

Figure S1. Single nucleotide polymorphisms (SNP) and InDels distribution in the 18 chromosomes of *B. juncea*.

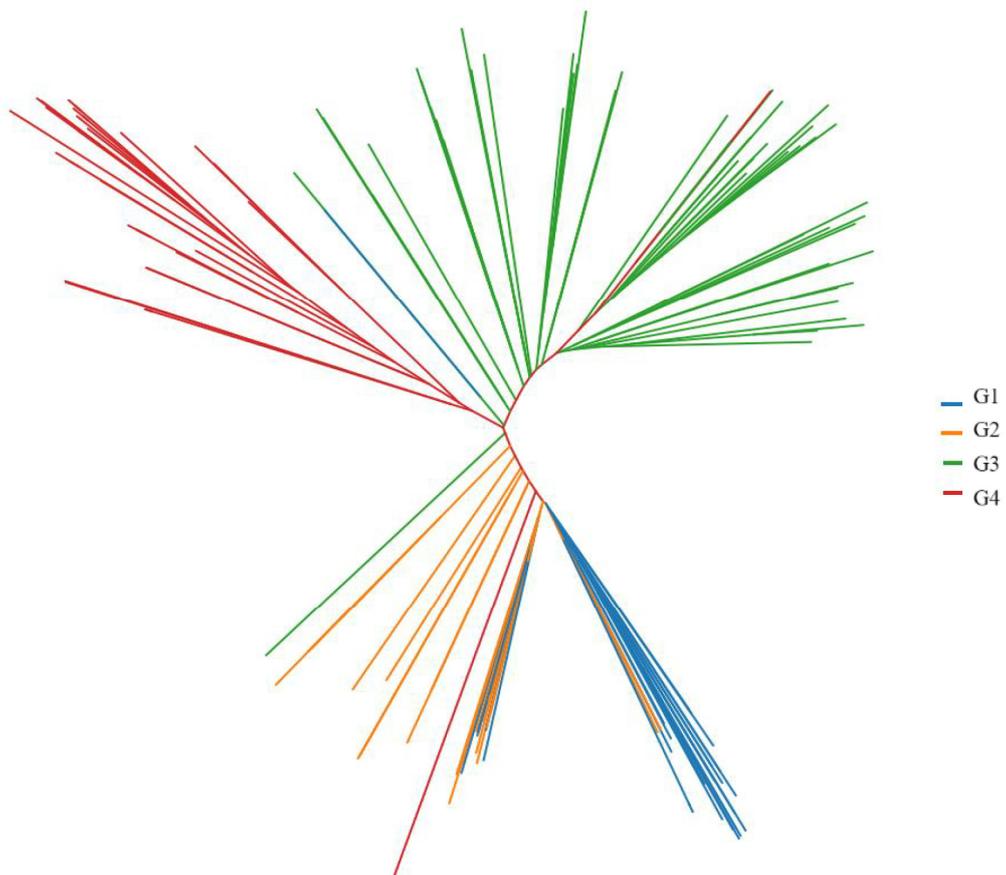


Figure S2. Phylogenetic tree of 193 *B. juncea* accessions.

