Supporting information 5: Identification of each reaction of the mathematical model.

Table S5: Identification of each reaction. Rev. stands for reversible.

Reaction ID	EC Number	Sso ID	Enzyme Name	Reaction	Rev?
$\mathbf{v_{GDH}}$	1.1.1.359	sso3003	glucose 1-dehydrogenase	$Glc + NAD(P)^+ \rightarrow DGat + NAD(P)H^+$	No
$\mathbf{v_{GAD}}$	4.2.1.140	sso3198	gluconate/galactonate dehydratase	$DGat \rightarrow KDG + H_2O$	No
$\mathbf{v_{KDGKi}}$	2.7.1.178	sso3195	2-keto-3-deoxy-D-gluconate kinase	$KDG + ATP \rightarrow KDPG + ADP$	No
$\mathbf{v_{KDPGA1}}$	4.1.2.55	sso3197	2-keto-3-deoxy gluconate aldolase	$KDG \leftrightarrow GA + Pyr$	Yes
$\mathbf{v_{KDPGA2}}$	4.1.2.55	sso3197	2-keto-3-deoxy gluconate aldolase	$KDPG \leftrightarrow GAP + Pyr$	Yes
$\mathbf{v_{GAPDH}}$	1.2.1.12 1.2.1.13	sso0528	phosphorylating glyceraldehyde-3-phosphate dehydrogenase	$1{,}3BPG + NAD(P)H \leftrightarrow GAP + Pi + NAD(P)^+$	Yes
$\mathbf{v_{GAPN}}$	1.2.1.9	sso3194	Non-phosphorylating glyceraldehyde-3-phosphate dehydrogenase	$GAP + NAD(P)^+ \rightarrow 3PG + NAD(P)H$	No
$\mathbf{v_{PGK}}$	2.7.2.3	sso0527	phosphoglycerate kinase	$3PG + ATP \leftrightarrow 1{,}3BPG + ADP$	Yes
$\mathbf{v_{IPGAM}}$	5.4.2.12	sso0417	phosphoglycerate mutase	$3PG \leftrightarrow 2PG$	Yes
$\mathbf{v_{ENO}}$	4.2.1.11	sso0913	enolase	$2PG \leftrightarrow PEP$	Yes
$\mathbf{v_{GK}}$	2.7.1.165	sso0666	glycerate kinase	$Gly + ATP \rightarrow 2PG + ADP$	No
$\mathbf{v_{PK}}$	2.7.1.40	sso981	pyruvate kinase	$PEP + ADP \rightarrow Pyr + ATP$	No
$\mathbf{v_{PEPS}}$	2.7.9.2	sso883	phosphoenolpyruvate synthase	$Pyr + ATP + H_2O \rightarrow PEP + AMP + Pi$	No
$\mathbf{v_{GAOR}}$	1.2.99.2	sso2636; sso2637; sso2639	glyceraldehyde:Fd oxidoreductase	$GA + Fd_{ox} \rightarrow Gly + Fd_{red}$	No