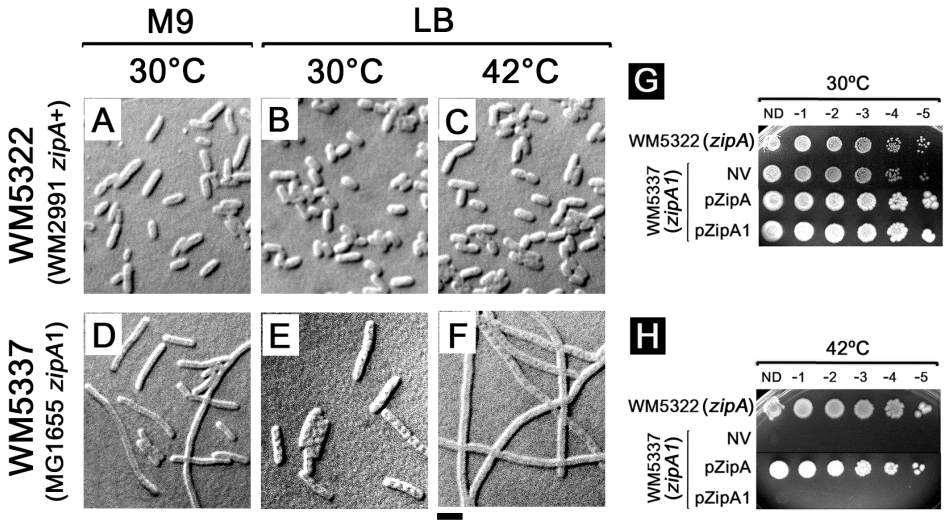

Figure S1. The *zipA1* allele is necessary and sufficient for the thermosensitive cell division phenotypes.

WM5322 (the original *zipA1* strain WM2991 transduced with the linked *nupC*::Tn*10* marker and confirmed to have acquired *zipA*+) and WM5337 (MG1655 transduced with the linked *nupC*::Tn10 marker and confirmed to have acquired *zipA1*) were grown in M9 at 30°C (A, D), LB at 30°C (B and E) or 42°C (C and F). A spot assay was carried out with WM5322 and WM5337 transformed with pDSW210-*zipA-gfp* (pZipA) or pDSW210-*zipA1-gfp* in LB at 30°C (G) or 42°C (H). Scale bar, 4 μm.

