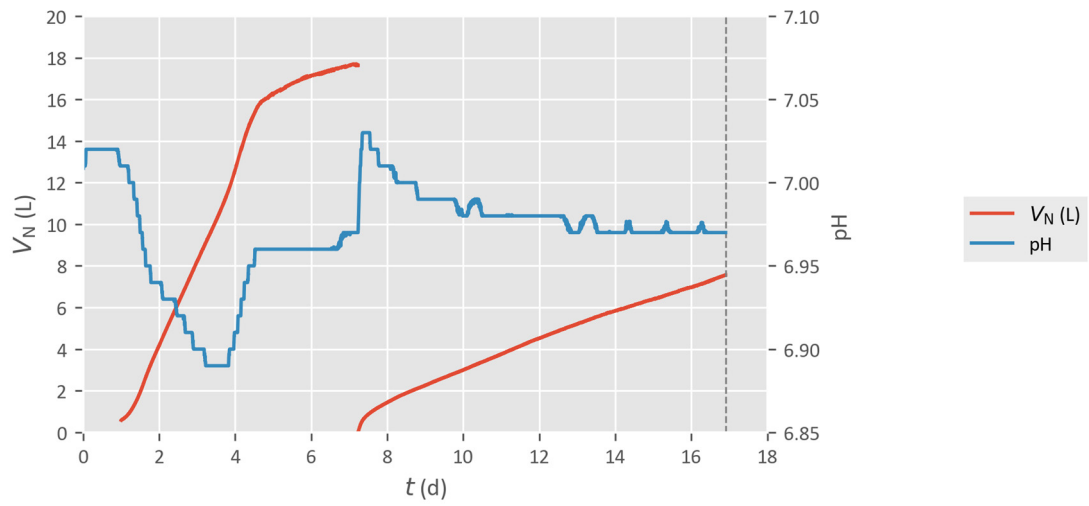


(A)



(B)

Figure S1. (A) Biogas formation V_N (L) and pH (moving average, window size = 15) during the anaerobic digestion of carboxymethyl cellulose (CMC) in the investigated continuous stirred tank reactor (CSTR) prior to sampling at $t = 9.7$ d. CMC was added to a final concentration of 0.5% at $t = 0$ (YB, CMC = 92 mL $\text{g}_{\text{ODM}}^{-1}$). (B) Biogas formation V_N (L) and pH (moving average, window size = 15) during the anaerobic digestion of microcrystalline cellulose (MCC) and carboxymethyl cellulose (CMC) in the investigated continuous stirred tank reactor (CSTR). Addition of 24 g MCC at $t = 0$ d (YB, MCC = 735 mL $\text{g}_{\text{ODM}}^{-1}$), addition of 82.5 g CMC at $t = 7.25$ d (YB, CMC = 92 mL $\text{g}_{\text{ODM}}^{-1}$), and sampling at $t = 16.9$ d (depicted by a vertical dashed line).

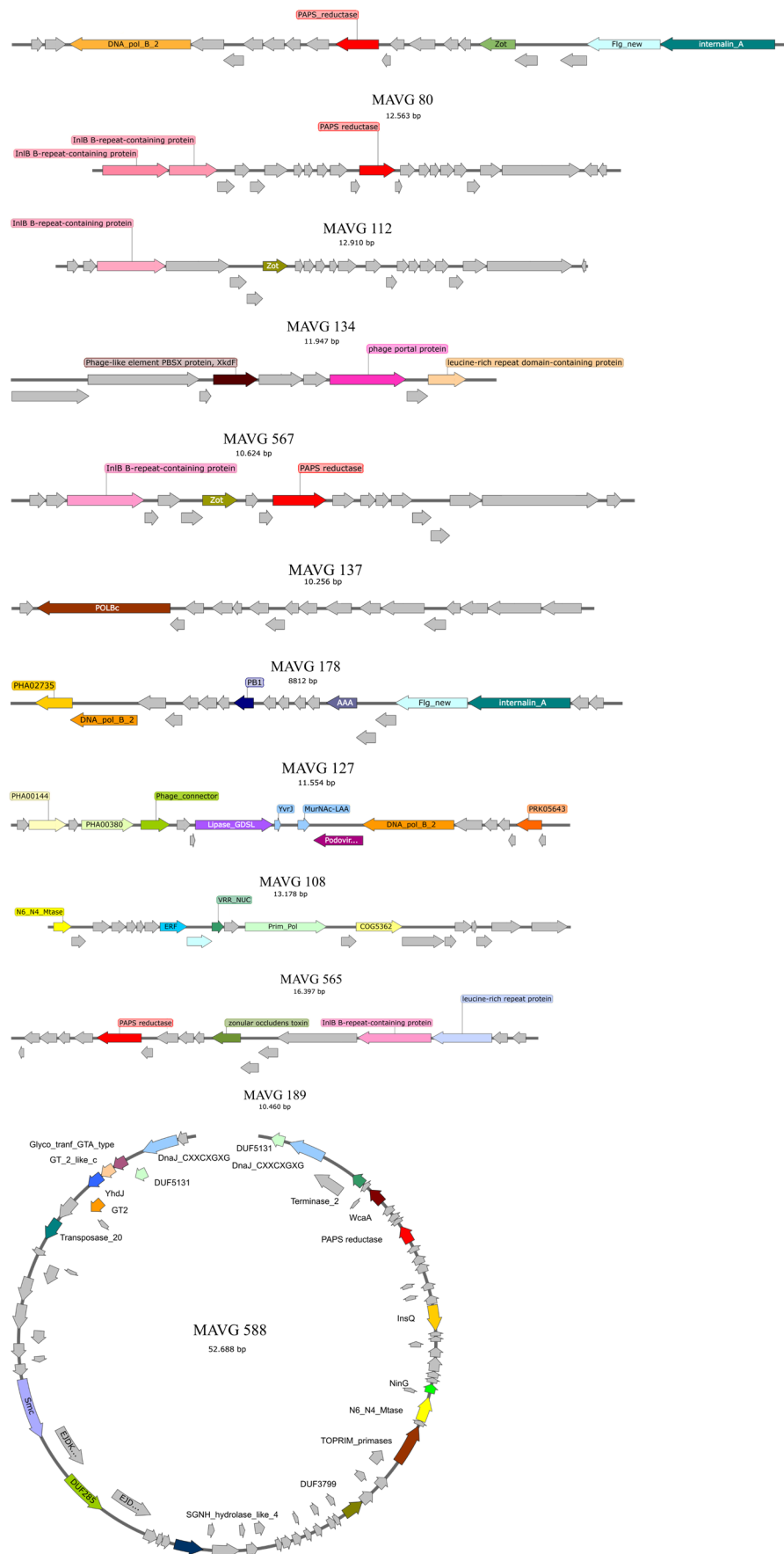


Figure S2. Linear and circular representations of manually annotated genomes of MAVGs 80, 112, 134, 567, 137, 178, 127, 108, 565, and 189. ORFs that were found in two or more genomes are colored with the same color (e.g., PAPS

reductase in bright red). Hypothetical proteins are depicted in grey and are not labeled. The ORFs identified are indicated by arrows in the direction in which they are translated. Genomes were generated with Snapgene.