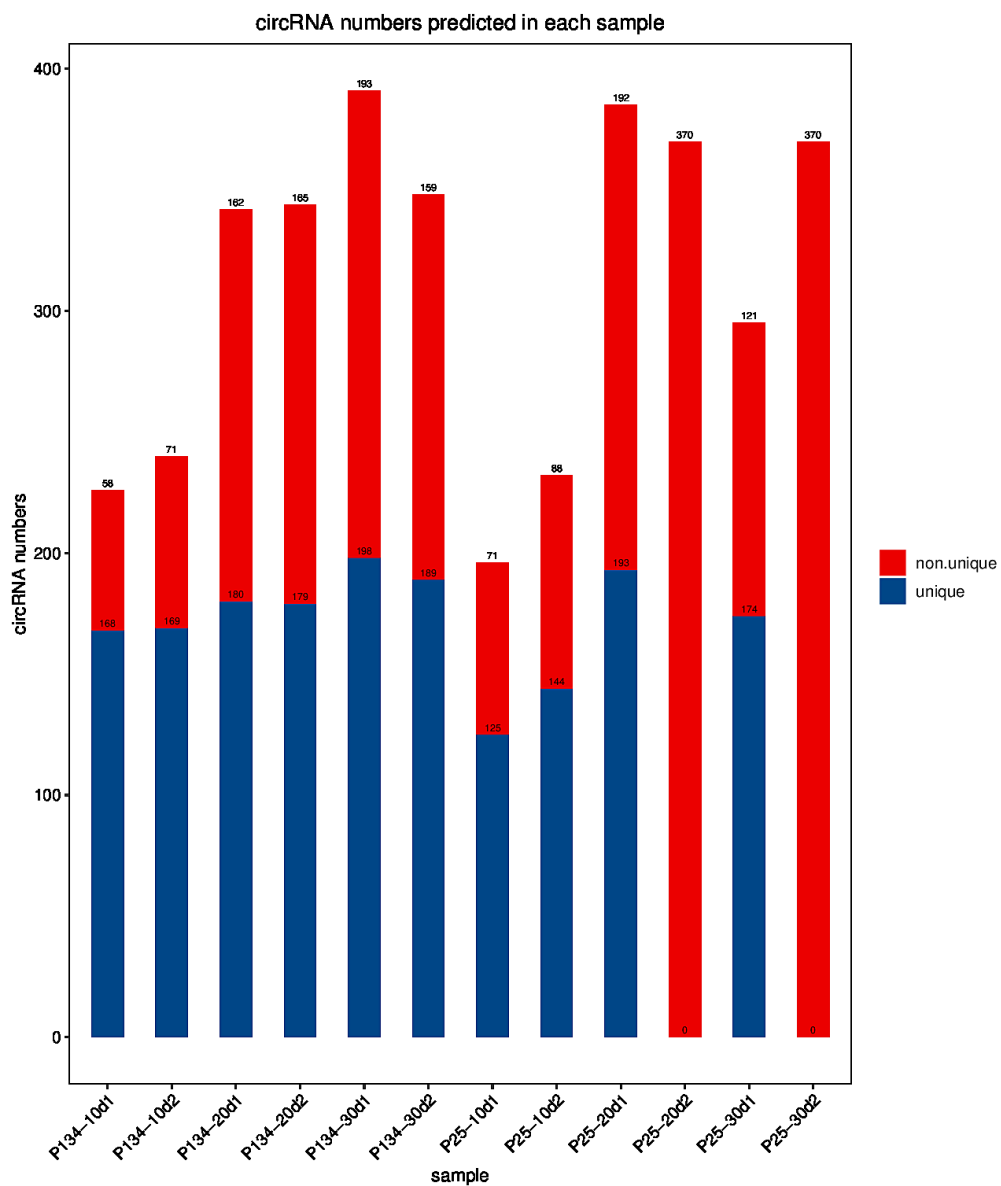
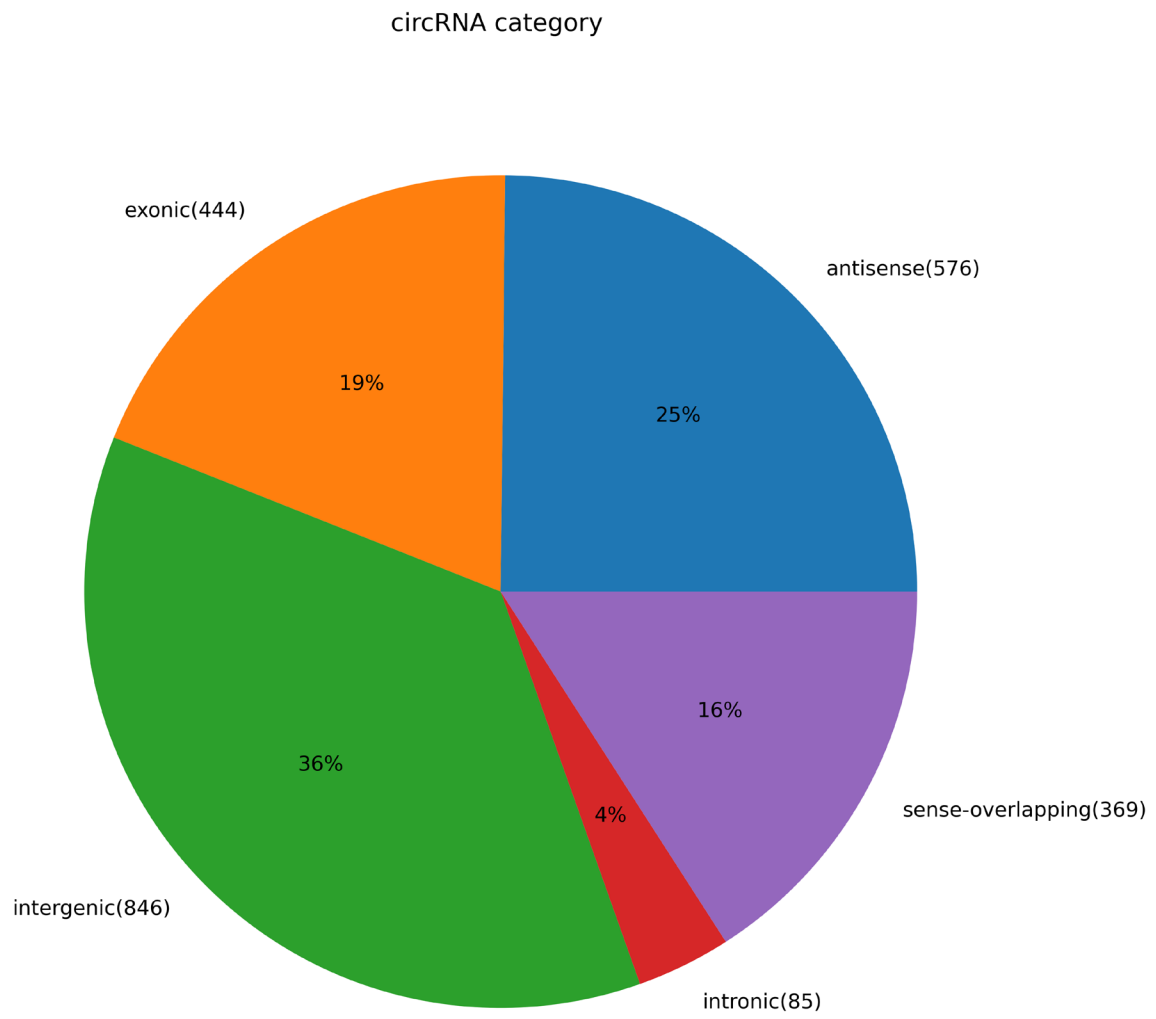
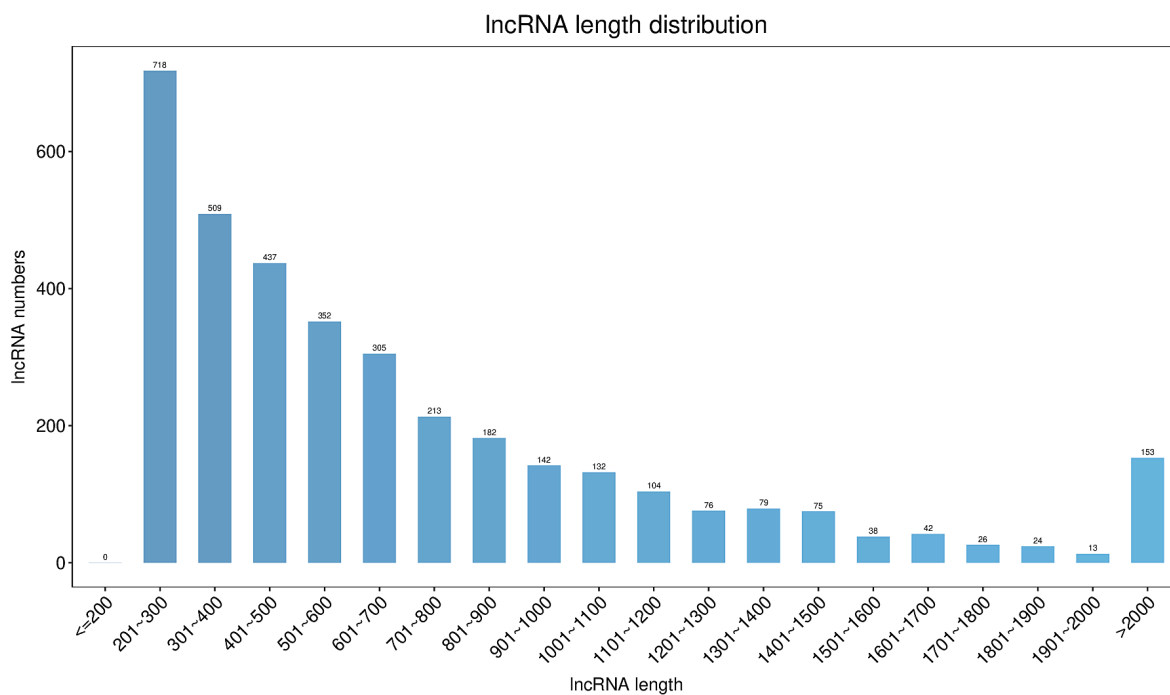