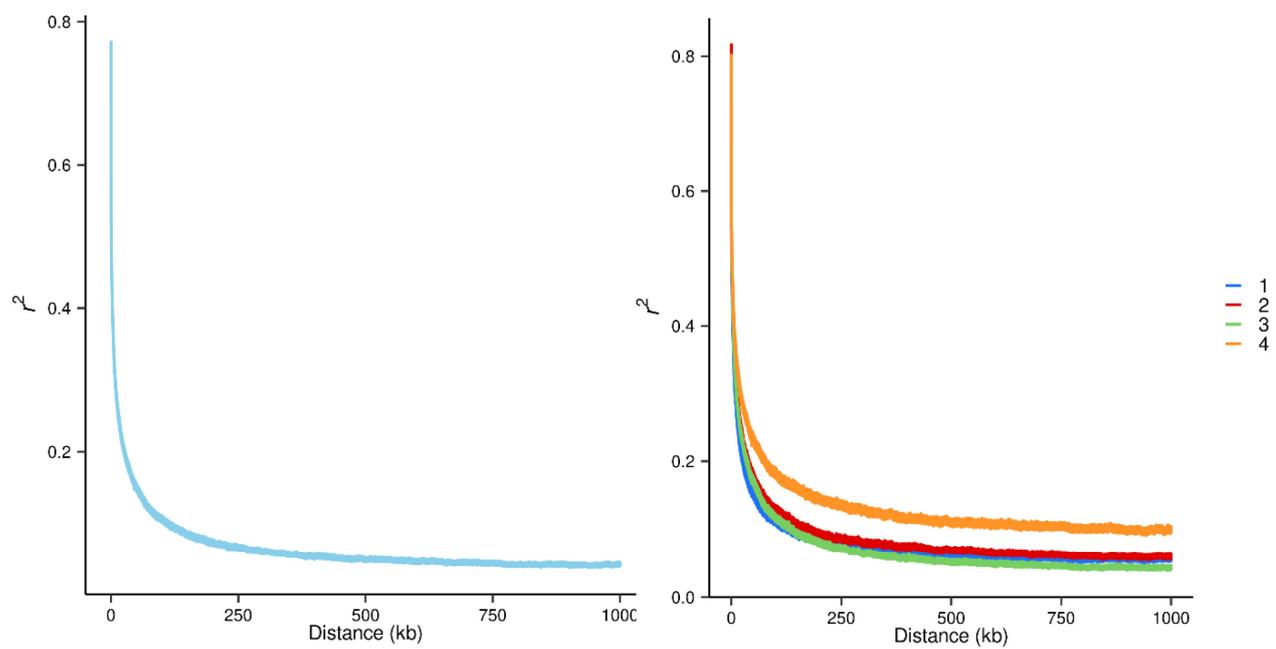


Figure S3. All accessions and group-specific LD decay plots.

