

Figure S1. HPLC chromatograms (A, B) and LC-MS spectrum (C) of methanol extracts from recombinant *E. coli* cells. A: stand bilirubin dissolved in methanol. B: methanol extract from strain M2 cells. C: LC-MS spectrum of chromatograms of methanol extract from strain M2 cells.

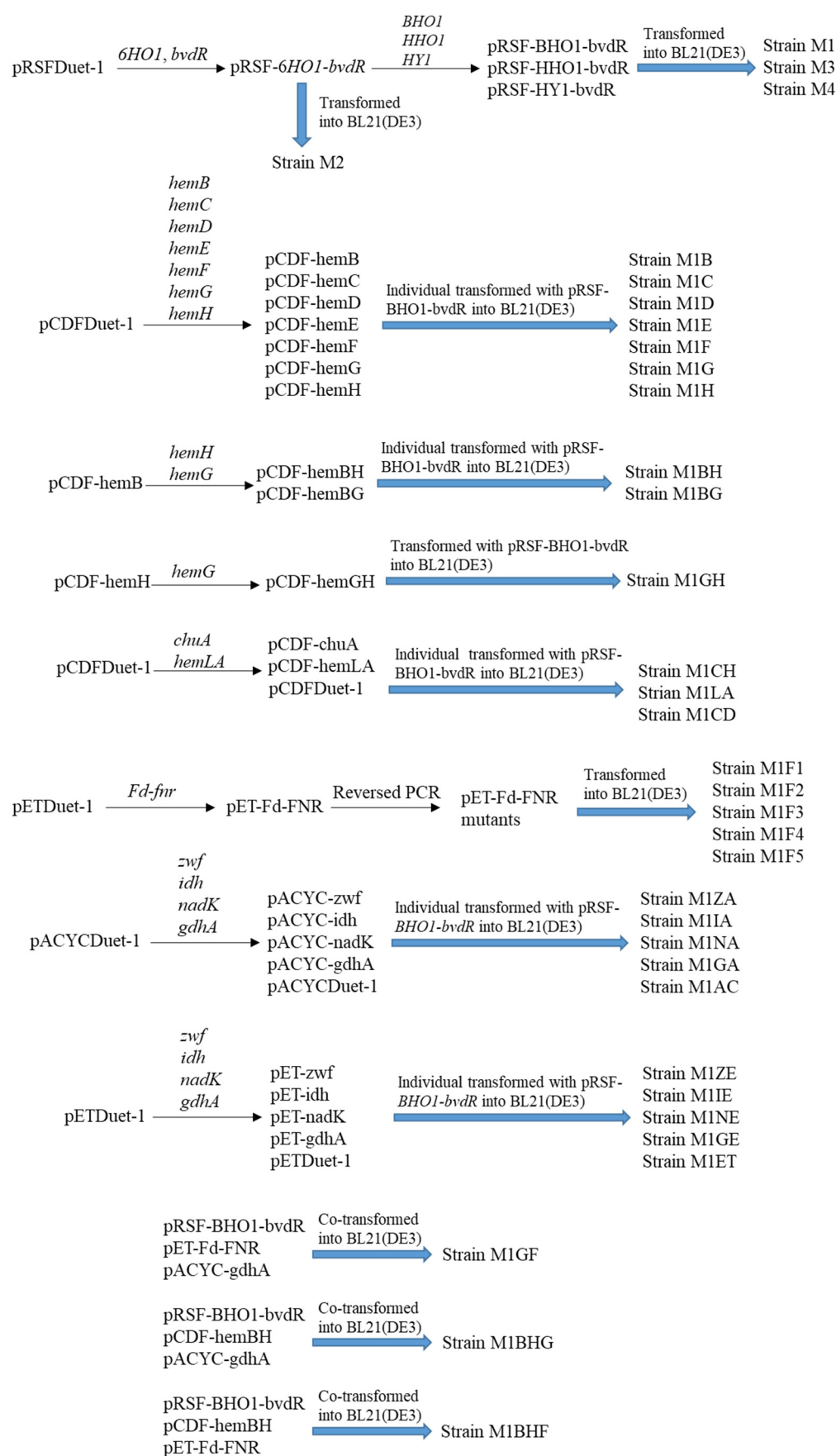


Figure S2 Flow diagram of the construction of plasmids and strains.

Table S1 Recombinant *E. coli* strains and plasmids used in this study.

Strains	Description
M1	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR
M2	<i>E. coli</i> BL21(DE3) harboring pRSF-6Ho1-BvdR
M3	<i>E. coli</i> BL21(DE3) harboring pRSF-HBHo1-BvdR
M4	<i>E. coli</i> BL21(DE3) harboring pRSF-YBHo1-BvdR
E1	<i>E. coli</i> BL21(DE3) harboring pRSFDuet-1
M1CD	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDFDuet-1
M1CH	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-chuA
M1LA	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemLA
M1B	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemB
M1C	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemC
M1D	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemD
M1E	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemE
M1F	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemF
M1G	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemG
M1H	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemH
M1BH	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemBH
M1BG	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemBG
M1GH	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pCDF-hemGH
M1ET	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pETduet-1
M1NE	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pET-NAD
M1IE	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pET-IDH
M1GE	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pET-gdhA
M1ZE	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pET-ZWF
M1AC	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pACYCduet-1
M1NA	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pACYC-NAD
M1IA	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pACYC-IDH
M1GA	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pACYC-gdhA
M1ZA	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pACYC-ZWF
M1FF1	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pET-RBS8-Fd/FNR
M1FF2	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pET-RBS75-Fd/FNR
M1FF3	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pET-RBS769-Fd/FNR
M1FF4	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pET-RBS3369-Fd/FNR
M1FF5	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR and pET-RBS4043-Fd/FNR
M1GF	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR, pET-Fd/FNR and pACYC-gdhA
M1BHG	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR, pCDF-hemBH, pACYC-gdhA
M1BHF	<i>E. coli</i> BL21(DE3) harboring pRSF-BHo1-BvdR, pCDF-hemBH, pET-Fd/FNR