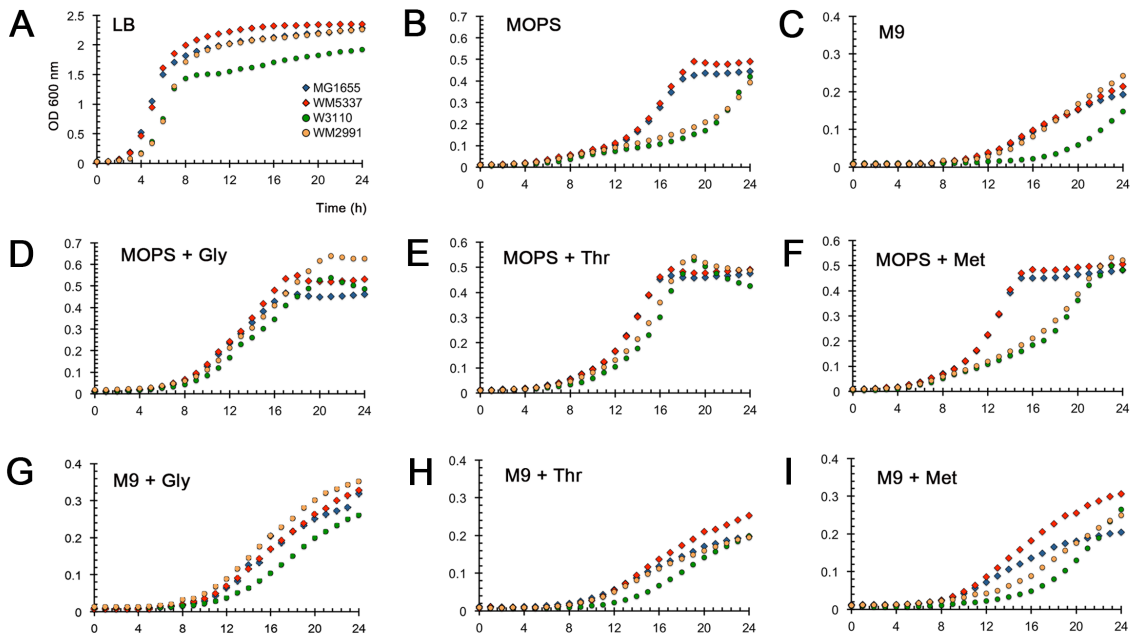

Figure S2. Medium-dependent growth differences between W3110 and MG1655 derivatives.

Parent strains MG1655 (blue rhombus) and W3110 (green circle), and mutant derivatives WM5337 (MG1655 *zipA1* (red rhombus)) and WM2991 (W3110 *zipA1* (orange circle)), were grown for 24 h at 30˚C in LB (A), MOPS (B), M9 (C), MOPS plus 0.5 mM of glycine (E), L-threonine (E), L-methionine (F) and M9 plus 0.5 mM of glycine (G), L-threonine (H) or L-methionine (I).

