

Table S3. COG category descriptions.

| COG Category | Description |
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| B | Chromatin structure and dynamics |
| C | Energy production and conversion |
| D | Cell cycle control, cell division, and chromosome partitioning |
| E | Amino acid transport and metabolism |
| F | Nucleotide transport and metabolism |
| G | Carbohydrate transport and metabolism |
| H | Coenzyme transport and metabolism |
| I | Lipid transport and metabolism |
| J | Translation, ribosomal structure and biogenesis |
| K | Transcription |
| L | Replication, recombination, and repair |
| M | Cell wall, membrane, envelope biogenesis |
| N | Cell motility |
| O | Posttranslational modification, protein turnover, and chaperones |
| P | Inorganic ion transport and metabolism |
| Q | Secondary metabolite biosynthesis, transport, and catabolism |
| S | Unknown function |
| Y | Signal transduction mechanisms |
| U | Intracellular trafficking, secretion, and vesicular transport |
| V | Defense mechanisms |