

Table 2. ALA production in recombinant *E. coli* expressing various related genes.

Strain	Relevant characteristic(s)	Plasmid	Expressed genes	ALA accumulation (mg/L)	Standard Error	Relative Change
<i>E. coli</i> BW25113-T7	BW25113-T7	pET-ALA-LAA	<i>hemA, hemL, eamA</i>	662.25	100.28	1.00
<i>E. coli</i> XD	BW25113-T7	pET-ALA-LAA + pUC-gltX-gltD	<i>hemA, hemL, eamA, gltX, gltD</i>	476.37	18.45	0.72
<i>E. coli</i> BX	BW25113-T7	pET-ALA-LAA + pUC-gltB-gltX	<i>hemA, hemL, eamA, gltB, gltX</i>	503.16	37.35	0.76
<i>E. coli</i> BD	BW25113-T7	pET-ALA-LAA + pUC-gltB-gltD	<i>hemA, hemL, eamA, gltB, gltD</i>	487.92	46.40	0.74
<i>E. coli</i> BDX	BW25113-T7	pET-ALA-LAA + pUC-gltB-gltX-gltD	<i>hemA, hemL, eamA, gltB, gltD, gltX</i>	293.65	74.89	0.44
<i>E. coli</i> D5:FYABD	BW25113-T7 <i>ΔhemF, ΔybdK, ΔgdhA, ΔgadB, ΔdppA</i>	pET-ALA-LAA	<i>hemA, hemL, eamA</i>	1601.72	98.70	2.419
<i>E. coli</i> D5:FYABD-RSA	BW25113-T7 <i>ΔhemF, ΔybdK, ΔgdhA, ΔgadB, ΔdppA</i>	pET-ALA-LAA + pACYCD-RS-hemA	<i>hemA, hemL, eamA, hemA(RS)</i>	2099.71	159.20	3.171