

Figure S1 Phylogenetic tree, conserved protein structure, conserved motif and gene structure analysis of *RcoUGTs*.

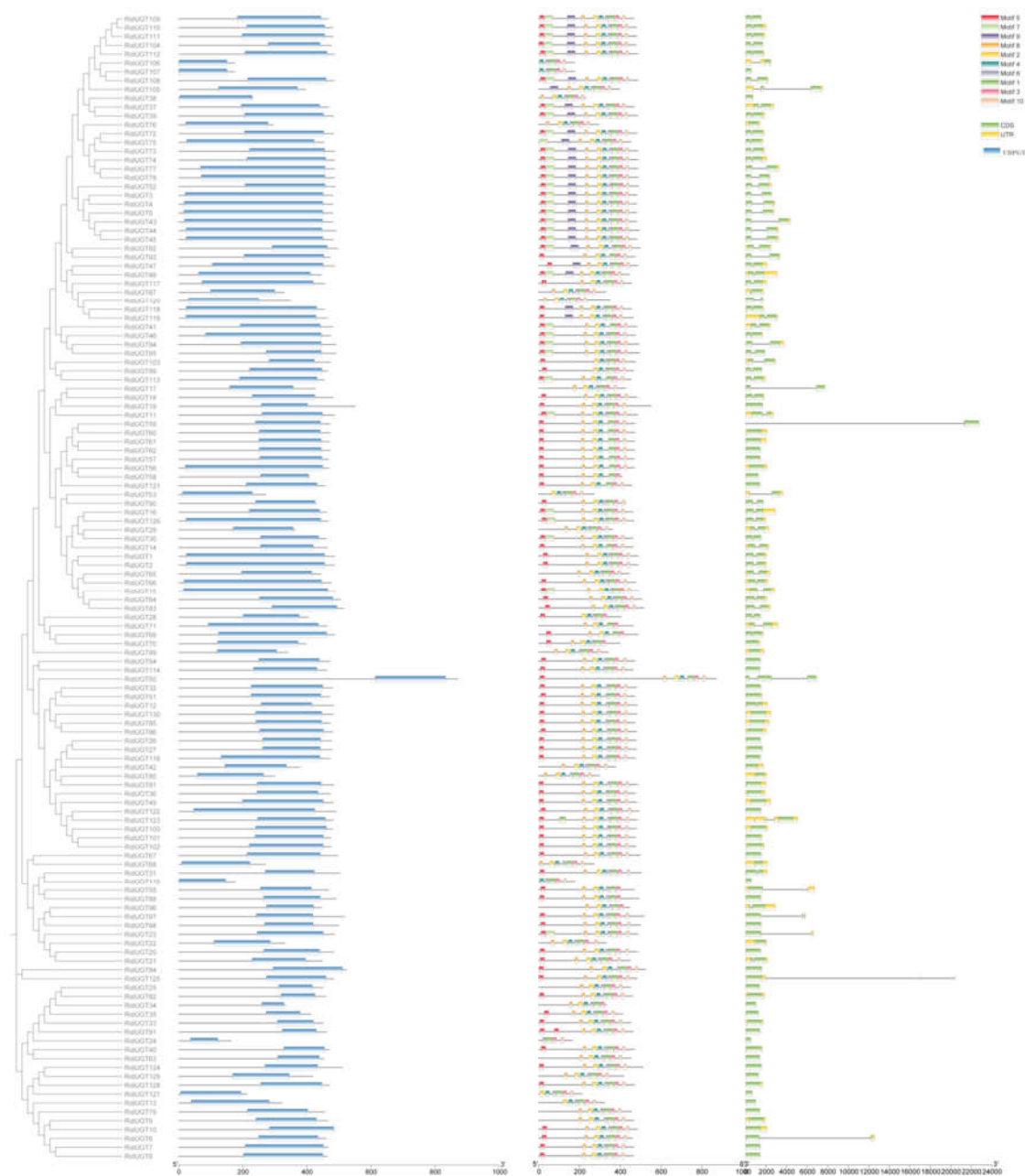


Figure S2 Phylogenetic tree, conserved protein structure, conserved motif and gene structure analysis of *RidUGTs*.

