

## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: Summary of karyotypes of typical mangrove species.

File Name: Supplementary Data 2

Description: The credits for the cartoon materials used in Fig. 3.

File Name: Supplementary Data 3

Description: Summary of GO categories enriched among differentially expressed gene pairs (DEGPs) in different tissues.

File Name: Supplementary Data 4

Description: Detailed annotation of three-copy retention groups related to root development and salt tolerance.

File Name: Supplementary Data 5

Description: Summary of whole genome sequences used in phylogenomic analysis in this study.