Figure S4. Statistical results of circRNA identified from different samples.

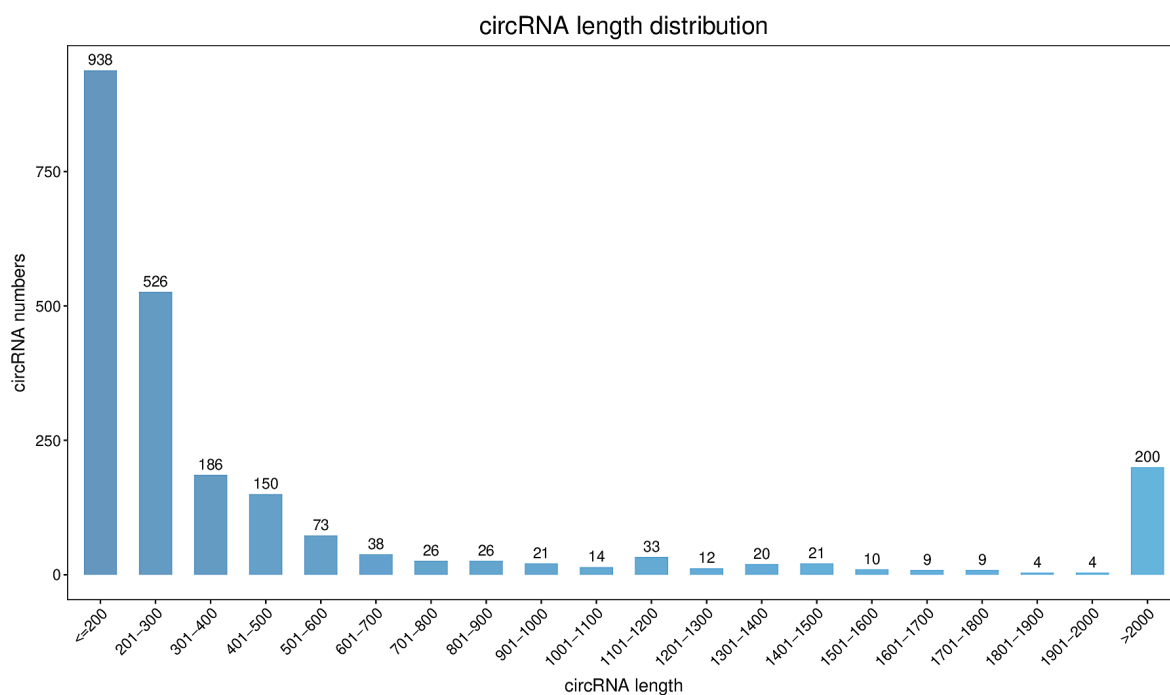


**Figure S5.** CircRNA type statistical chart.

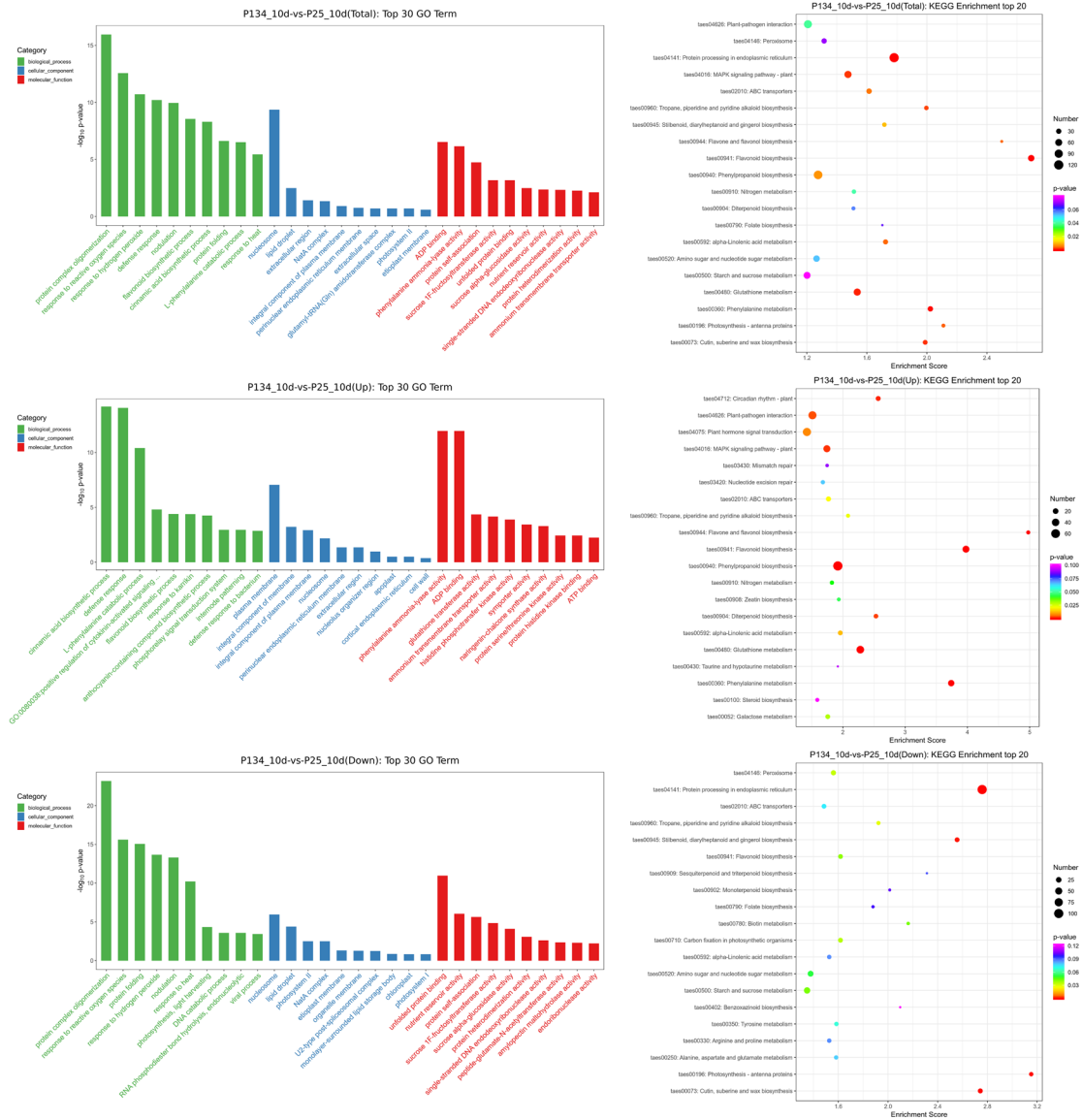