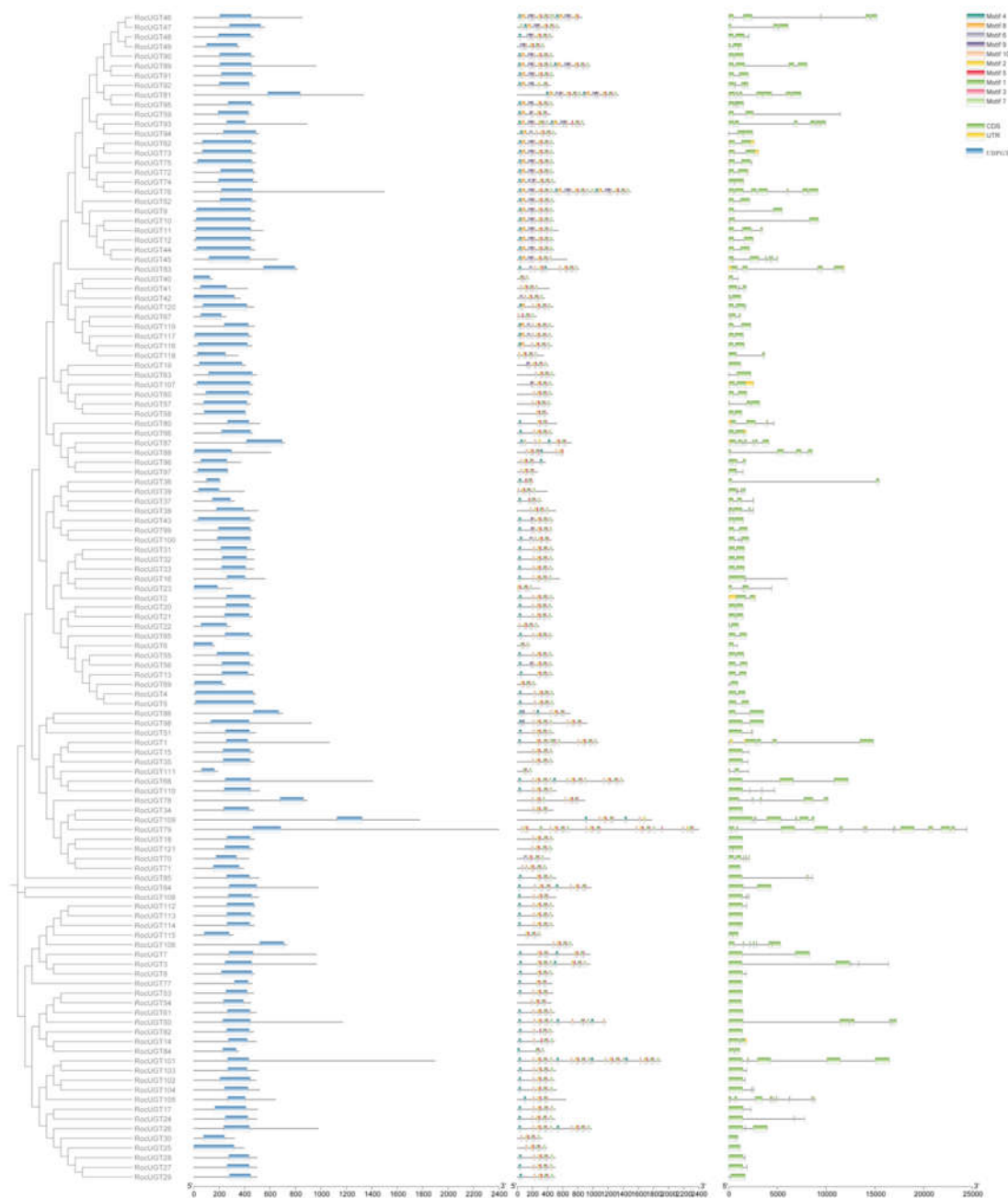


Figure S3 Phylogenetic tree, conserved protein structure, conserved motif and gene structure analysis of *RocUGTs*.

