**Abbreviations**

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| **Abbreviation** | **Protein/metabolite name** |
| accA | Acetyl-coenzyme A carboxylase carboxyl transferase subunit alpha |
| accB | Biotin carboxyl carrier protein of acetyl-CoA carboxylase |
| accC | Biotin carboxylase |
| accD | Acetyl-coenzyme A carboxylase carboxyl transferase subunit beta |
| aceA | isocitrate lyase  |
| aceE | Pyruvate dehydrogenase  |
| aceF | Pyruvate dehydrogenase E2 component  |
| aceK | isocitrate dehydrogenase kinase/phosphatase  |
| acnA1 | aconitate hydratase  |
| acnA2 | aconitate hydratase |
| acnB | aconitate hydratase B  |
| acoA | Acetoin:2,6-dichlorophenolindophenol oxidoreductase subunit alpha  |
| acsA1 | acyl-CoA synthetase  |
| acsA2 | Acetyl-coenzyme A synthetase 2 |
| ahpC | peroxiredoxin/alkylhydroperoxide reductase small subunit  |
| aldB-II | aldehyde dehydrogenase (pedI)  |
| aroB | 3-dehydroquinate synthase |
| aroE | shikimate 5-dehydrogenase  |
| aroF-I | Phospho-2-dehydro-3-deoxyheptonate aldolase |
| aroF-II | Phospho-2-dehydro-3-deoxyheptonate aldolase |
| aroH | Phospho-2-dehydro-3-deoxyheptonate aldolase |
| aroQ-I  | type II 3-dehydroquinate dehydratase  |
| aroQ-II  | type II 3-dehydroquinate dehydratase  |
| aroQ-III  | type II 3-dehydroquinate dehydratase  |
| benA | Benzoate 1,2-dioxygenase subunit alpha |
| benB | Benzoate 1,2-dioxygenase subunit beta |
| benC | Benzoate 1,2-dioxygenase electron transfer component |
| benD | 1,6-dihydroxycyclohexa-2,4-diene-1-carboxylate dehydrogenase |
| benK | Benzoate MFS transporter |
| catA1 | Catechol 1,2-dioxygenase  |
| catB | Muconate cycloisomerase 1  |
| catC | Muconolactone Delta-isomerase |
| cheA | chemotaxis histidine kinase CheA  |
| cti | esterified fatty acid cis/trans isomerase  |
| curA | NADPH-dependent curcumin/dihydrocurcumin reductase  |
| DAHP | 3-deoxy-D-arabino-heptulosonate-7-phosphate |
| eda | KHG/KDPG aldolase  |
| edd | Phosphogluconate dehydratase |
| eno | enolase |
| etfA | electron transfer flavoprotein subunit alpha  |
| etfB | electron transfer flavoprotein subunit beta  |
| fabA | 3-hydroxydecanoyl-[acyl-carrier-protein] dehydratase |
| fabB | 3-oxoacyl-[acyl-carrier-protein] synthase 1 |
| fabD | malonyl-CoA-ACP transacylase  |
| fabF | 3-oxoacyl-[acyl-carrier-protein] synthase 2 |
| fabG | 3-oxoacyl-[acyl-carrier-protein] reductase |
| fabV | Enoyl-[acyl-carrier-protein] reductase [NADH] |
| fabZ | 3-hydroxyacyl-[acyl-carrier-protein] dehydratase  |
| fadA | 3-ketoacyl-CoA thiolase |
| fadB | Fatty acid oxidation complex subunit alpha |
| fadBA | 3-hydroxyacyl-CoA dehydrogenase type-2 |
| fadD1 | long-chain-fatty acid--CoA ligase  |
| fadD2 | long-chain-fatty acid--CoA ligase  |
| fadE | medium-long chain acyl-CoA dehydrogenase  |
| fba | Fructose-1,6-bisphosphate aldolase |
| fbp | Fructose-1,6-bisphosphatase class 1 |
| fumC1 | class 2 fumarate hydratase |
| fumC2 | class 2 fumarate hydratase  |
| gapA | Glyceraldehyde-3-phosphate dehydrogenase |
| gapB | Glyceraldehyde-3-phosphate dehydrogenase |
| gcd | quinoprotein glucose dehydrogenase  |
| glcB | malate synthase G  |
| glgA | glycogen synthase  |
| glgB | 1,4-alpha-glucan branching enzyme  |
| glgE | alpha-1,4-glucan: maltose-1-phosphate maltosyltransferase |
| glgP | glycogen phosphorylase |
| glgX | glycogen debranching enzyme |
| glk | glucokinase |
| glpD | aerobic glycerol-3-phosphate dehydrogenase  |
| glpF | aquaglyceroporin |
| glpK | glycerol kinase  |
| gltA | citrate synthase  |
| gntT | D-gluconate transporter |
| gntZ | Putative 6-phosphogluconate dehydrogenase, decarboxylating |
| gnuK | D-gluconate kinase |
| gor | glutathione reductase  |
| gpmI | 2,3-bisphosphoglycerate-independent phosphoglycerate mutase |
| gqr | glutathionyl-hydroquinone reductase  |
| gshB | glutathione synthetase  |
| gtsB | Mannose/glucose ABC transporter, permease protein |
| gtsC | Mannose/glucose ABC transporter, permease protein |
| hbdH | 3-hydroxybutyrate dehydrogenase  |
| icd | NADP(+)-specific isocitrate dehydrogenase |
| idh | isocitrate dehydrogenase  |
| katE | hydroperoxidase |
| katG | catalase-peroxidase  |