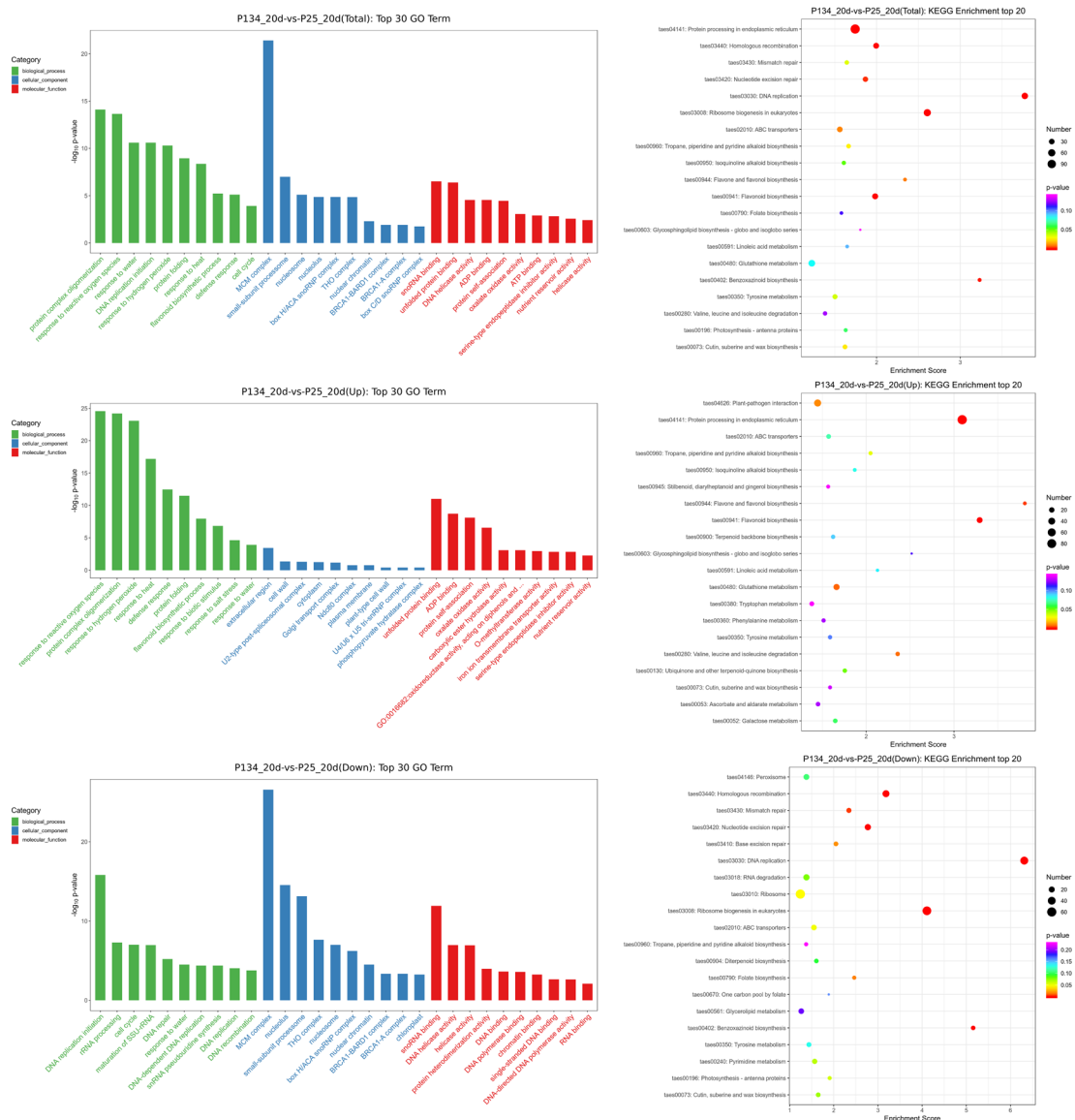
**Figure S6.** Distribution map of lncRNA sequence length.



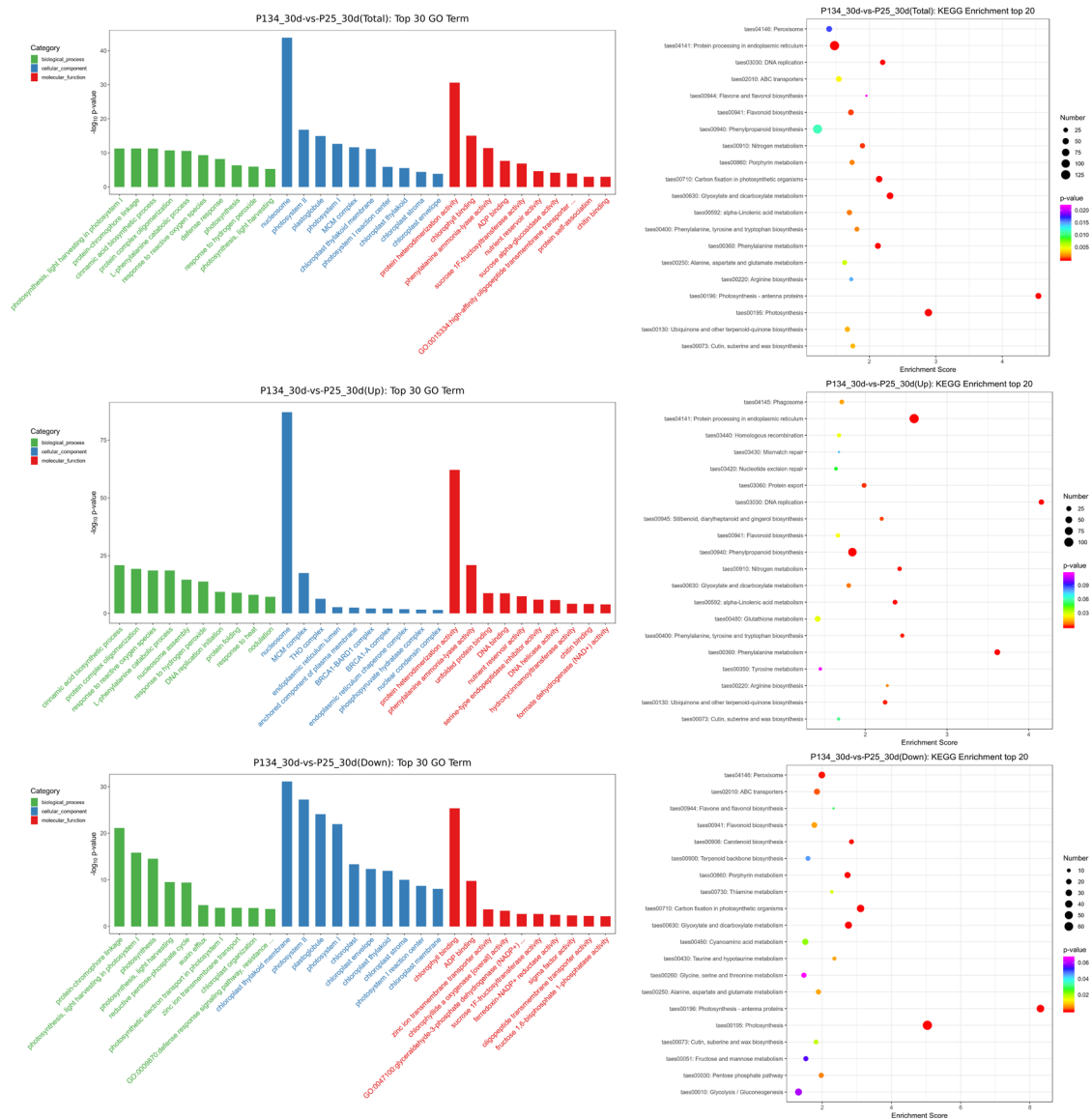
**Figure S7.** CircRNA sequence length distribution map.