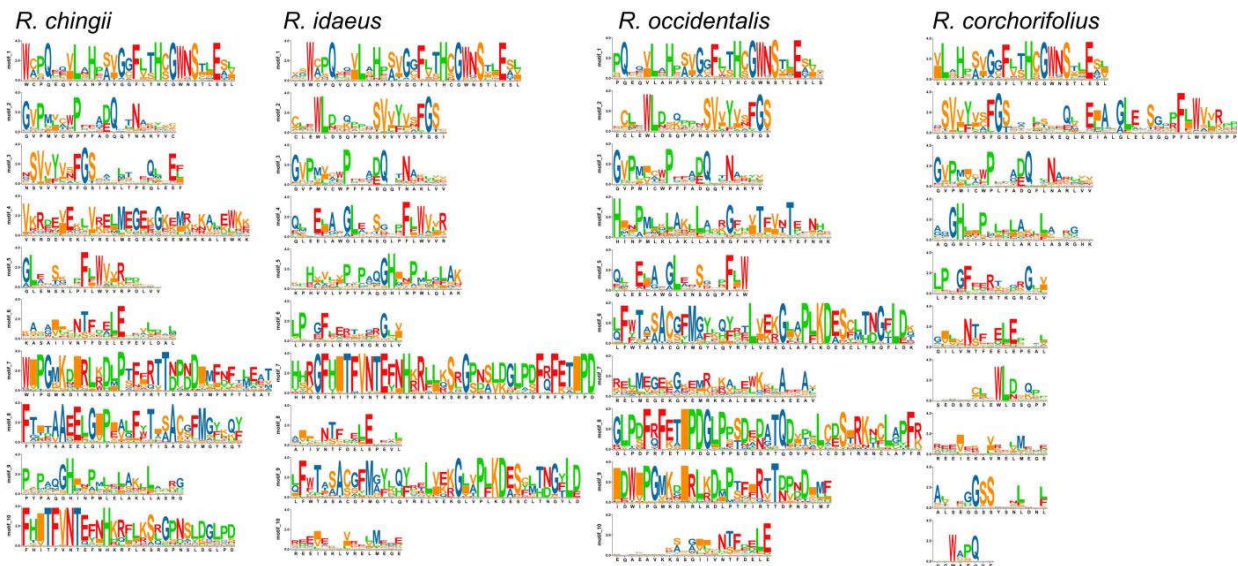


Figure S4 SeqLogo of the Motif 1 to 10 among four plants of *Rubus*.

