

- A. alanine + D-xylulose-5-phosphate + H₂O + NAD⁺ + NADP⁺ → DHAP + glycine + 2 H⁺ + NADH + NADPH + pyruvate
- B. 6 ATP + H⁺ + 6 H₂O + 3 methionine + PE-LD pool + serine + CDP-diacylglycerol → 3 ADP + 3 AMP + CMP + 3 homocysteine + 3 Pi + 3 PPi + PS-LD pool + phosphatidylcholine
- C. GMP + thioredoxin → dGMP + H₂O + oxidized thioredoxin
- D. 2 5,10-methenyl-THF + aspartate + 4 ATP + CO₂ + 2 glutamine + glycine + 3 H₂O + PRPP → 4 ADP + fumarate + 2 glutamate + 2 H⁺ + IMP + 4 Pi + PPi + 2 THF
- E. ATP + glutamine + 2 H₂O + IMP + NAD⁺ → AMP + glutamate + GMP + H⁺ + NADH + PPi
- F. aspartate + IMP + succinyl-CoA → AMP + CoA + fumarate + succinate
- G. 5,10-methylene-THF + ADP + H⁺ + NADPH + thioredoxin + UDP → ATP + dTMP + H₂O + NADP⁺ + oxidized thioredoxin + THF
- H. H⁺ + NADPH + oxidized thioredoxin → NADP⁺ + thioredoxin
- I. L-glutamate 5-semialdehyde + ubiquinol[m] → H₂O + proline + ubiquinone[m]
- J. ATP + glutamate + H⁺ + NADPH → ADP + L-glutamate 5-semialdehyde + NADP⁺ + Pi
- K. H⁺ + 3 H₂O + NAD⁺ + 2 NADPH + 3 O₂ + tryptophan → 2-oxoadipate + alanine + CO₂ + formate + NADH + 2 NADP⁺ + NH₃
- L. 2 acetyl-CoA + ATP + CTP + DHAP + 28 H⁺ + 14 malonyl-CoA + 28 NADPH + ubiquinol[m] → AMP + 14 CO₂ + 16 CoA + 12 H₂O + 28 NADP⁺ + 2 PPi + ubiquinone[m] + CDP-diacylglycerol
- M. 18 ATP + 29 H⁺ + 6 HMG-CoA + NADH + 24 NADPH + 11 O₂ → 18 ADP + cholesterol + 8 CO₂ + 6 CoA + formate + 15 H₂O + NAD⁺ + 24 NADP⁺ + 6 Pi + 6 PPi
- N. PE-LD pool + serine + CDP-diacylglycerol → CMP + PS-LD pool + phosphatidylethanolamine
- O. 0.3 dAMP + 0.2 dCMP + 0.2 dGMP + 0.3 dTMP → human_DNAPool
- P. serine + CDP-diacylglycerol → CMP + phosphatidylserine
- Q. 0.331 cholesterol + 0.384 phosphatidylPool → lipidPool