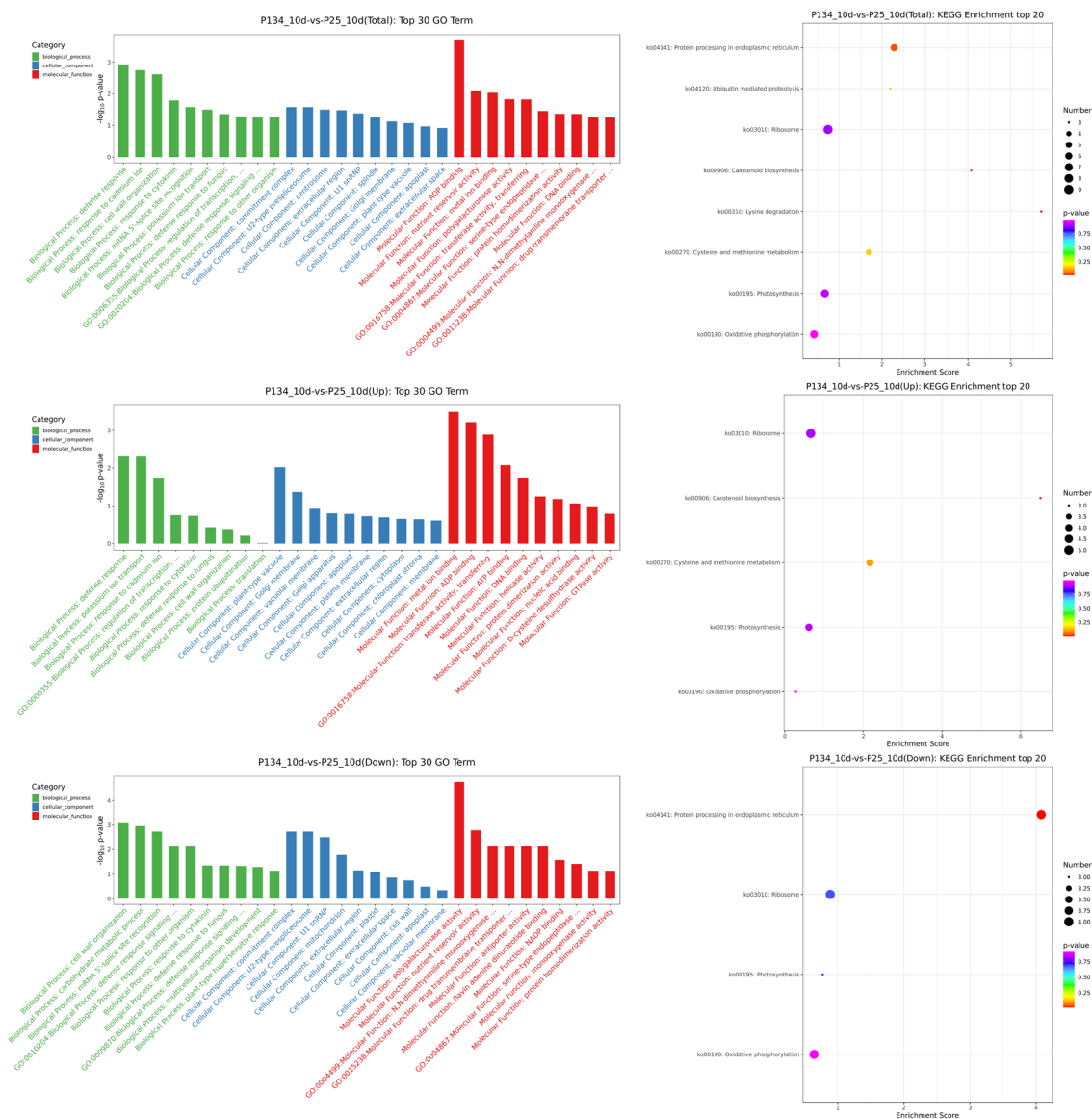
**Figure S8.** Enrichment Analysis of Differential mRNA GO and KEGG in Whole Transcriptome of Different Granules. (a) P134\_10d vs P25\_10d GO enrichment and KEGG enrichment analysis of all differentially expressed mRNA after 10 days; (b) P134\_10d vs P25\_10d differential expression upregulated mRNA GO enrichment and KEGG enrichment analysis; (c) P134\_10d vs P25\_10d differential expression downregulated mRNA GO enrichment and KEGG enrichment analysis.



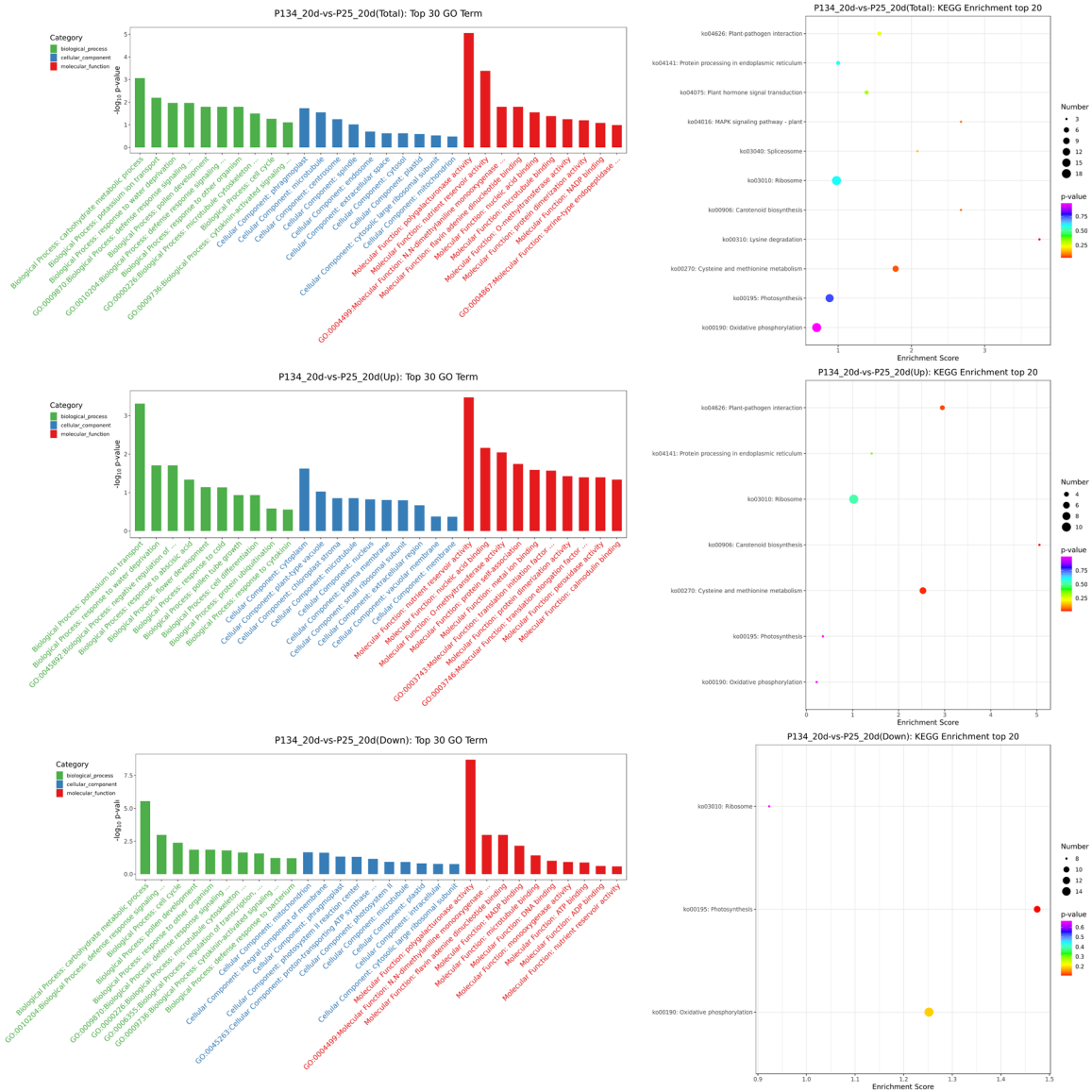
**Figure S9.** P134\_20d vs P25\_20d whole Transcriptome differential mRNA GO and KEGG enrichment analysis. (a) P134\_20d vs P25\_20d of differentially expressed mRNA GO enrichment and KEGG enrichment analysis; (b) P134\_20d vs P25\_20d differential expression upregulated mRNA GO enrichment and KEGG enrichment analysis; (c) P134\_20d vs P25\_20d differential expression downregulated mRNA GO enrichment and KEGG enrichment analysis.