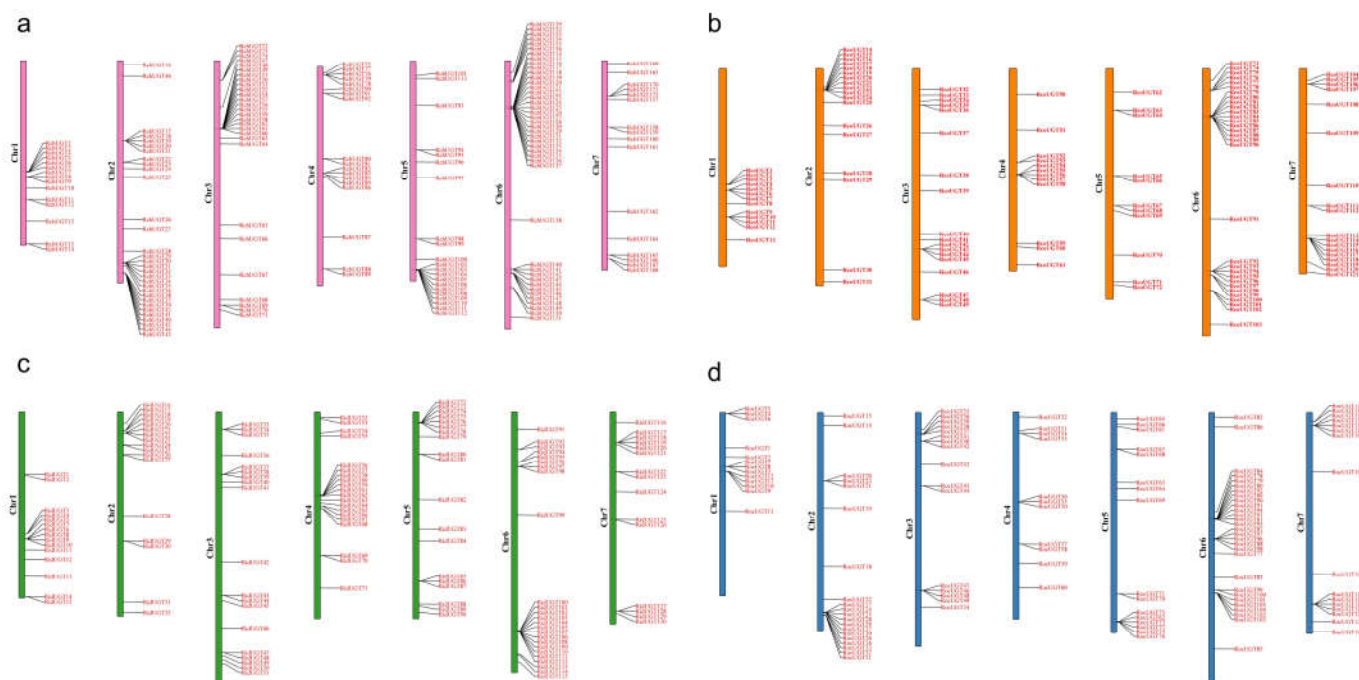


Figure S5 Chromosome Mapping of *UGTs* Gene in four *Rubus* species.

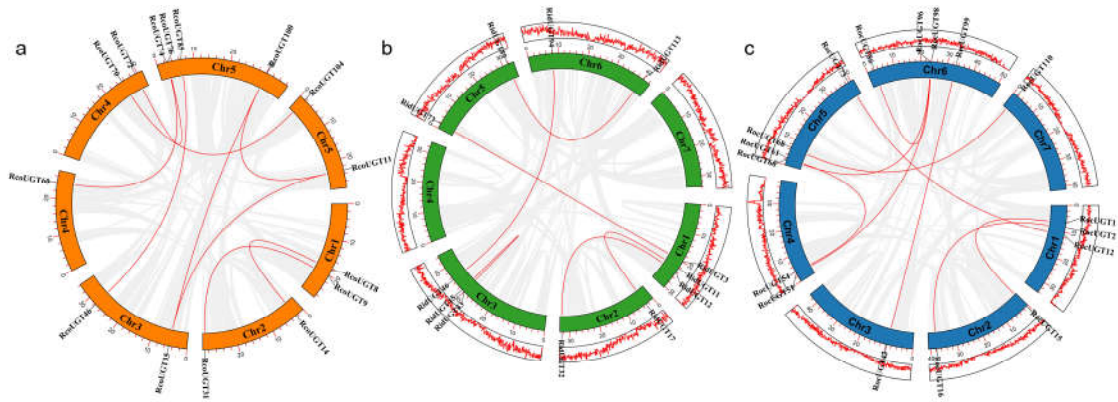


Figure S6 Collinear analysis of *UGTs* gene family from *R. corchorifolius* (a), *R. idaeus* (b) and *R. occidentalis* (c).

