

Table S1. Growth rate of strain expressing various related genes in different medium

Strain	Plasmid	Expressed genes	Growth Rate	Medium
<i>E. coli</i> BW25113-T7	pET-ALA-LAA	<i>hemA, hemL, eamA</i>	0.249	LB
<i>E. coli</i> XD	pET-ALA-LAA + pUC-gltX-gltD	<i>hemA, hemL, eamA, gltX, gltD</i>	0.203	LB
<i>E. coli</i> BX	pET-ALA-LAA + pUC-gltB-gltX	<i>hemA, hemL, eamA, gltB, gltX</i>	0.195	LB
<i>E. coli</i> BD	pET-ALA-LAA + pUC-gltB-gltD	<i>hemA, hemL, eamA, gltB, gltD</i>	0.180	LB
<i>E. coli</i> BDX	pET-ALA-LAA + pUC-gltB-gltX-gltD	<i>hemA, hemL, eamA, gltB, gltD, gltX</i>	0.177	LB
<i>E. coli</i> BW25113-T7	pET-ALA-LAA	<i>hemA, hemL, eamA</i>	0.442	M9YE
<i>E. coli</i> XD	pET-ALA-LAA + pUC-gltX-gltD	<i>hemA, hemL, eamA, gltX, gltD</i>	0.251	M9YE
<i>E. coli</i> BX	pET-ALA-LAA + pUC-gltB-gltX	<i>hemA, hemL, eamA, gltB, gltX</i>	0.281	M9YE
<i>E. coli</i> BD	pET-ALA-LAA + pUC-gltB-gltD	<i>hemA, hemL, eamA, gltB, gltD</i>	0.242	M9YE
<i>E. coli</i> BDX	pET-ALA-LAA + pUC-gltB-gltX-gltD	<i>hemA, hemL, eamA, gltB, gltD, gltX</i>	0.190	M9YE