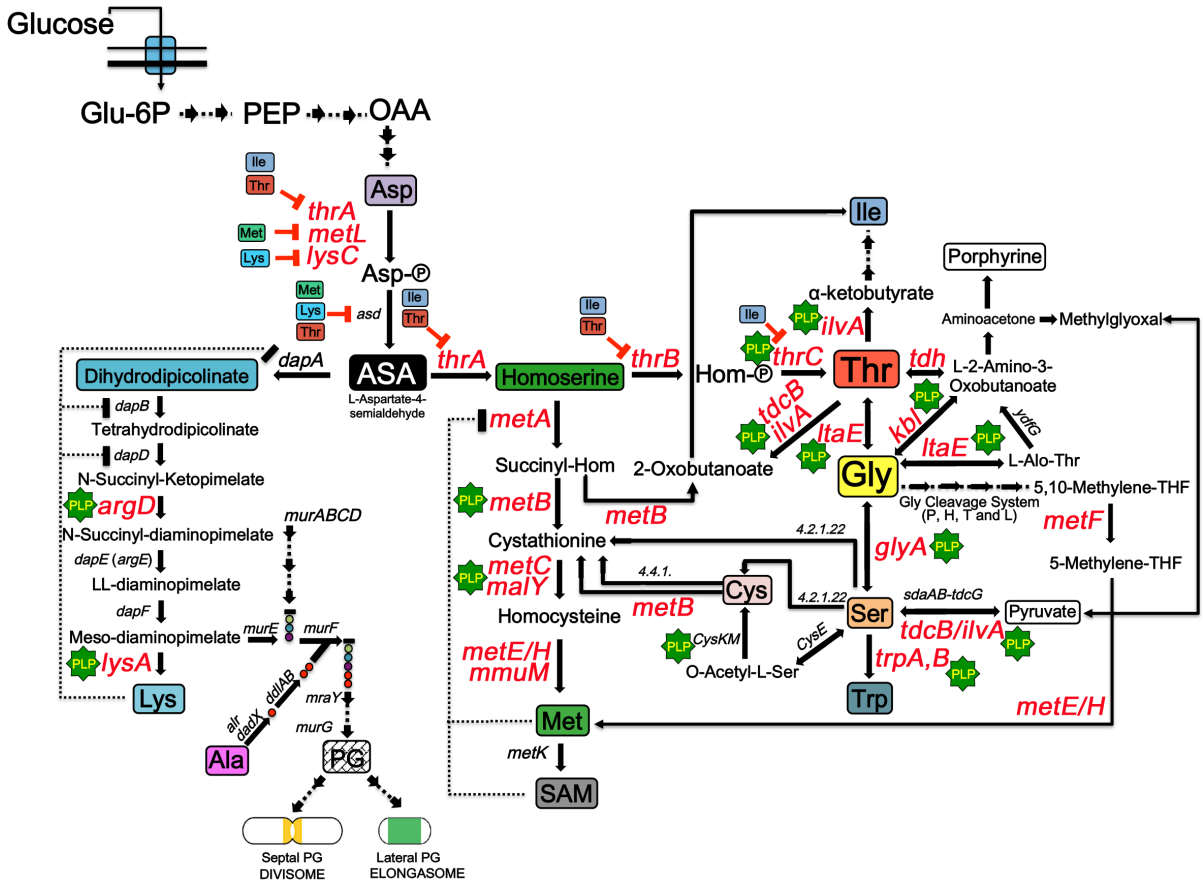

Figure S3. Partial overview of the metabolic pathways for synthesis of amino acids relevant to this study.

Solid black arrows represent the direction of reactions. Green stars indicate enzymatic reactions requiring PLP as cofactor; Blocked arrows indicate inhibition of the reaction. Genes in red indicate those single deleted in a *zipA1* background. Abbreviations: Glu-6P, glucose 6-phosphate; PEP, phosphoenolpyruvate; OAA, oxaloacetate; Asp, aspartate; ASA, L-aspartate-4-semialdehyde; PG, peptidoglycan; Lys, lysine; Ala, alanine; Ile, isoleucine; Thr, threonine; Gly, glycine; Ser, serine; Trp, tryptophan; PLP, Pyridoxal 5-phosphate; SAM, S-adenosyl-methionine; Succinyl-Hom, O-succinyl L-homoserine.

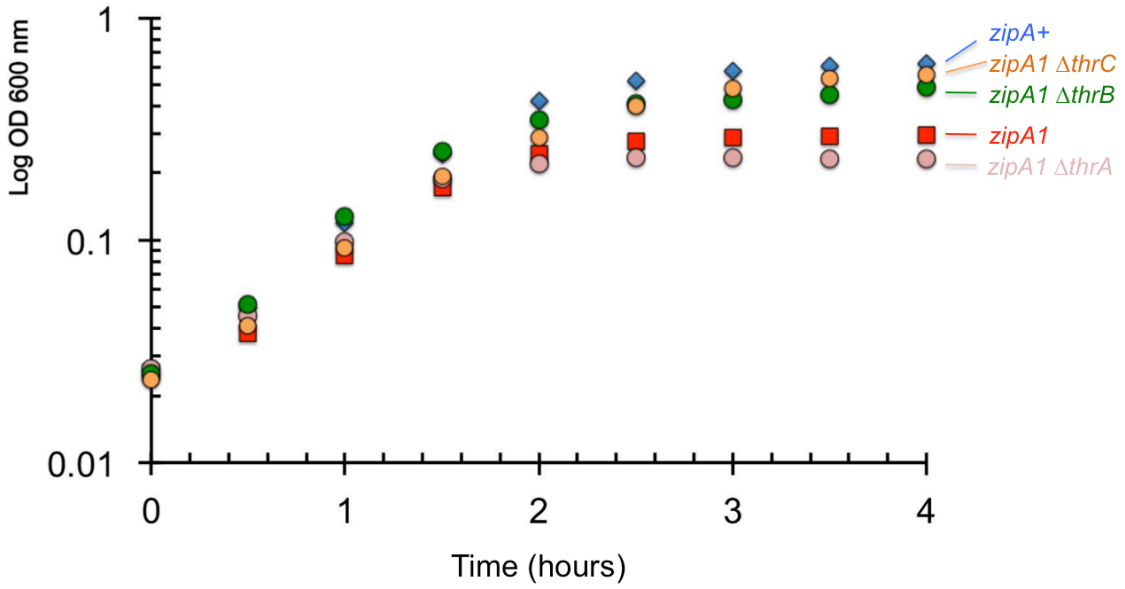

Figure S4. Growth curves of suppressed and non-suppressed *zipA1* derivatives at 37˚C in LB. Cells were grown at 30˚C to early logarithmic phase and then shifted to 37˚C at time zero.