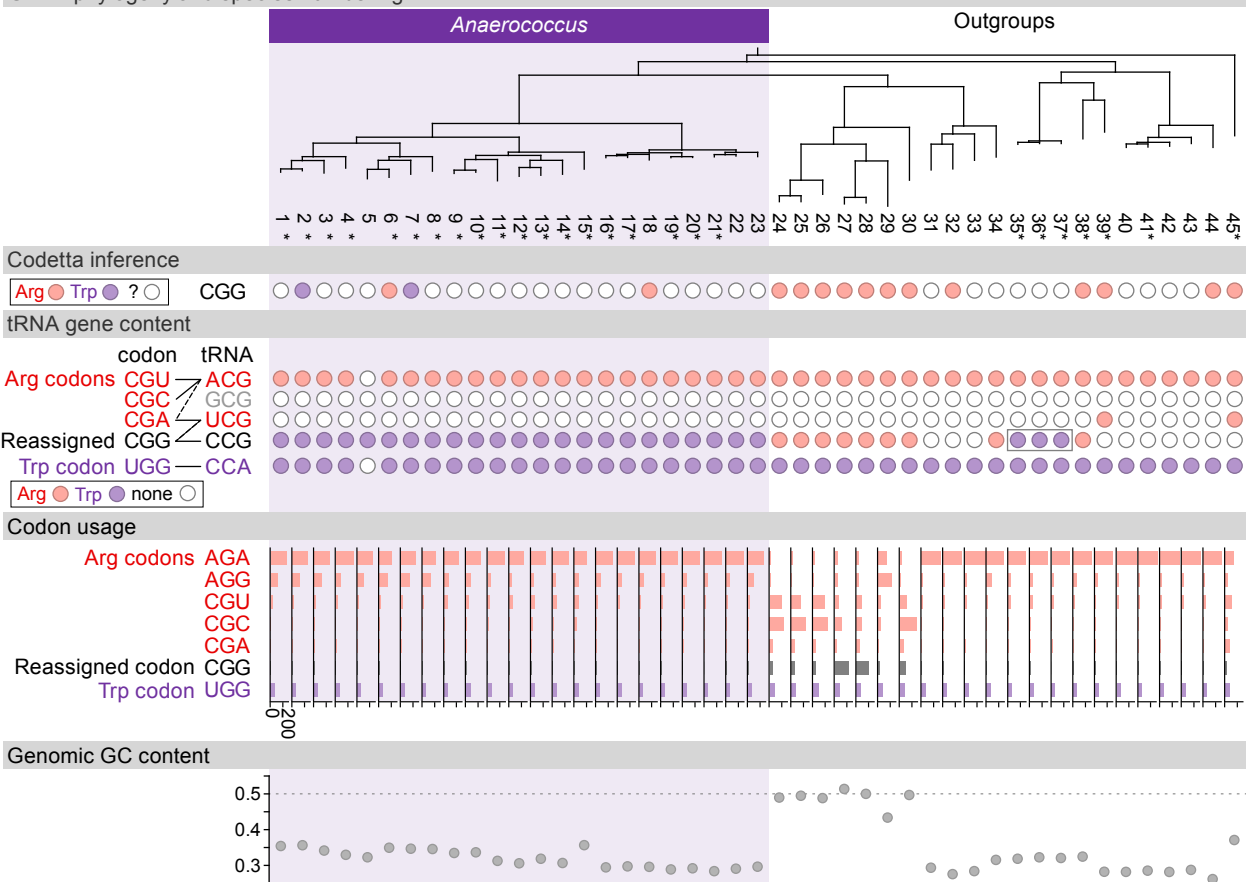


# A

## GTDB phylogeny and species numbering



## B DNA ligase (POG091H024G)

*Anaerococcus*

```

1...KFEAEYTTTLLREVVVNVGRSGKVTSPAILDP...
3...KFEAEYTTTLLRKVVNVGRTGKVTSPAILDP...
4...KYAEAEFTTTLKEVVNVGRTGKVTSPAILDP...
5...KFEPEEFTTKLIDVVNVGRTGKVTSPAILDP...
11...KFEAEYTTTLLDVVNVGRTGKVTSPAILDP...
14...KFEAEYTTTLLDVVNVGRTGKVTSPAILDP...
15...KFEAEYTTTLLDVVNVGRTGKVTSPAILDP...
21...KYDPEEYTTKLLDVVNVGRTGKVTSPAILDP...
27...KFEAEVTTTLQAVEVNVGRTGKVTPIALLDP...
30...KFEAEVTTTLQAVEVNVGRTGKVTPTAQLDP...
39...KFEPEEYTTTLKEVVNVGRTGKVTPTAILEP...
41...KFEAEYSTILKEVVNVGRTGKVTPTAILEP...

```

**Outgroups**

## C *Anaerococcus* reassigned tRNA<sub>CCG</sub>

7. *Anaerococcus* sp. Marseille-P3915  
GCA\_900258475.1