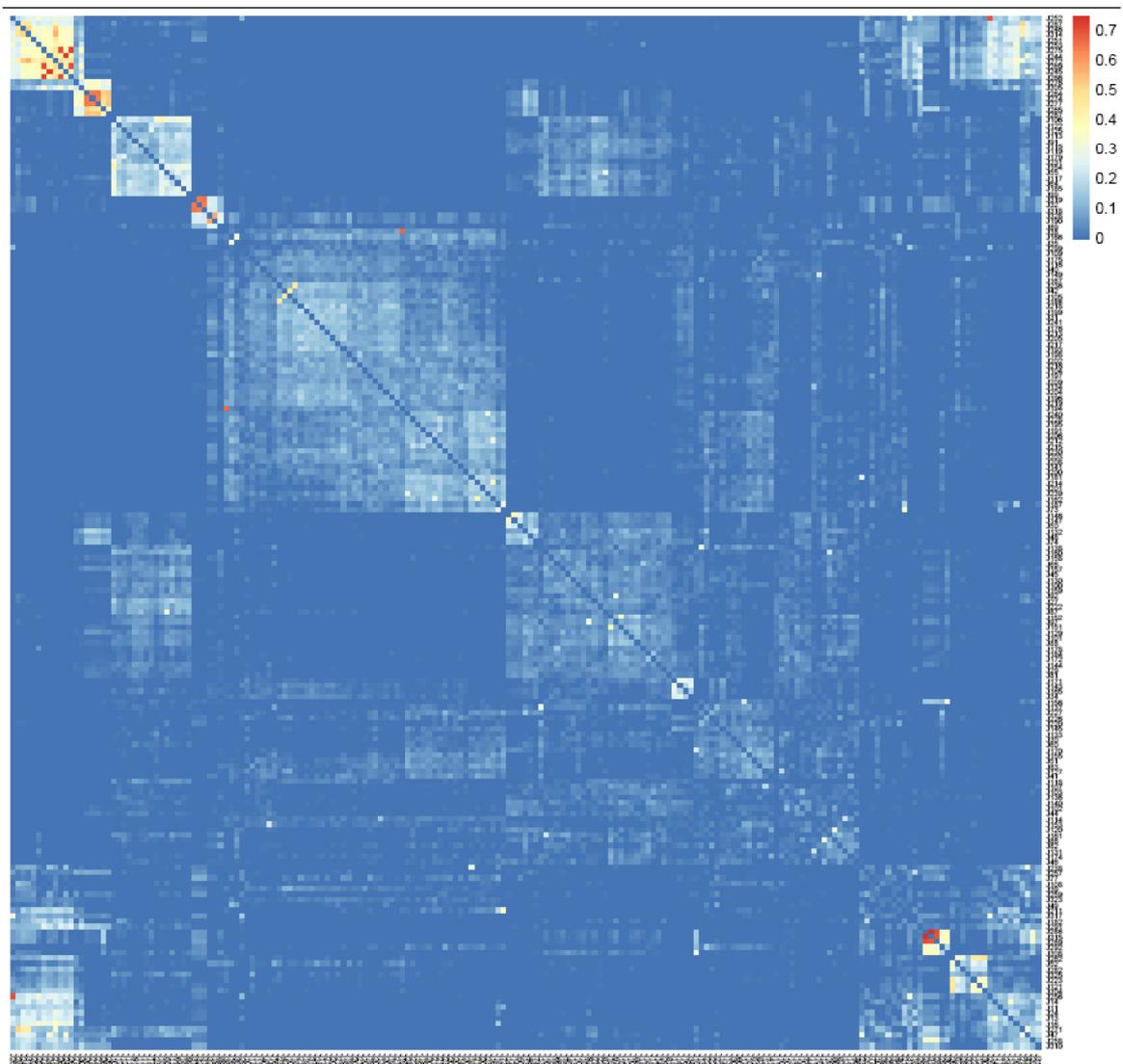


Figure S4. The heatmap of kinship of 193 *B. juncea* accessions.

