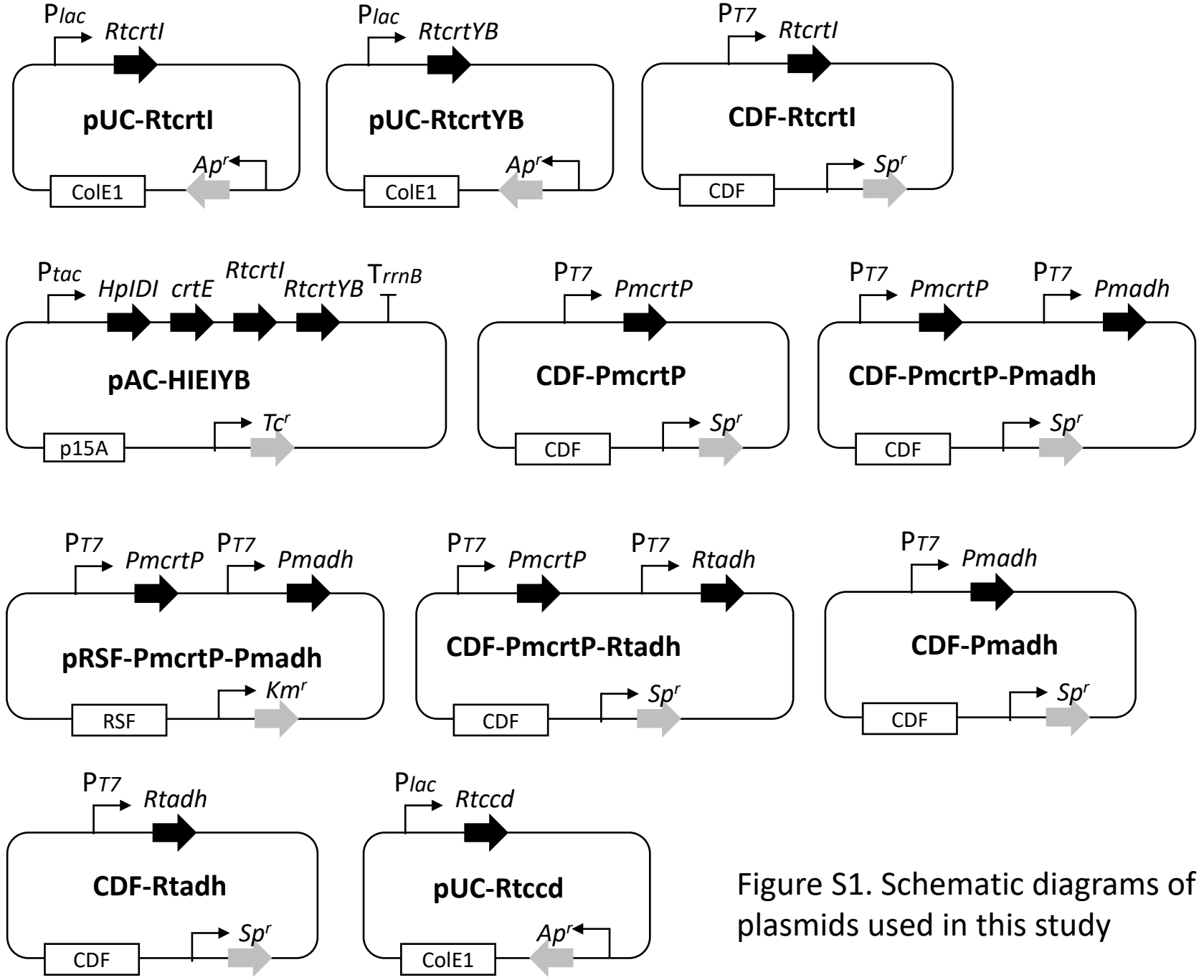


Figure S1. Schematic diagrams of the plasmids used in this study

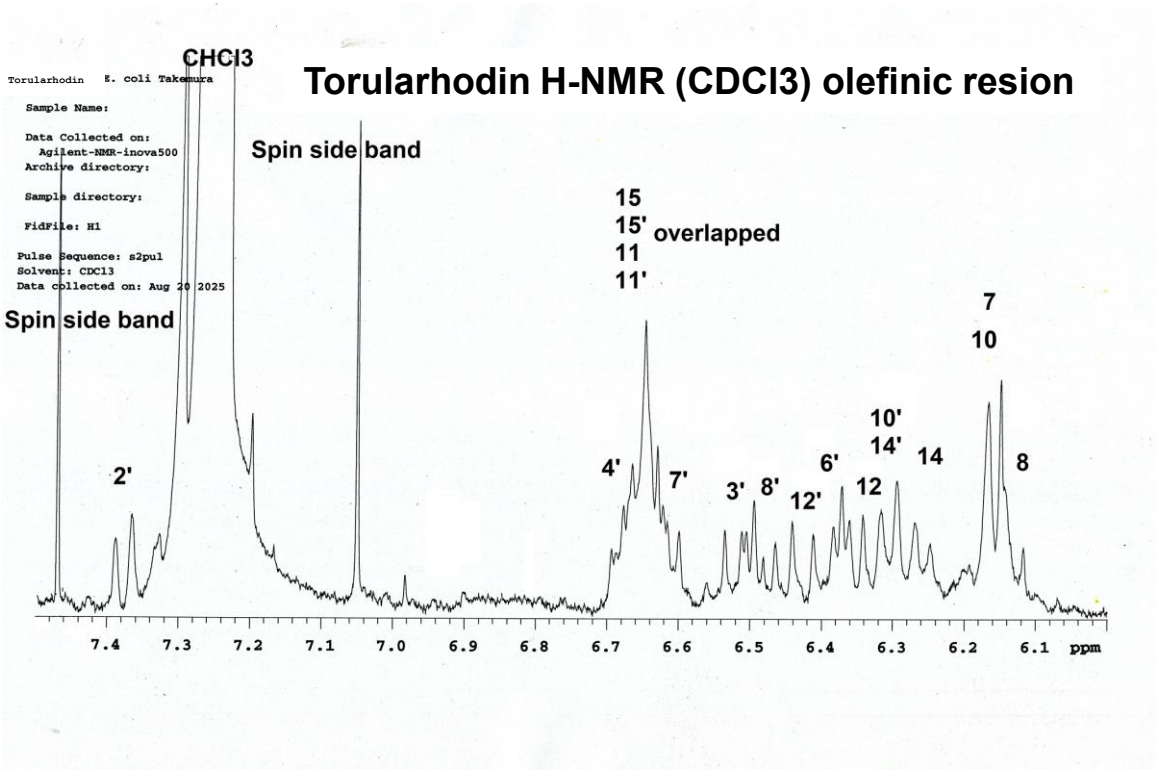


Figure S2. ^{1}H NMR of torularhodin purified from the recombinant *E. coli*

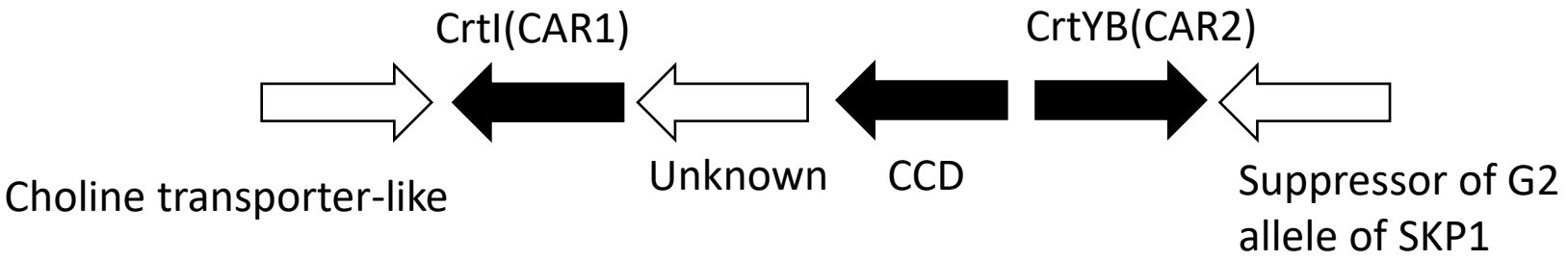