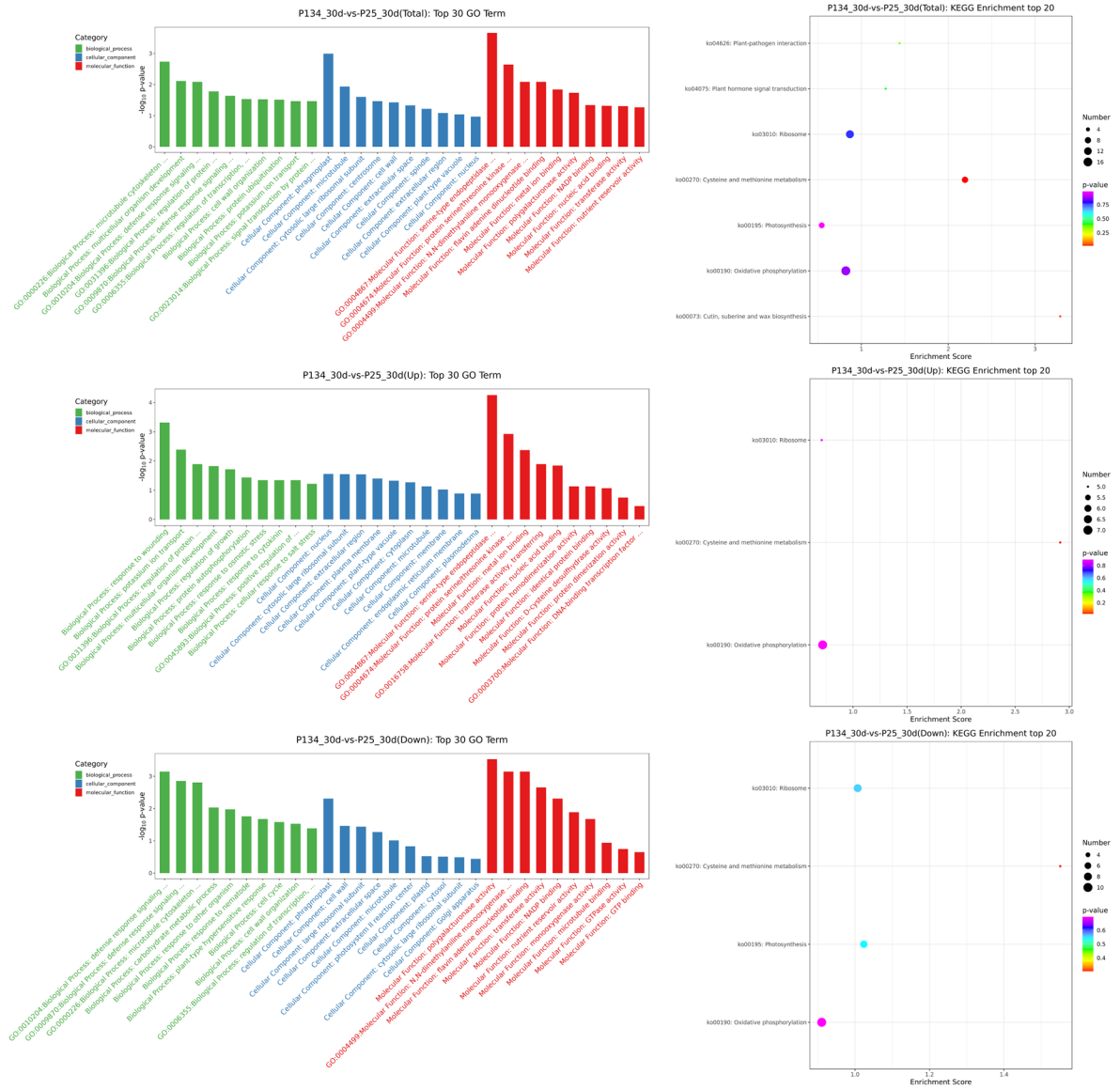
**Figure S10.** P134\_30d vs P25\_30-d whole Transcriptome differential mRNA GO and KEGG enrichment analysis. (a)analysis. (d vs P25\_30d GO enrichment and KEGG enrichment analysis of all differentially expressed mRNA after 30 days; (b) P134\_30d vs P25\_30d differential expression upregulated mRNA GO enrichment and KEGG enrichment analysis; Differential expression downregulated mRNA GO enrichment and KEGG enrichment analysis. (c) P134\_30d vs P25\_30d differential expression downregulated mRNA GO enrichment and KEGG enrichment analysis.



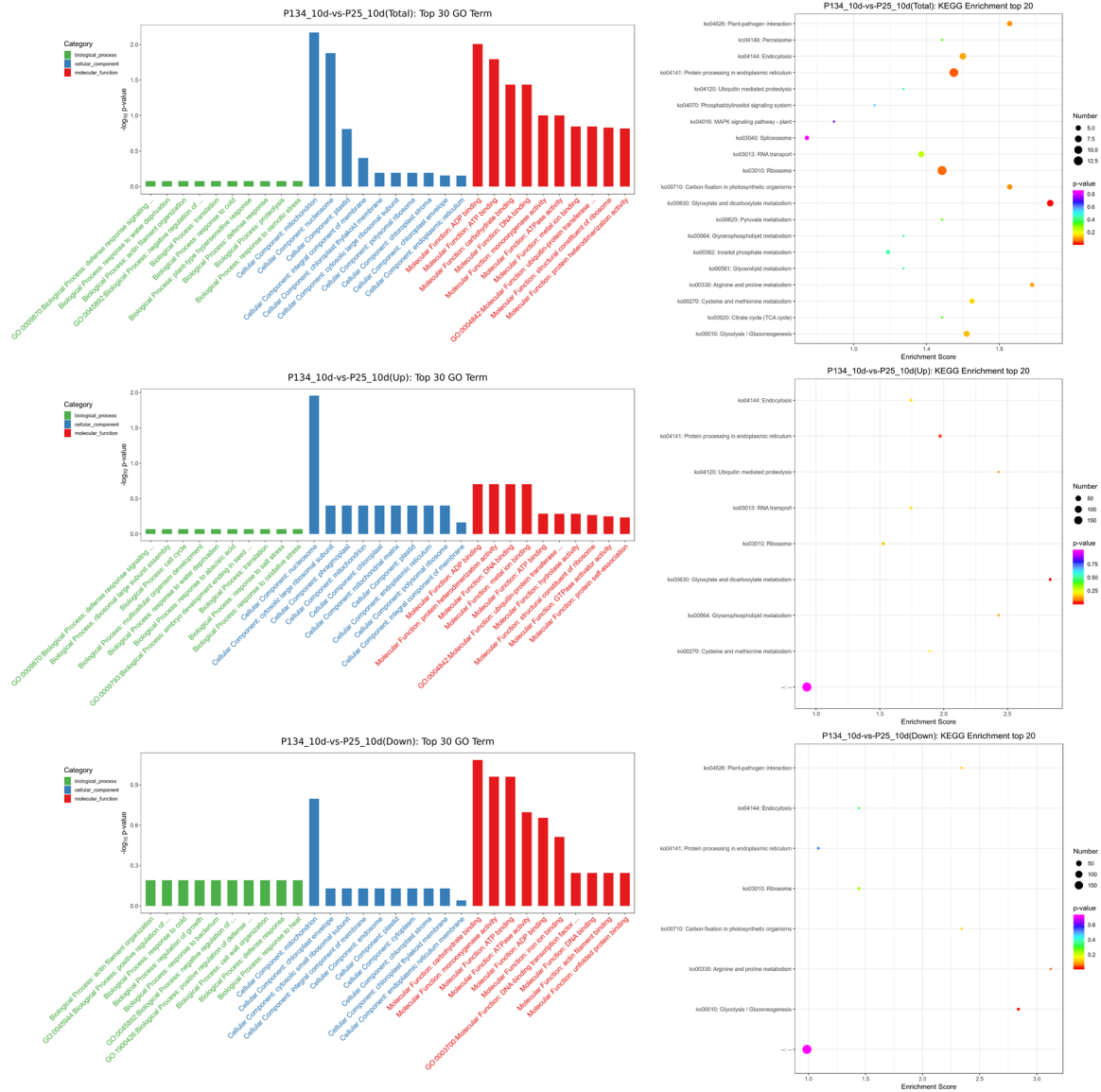
**Figure S11.** P134\_10d vs P25\_10d whole Transcriptome differential lncRNA GO and KEGG enrichment analysis. (analysis. (d vs P25\_10d differential expression of lncRNA GO enrichment and KEGG enrichment analysis; (b) P134\_10d vs P25\_10d differential expression upregulated lncRNA GO enrichment and KEGG enrichment analysis; (c) P134\_10d vs P25\_10d differential expression downregulated lncRNA GO enrichment and KEGG enrichment analysis.



**Figure S12.** P134\_20d vs P25\_20d whole Transcriptome differential lncRNA GO and KEGG enrichment analysis. (a) P134\_20d vs P25\_20d differential expression of lncRNA GO enrichment and KEGG enrichment analysis; (b) P134\_20d vs P25\_20d differential expression upregulated lncRNA GO enrichment and KEGG enrichment analysis; (c) P134\_20d vs P25\_20d differential expression downregulated lncRNA GO enrichment and KEGG enrichment analysis.