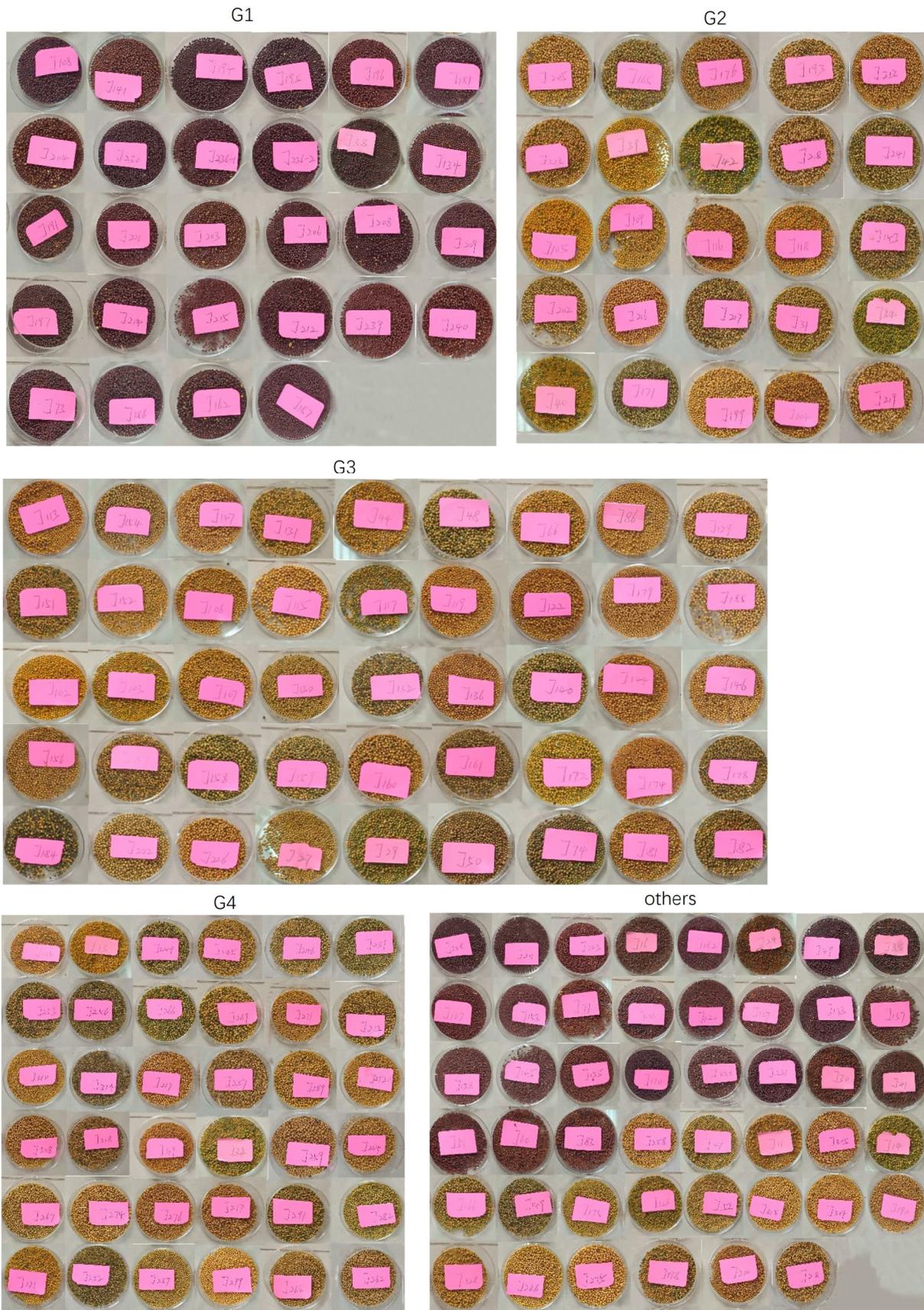


Figure S5. Seed coat color of 193 *B. juncea* accessions.

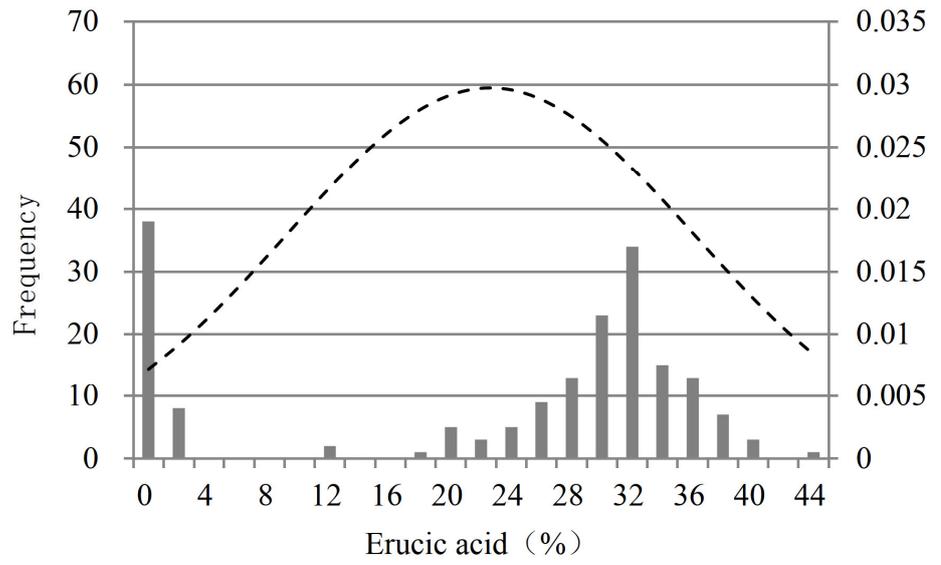


Figure S6. Frequency distribution diagram of erucic acid content in 193 *B. juncea* accessions.