| kguD | phosphogluconate 2-dehydrogenase |
| kguK | Putative 2-ketogluconokinase |
| kguT | 2-ketogluconate transporter, putative |
| lpd | Dihydrolipoyl dehydrogenase  |
| lpdG | Dihydrolipoyl dehydrogenase |
| lpdV | branched-chain 2-oxo acid dehydrogenase complex dihydrolipoyl dehydrogenase component |
| lpxD | UDP-3-O-acylglucosamine N-acyltransferase  |
| maeB | malic enzyme B  |
| malQ | 4-alpha-glucanotransferase  |
| mdh | malate dehydrogenase |
| mmsB | 3-hydroxyisobutyrate dehydrogenase  |
| mqo1 | malate:quinone oxidoreductase |
| mqo2 | malate:quinone oxidoreductase |
| mqo3 | malate:quinone oxidoreductase  |
| mupP | N-acetyl-β-muramate 6-phosphate phosphatase  |
| murD | UDP-N-acetylmuramoylalanine--D-glutamate ligase  |
| nagZ | beta-N-acetylglucosaminidase  |
| ndh | NADH dehydrogenase  |
| opgG | glucans biosynthesis protein G  |
| pcaB | 3-carboxy-cis,cis-muconate cycloisomerase  |
| pcaC | 4-carboxymuconolactone decarboxylase  |
| pcaD | 3-oxoadipate enol-lactonase  |
| pcaF-I | Beta-ketoadipyl-CoA thiolase  |
| pcaG | protocatechuate 3,4-dioxygenase subunit alpha  |
| pcaH | protocatechuate 3,4-dioxygenase subunit beta  |
| pcaI | 3-oxoadipate CoA-transferase subunit A |
| pcaJ | 3-oxoadipate CoA-transferase subunit B |
| pgi1 | Glucose-6-phosphate isomerase 1 |
| pgi2 | Glucose-6-phosphate isomerase 2 |
| pgk | phosphoglycerate kinase  |
| pgl | 6-phosphogluconolactonase  |
| pgm | phosphoglucomutase |
| phaA | Poly(3-hydroxyalkanoate) polymerase 1 |
| phaB | poly(3-hydroxyalkanoate) depolymerase  |
| phaC2 | poly(R)-3-hydroxyalkanoate polymerase 2  |
| phaG | (R)-3-hydroxydecanoyl-ACP:CoA transacylase  |
| phaJ4 | (R)-specific enoyl-CoA hydratase |
| PP\_0370  | acyl-CoA dehydrogenase family protein  |
| PP\_0665 | Glyceraldehyde-3-phosphate dehydrogenase |
| PP\_0897 | class 1 fumarate hydratase |
| PP\_1389 | Oxaloacetate decarboxylase  |
| PP\_1644  | NAD(P)H dehydrogenase (Quinone) |
| PP\_1686  | glutathione peroxidase  |
| PP\_1720  | Alcohol dehydrogenase, zinc-containing  |
| PP\_1791 | Putative Aldolase/synthase |
| PP\_1816 | alcohol dehydrogenase  |
| PP\_2871 | class II aldolase/adducin domain-containing protein |
| PP\_3126 | Putative polysaccharide exported protein |
| PP\_3224 | class II aldolase/adducin domain-containing protein |
| PP\_3382 | Gluconate 2-dehydrogenase cytochrome c subunit |
| PP\_3383 | Gluconate 2-dehydrogenase flavoprotein subunit |
| PP\_3384 | Gluconate 2-dehydrogenase gamma subunit |
| PP\_3443 | Glyceraldehyde-3-phosphate dehydrogenase |
| PP\_3768 | shikimate 5-dehydrogenase  |
| PP\_3923 | Phosphoglycerate mutase |
| PP\_4450 | Phosphoglycerate mutase family protein  |
| PP\_4975 | Long-chain acyl-CoA thioester hydrolase family protein  |
| ppc | Phosphoenolpyruvate carboxylase  |
| pycA | Pyruvate carboxylase subunit A  |
| pycB | Pyruvate carboxylase subunit B  |
| pykA | pyruvate kinase II  |
| pykF | pyruvate kinase  |
| quiA | Quinate dehydrogenase  |
| quiC | 3-dehydroshikimate dehydratase  |
| rfbA | dTDP-glucose pyrophosphorylase  |
| rffG | dTDP-glucose 4,6-dehydratase  |
| rpe | Ribulose-phosphate 3-epimerase |
| rpiA | Ribose-5-phosphate isomerase A |
| sdhA | succinate dehydrogenase flavoprotein subunit  |
| sdhB | succinate dehydrogenase iron-sulfur subunit  |
| sdhC | succinate dehydrogenase membrane b-556 subunit  |
| sdhD | succinate dehydrogenase hydrophobic membrane anchor subunit |
| sucA | 2-oxoglutarate decarboxylase, thiamine-requiring E1 subunit |
| sucB | 2-oxoglutarate dehydrogenase dihydrolipoyltranssuccinylase subunit  |
| sucC | succinyl-CoA synthetase subunit beta |
| sucD | succinyl-CoA synthetase subunit alpha |
| tal | Transaldolase |
| tktA | Transketolase |
| tpiA | triose phosphate isomerase  |
| treSB | bifunctional trehalose synthase B/maltokinase  |
| treY | maltooligosyl trehalose synthase |
| treZ | malto-oligosyltrehalose trehalohydrolase  |
| trx | thioredoxin |
| trxA | thioredoxin I  |
| trxB | thioredoxin reductase  |
| zwf | glucose 6-phosphate-1-dehydrogenase  |
| zwf-1  | glucose 6-phosphate-1-dehydrogenase  |
| zwfB | glucose 6-phosphate-1-dehydrogenase  |