

function

tRNA modification

Urea cycle

Ubiquinone biosynthesis

Translation factors

Thymidylate biosynthesis

Threonine biosynthesis

Thiamine biosynthesis

TCA cycle!!!Pyruvate oxidation!!!Pyruvate oxidation!!!Pyruvate oxidation

TCA cycle

Serine biosynthesis

Ribosome 50S subunit

Ribosome 30S subunit!!!Isoprenoid biosynthesis

Ribosome 30S subunit

Riboflavin/FAD biosynthesis

RNA polymerase

Pyruvate oxidation

Pyrimidine salvagetRNA modification

Pyrimidine salvage

Pyrimidine degradation

Pyrimidine biosynthesis

Pyridoxal phosphate biosynthesis

Purine salvage

Purine biosynthesis!!!Purine biosynthesis

Purine biosynthesis

Proline degradation

Proline biosynthesis

Phospholipid biosynthesis

Pentose phosphate pathway

ntothonato/CoA biocynthos

Pantothenate/CoA biosynthesis

Non-phosphorylated Entner-Doudoroff pathway

Na+-translocating Fd:NADH oxidoreductase

NADH dehydrogenase!!!NADH dehydrogenase!!!2Fe2S

NADH dehydrogenase

NAD biosynthesis

ureine hiosynthesis

Mureine biosynthesis

Molybdopterin biosynthesis!!!Urea cycle!!!Molybdopterin biosynthesis

Molybdopterin biosynthesis

Methionine biosynthesis!!!Methionine biosynthesis

Methionine biosynthesis

Menaquinone biosynthesis

Lysine biosynthesisTCA cycle

Lysine biosynthesis

Lipid A biosynthesis

Isoprenoid biosynthesis

Isoleucine, leucine, valine biosynthesis

Histidine biosynthesis, Purine biosynthesis

Histidine biosynthesis

Heme biosynthesis

Glycolysis

Glutamine biosynthesis

Gluconeogenesis

Folate biosynthesis

FoF1-type ATP synthase

Fatty acid biosynthesis

Cysteine biosynthesis

Cobalamine/B12 biosynthesis!!!Heme biosynthesis

Cobalamine/B12 biosynthesis

CRISPR-Cas system

Biotin biosynthesis

Asparagine biosynthesis

Aromatic amino acid biosynthesis!!!Aromatic amino acid biosynthesis

Aromatic amino acid biosynthesis

Arginine biosynthesis

Aminoacyl-tRNA synthetases

23S rRNA modification

A/V-type ATP synthase

16S rRNA modification