

**Additional Table 1:** List of orthologous group markers

COG0012 Predicted GTPase, probable translation factor  
COG0016 Phenylalanyl-tRNA synthetase alpha subunit  
COG0048 Ribosomal protein S12  
COG0049 Ribosomal protein S7  
COG0052 Ribosomal protein S2  
COG0080 Ribosomal protein L11  
COG0081 Ribosomal protein L1  
COG0085 DNA-directed RNA polymerase, beta subunit/140 kD subunit  
COG0087 Ribosomal protein L3  
COG0088 Ribosomal protein L4  
COG0090 Ribosomal protein L2  
COG0091 Ribosomal protein L22  
COG0092 Ribosomal protein S3  
COG0093 Ribosomal protein L14  
COG0094 Ribosomal protein L5  
COG0096 Ribosomal protein S8  
COG0097 Ribosomal protein L6P/L9E  
COG0098 Ribosomal protein S5  
COG0099 Ribosomal protein S13  
COG0100 Ribosomal protein S11  
COG0102 Ribosomal protein L13  
COG0103 Ribosomal protein S9  
COG0124 Histidyl-tRNA synthetase  
COG0184 Ribosomal protein S15P/S13E  
COG0185 Ribosomal protein S19  
COG0186 Ribosomal protein S17  
COG0197 Ribosomal protein L16/L10E  
COG0200 Ribosomal protein L15  
COG0201 Preprotein translocase subunit SecY  
COG0256 Ribosomal protein L18  
COG0495 Leucyl-tRNA synthetase  
COG0522 Ribosomal protein S4 and related proteins  
COG0525 Valyl-tRNA synthetase  
COG0533 Metal-dependent proteases with possible chaperone activity  
COG0541 Signal recognition particle GTPase