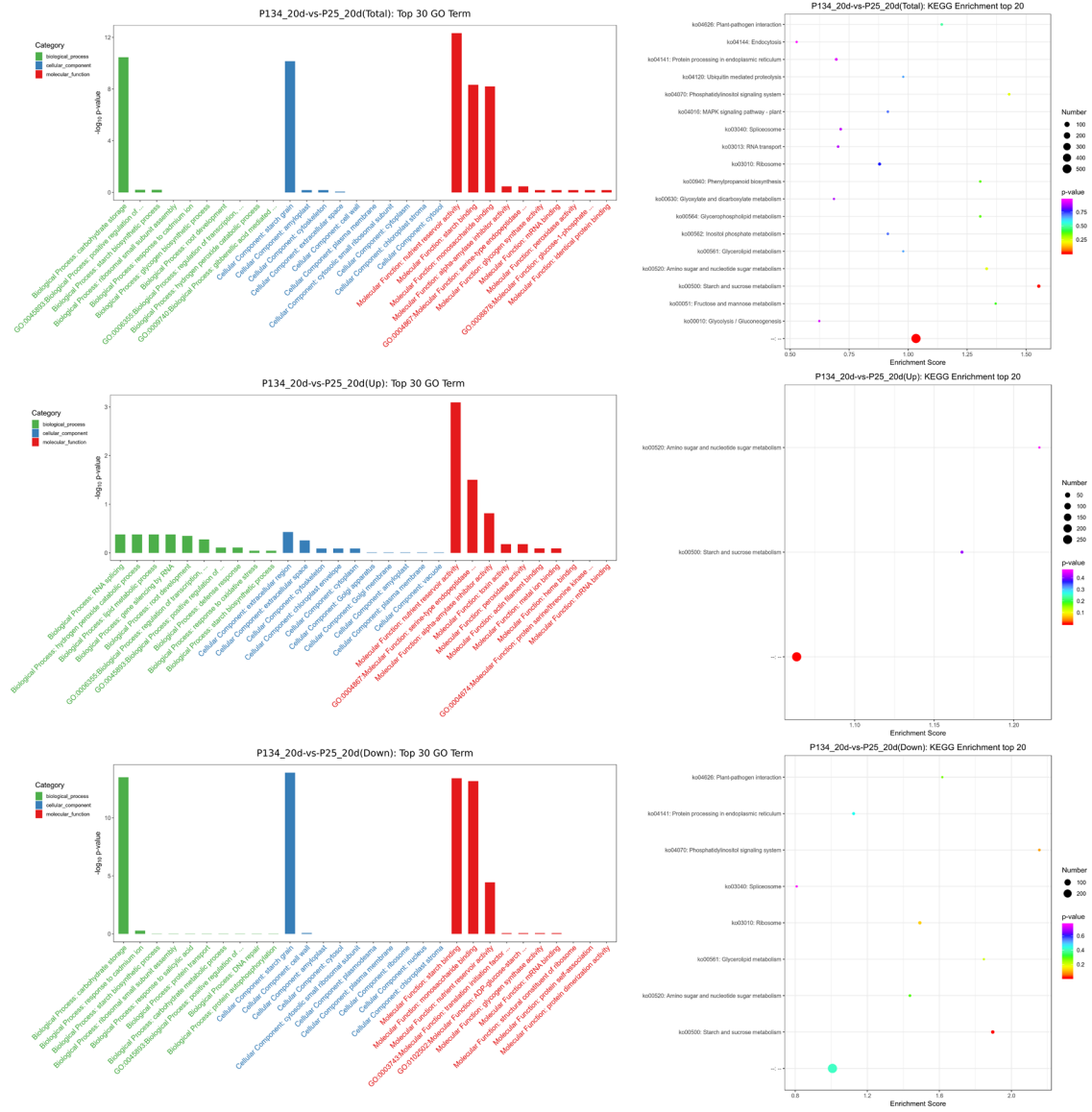


**Figure S13.** P134\_30d vs P25\_30d whole Transcriptome differential lncRNA GO and KEGG enrichment analysis. (a) P134\_30d vs P25\_30d differentially expressed lncRNA GO enrichment and KEGG enrichment analysis; (b) P134\_30d vs P25\_30d differential expression upregulated lncRNA GO enrichment and KEGG enrichment analysis; (c) P134\_30d vs P25\_30d differential expression downregulated lncRNA GO enrichment and KEGG enrichment analysis.

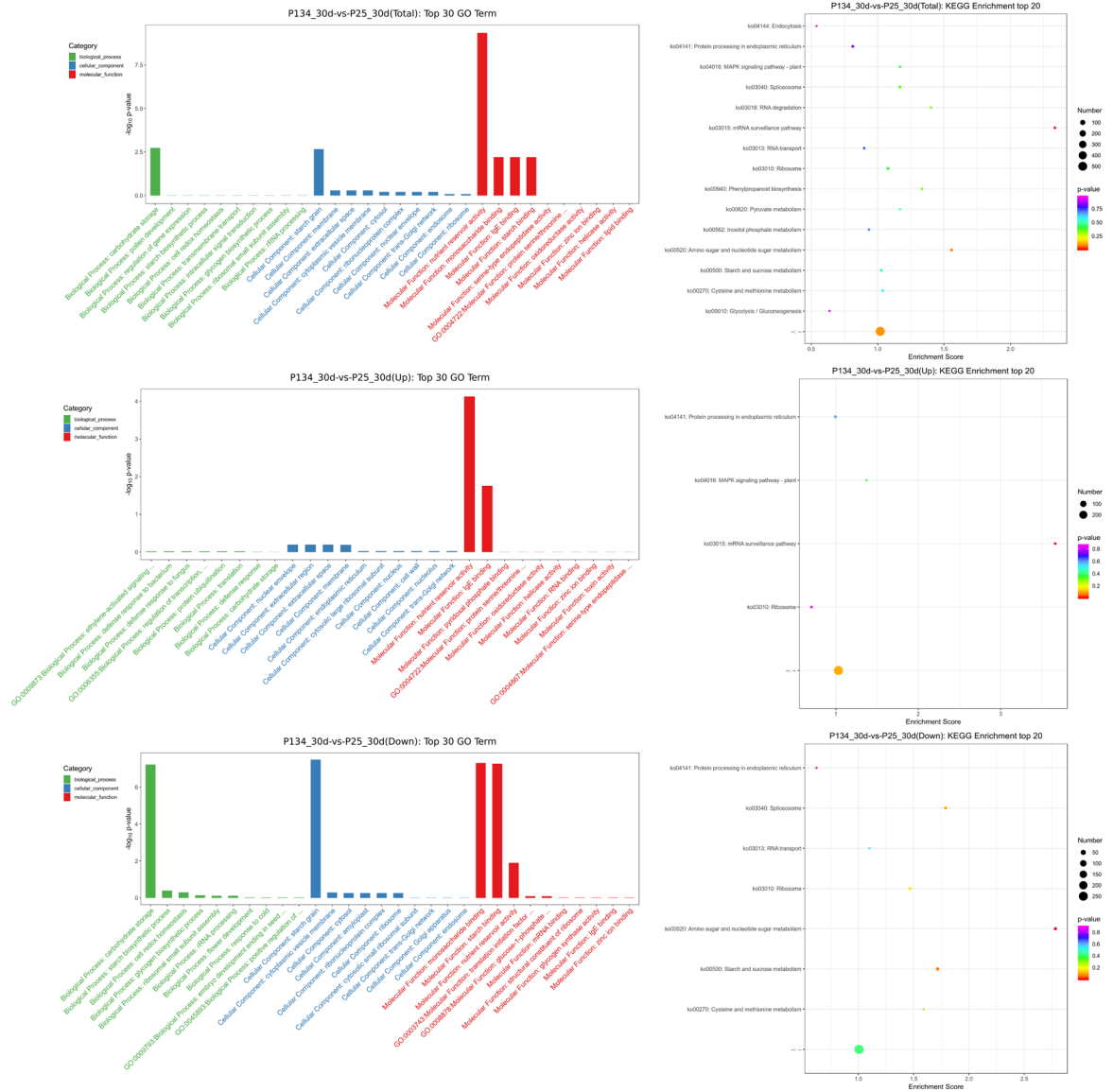


**Figure S14.** P134\_10d vs P25\_10d whole Transcriptome differential circRNA GO and KEGG enrichment analysis. (a) P134\_10d vs P25\_10d differential expression of circRNA GO enrichment and KEGG enrichment analysis; (b) P134\_10d vs P25\_10d differential expression upregulated circRNA GO enrichment and KEGG enrichment analysis; (c) P134\_10d vs P25\_10d differential expression downregulated circRNA GO enrichment and KEGG enrichment analysis.

