

**Supplementary Table 2. KEGG pathways used for metabolic network reconstruction**

| Pathway name   | Pathway number |
|--|----------------|
| Alanine, aspartate and glutamate metabolism          | 00250          |
| Amino sugar and nucleotide sugar metabolism          | 00520          |
| Arginine and proline metabolism                      | 00330          |
| Fatty acid biosynthesis                              | 00061          |
| Fatty acid metabolism                                | 00071          |
| D-glutamine and D-glutamate metabolism               | 00471          |
| Glycerophospholipid metabolism                       | 00564          |
| Histidine metabolism                                 | 00340          |
| Lipopolysaccharide biosynthesis                      | 00540          |
| Lysine biosynthesis                                  | 00300          |
| Nitrogen metabolism                                  | 00919          |
| Peptidoglycan biosynthesis                           | 00550          |
| Phenylalanine, tyrosine and tryptophane biosynthesis | 00400          |
| Purine metabolism                                    | 00230          |
| Pyrimidine metabolism                                | 00240          |
| Sulfur metabolism                                    | 00920          |
| Terpenoid backbone biosynthesis                      | 00900          |