



**Figure S5. Paralogous miRNA-mediated ceRNA-miRNA-target gene regulatory networks associated with anther development.**

Networks of **a** *zma-miR159* and **b** *zma-miR164* paralogs were shown. The transcription patterns of the corresponding miRNAs were shown at the top of the networks based on small RNA transcriptomes in maize lines L7 (red curve) and L30 (blue curve). Transcription patterns of genes negatively associated with miRNA expression in at least one of the two lines were shown beside the gene names. The names and backgrounds of genes in the same gene family in the network were marked in red. The names of genes with orthologs that participate in anther development in other plant species were shown in yellow. Numbers in the yellow dots represent known miRNAs numbered in Figure 4.