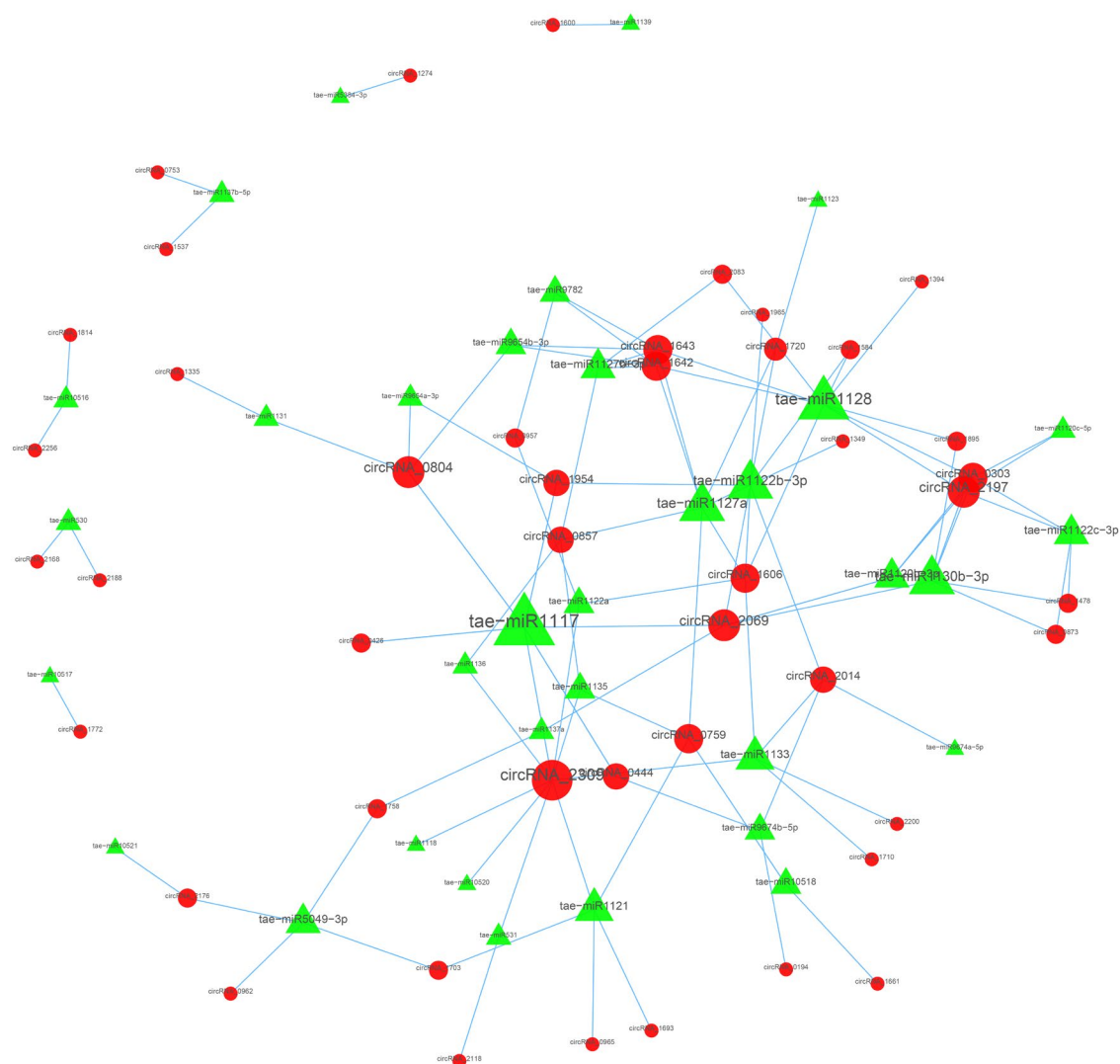


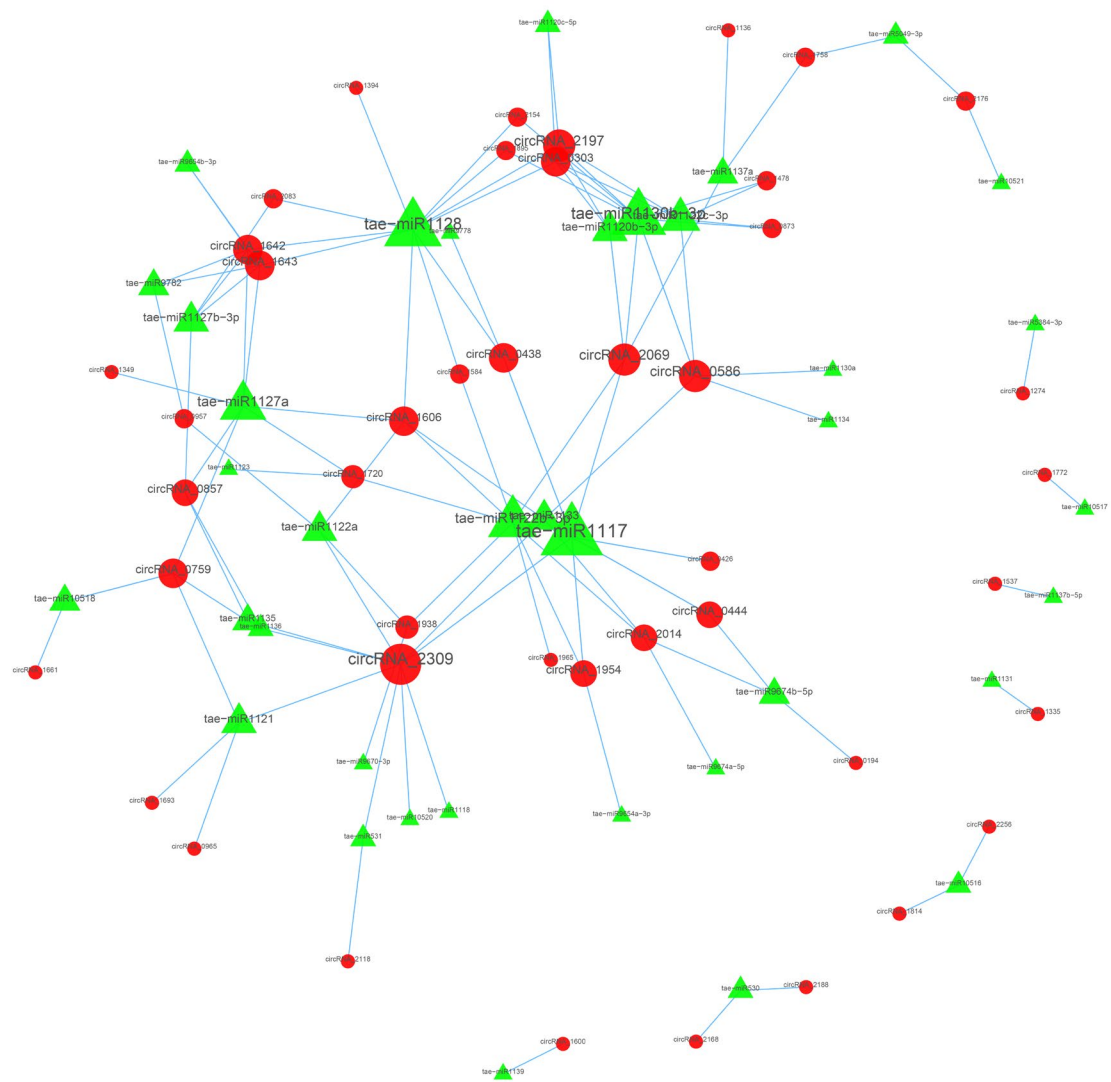


**Figure S15.** P134\_20d vs P25\_20d whole Transcriptome differential circRNA GO and KEGG enrichment analysis (a) P134\_20d vs P25\_20d differential expression of circRNA GO enrichment and KEGG enrichment analysis; (b) P134\_20d vs P25\_20d differential expression upregulated circRNA GO enrichment and KEGG enrichment analysis; (c) P134\_20d vs P25\_20d differential expression downregulated circRNA GO enrichment and KEGG enrichment analysis.