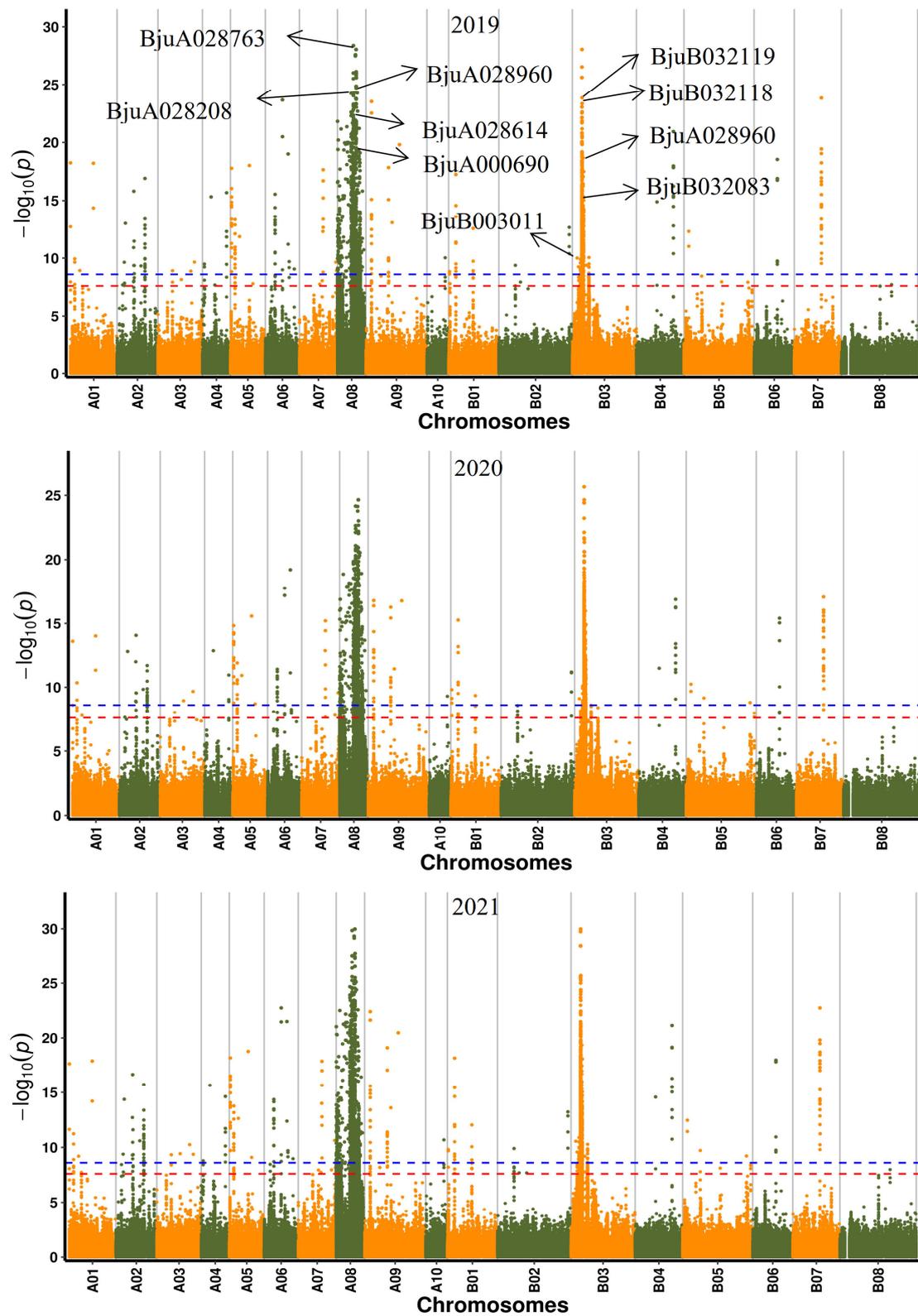


Figure S7. GWAS of erucic acid metabolism in *B. juncea* in three years. Candidate genes significantly associated with erucic acid metabolism are labeled in each year. The significance threshold of $-\log_{10} p$ value was set at 8.