Figure S3. Carotenoid gene cluster of *Rhodotorula toruloides*

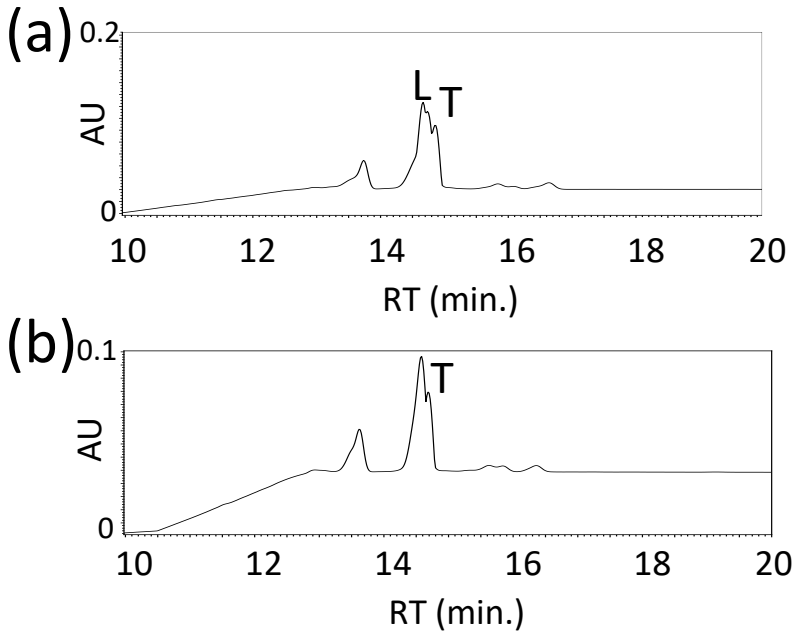


Figure S4. Functional analysis of *RtCCD* gene.
HPLC chromatograms of the extracts of *E. coli* transformants carrying pAC-HIEIYB and pUC-RtCCD (**a**); pAC-HIEIYB, pUC-RtCCD and CDF-Pmadh (**b**). T, torulene; L, lycopene.