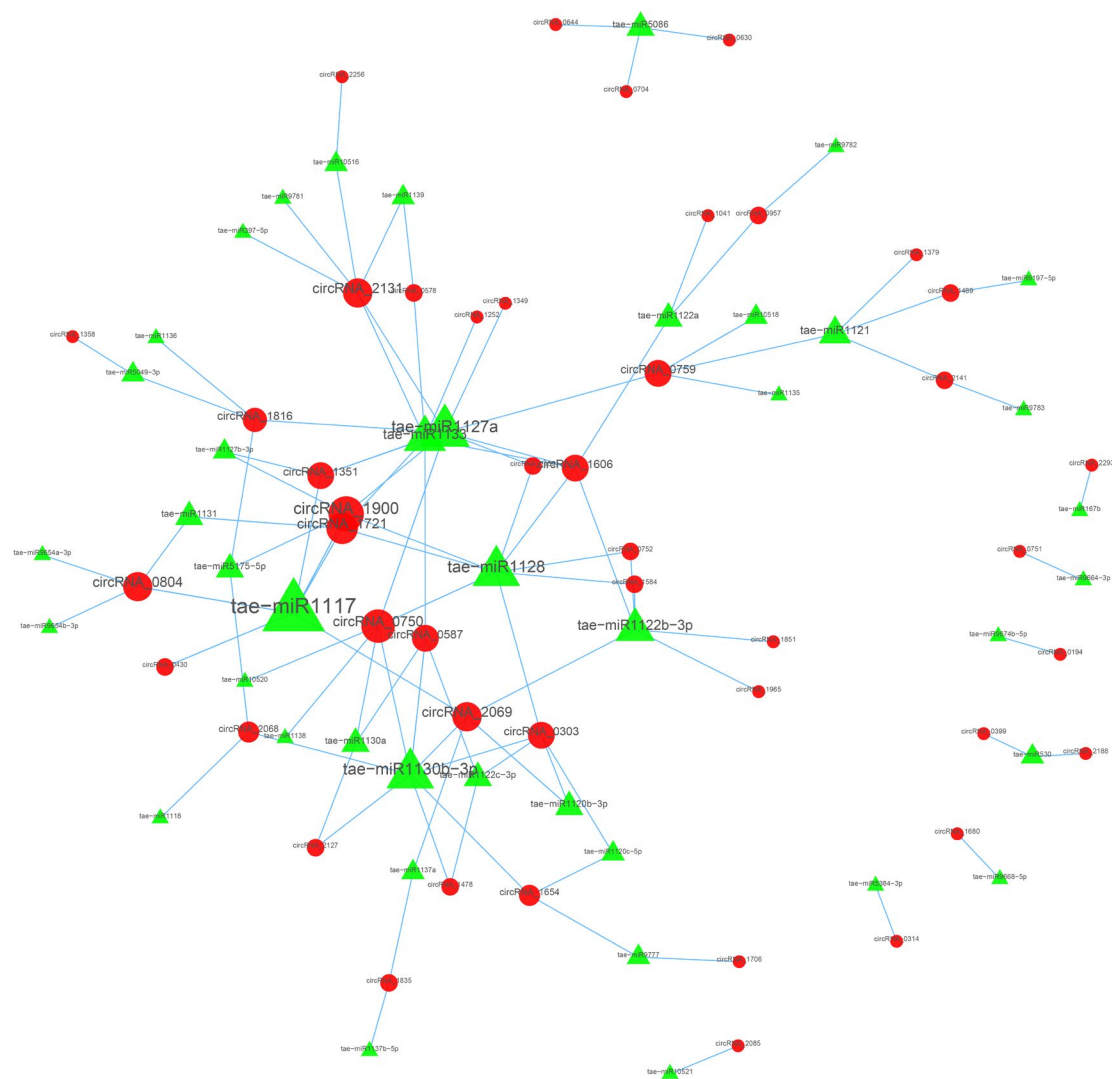
**Figure S16.** P134\_30d vs P25\_30d whole Transcriptome differential circRNA GO and KEGG enrichment analysis (a) P134\_30d vs P25\_30d differential expression of circRNA GO enrichment and KEGG enrichment analysis; (b) P134\_30d vs P25\_30d differential expression upregulated circRNA GO enrichment and KEGG enrichment analysis; (c) P134\_30d vs P25\_30d differential expression downregulated circRNA GO enrichment and KEGG enrichment analysis.





**Figure S18.** CircRNAs Interacting with miRNAs in Differential Expression of P25\_30d vs P25\_10d.



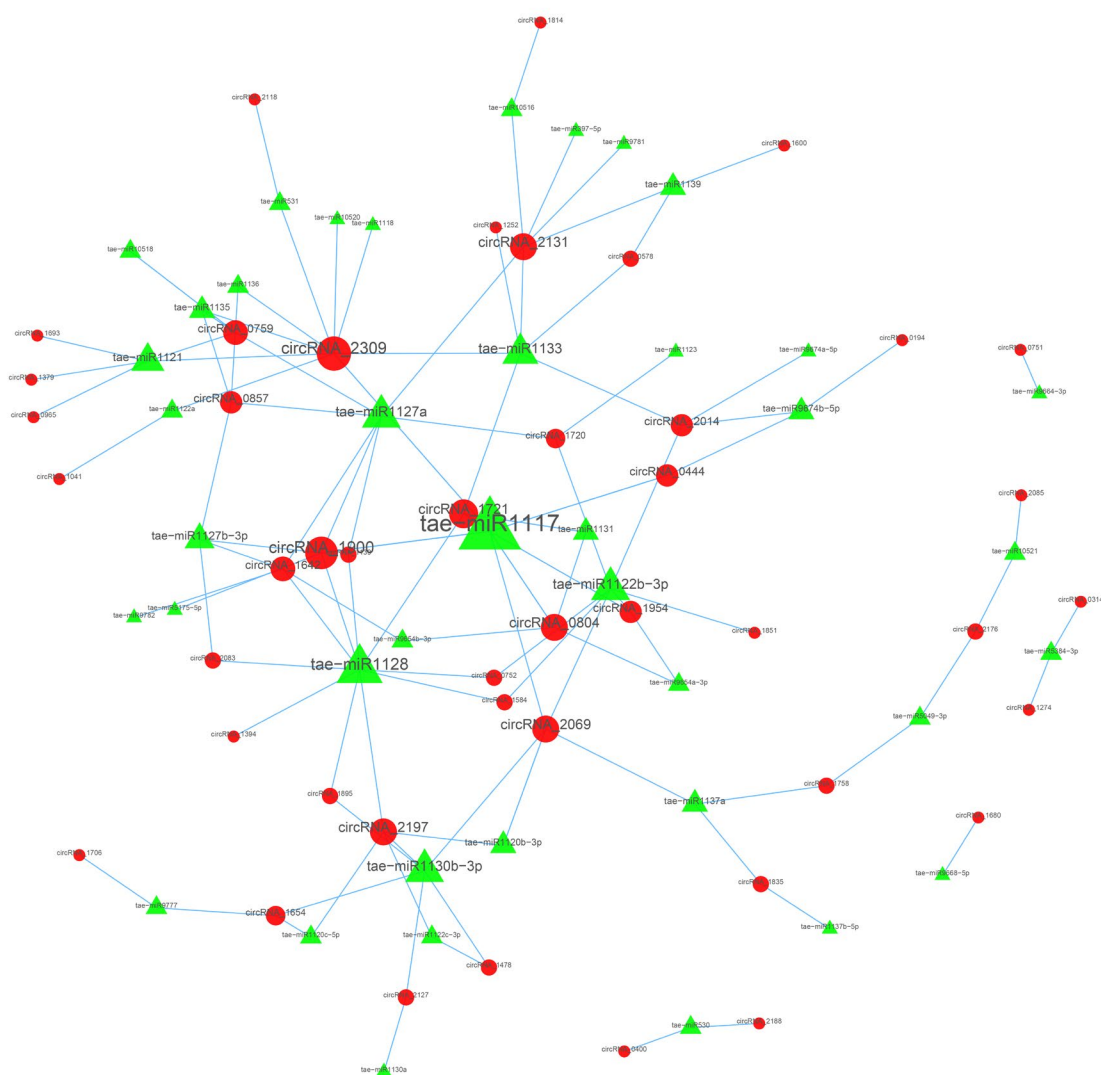


**Figure S20.** CircRNAs Interacting with miRNAs in Differential Expression of P134\_30d vs P134\_10d.









**Figure S23.** CircRNAs Interacting with miRNAs in Differential Expression of P134\_10d vs P25\_10d.