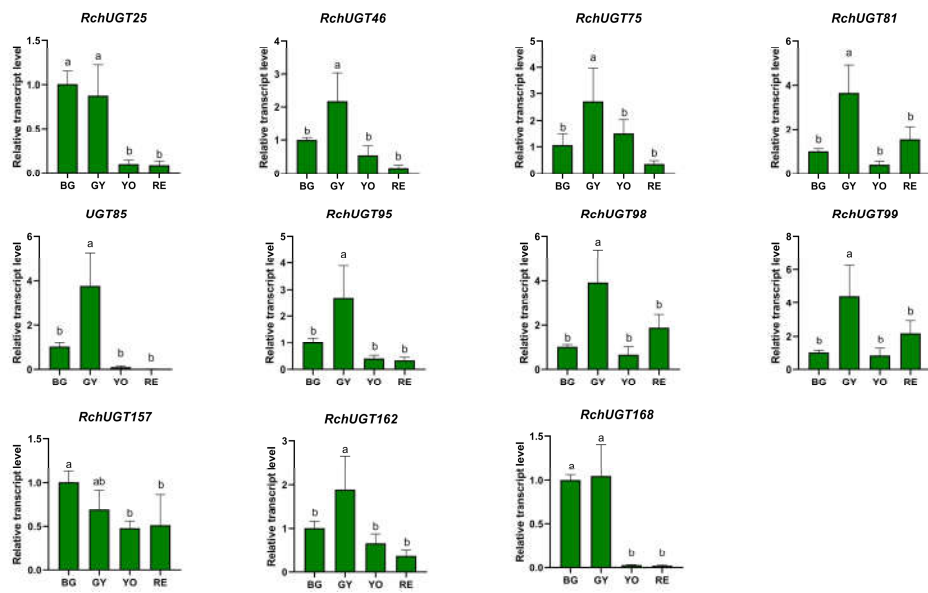


Figure S7 RT-qPCR results of *RchUGTs* in four stages of fruits development. BG (big green, 21 DPA), GY (green-to-yellow, 42 DPA), YO (yellow-to-orange, 48 DAP) and RE (red, 54 DPA).

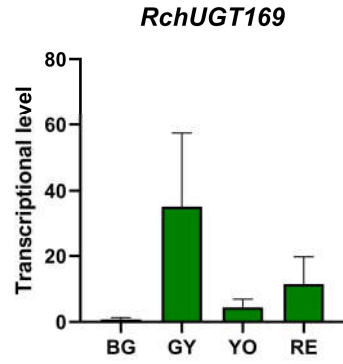


Figure S8 The expression patterns of *RchUGT169* in four stages of fruits development.

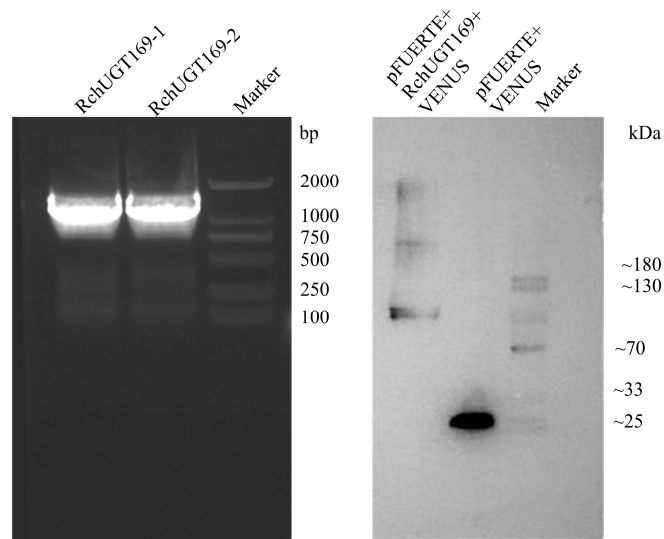


Figure S9 Full-length CDS cloning of *RchUGT169* gene of raspberry and SDS-PAGE of RchUGT169 recombinant protein.