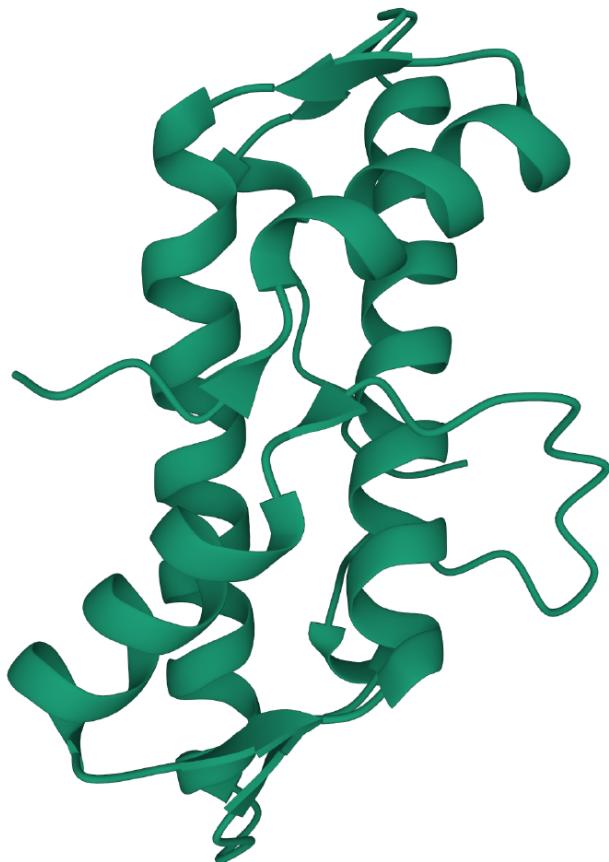


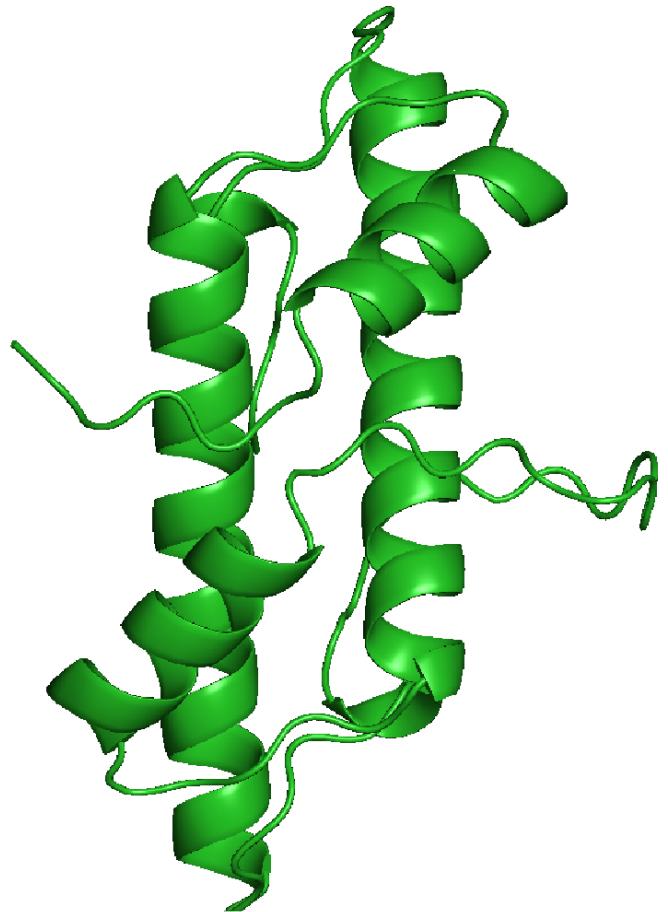
Supplementary Materials

Supplementary Figures

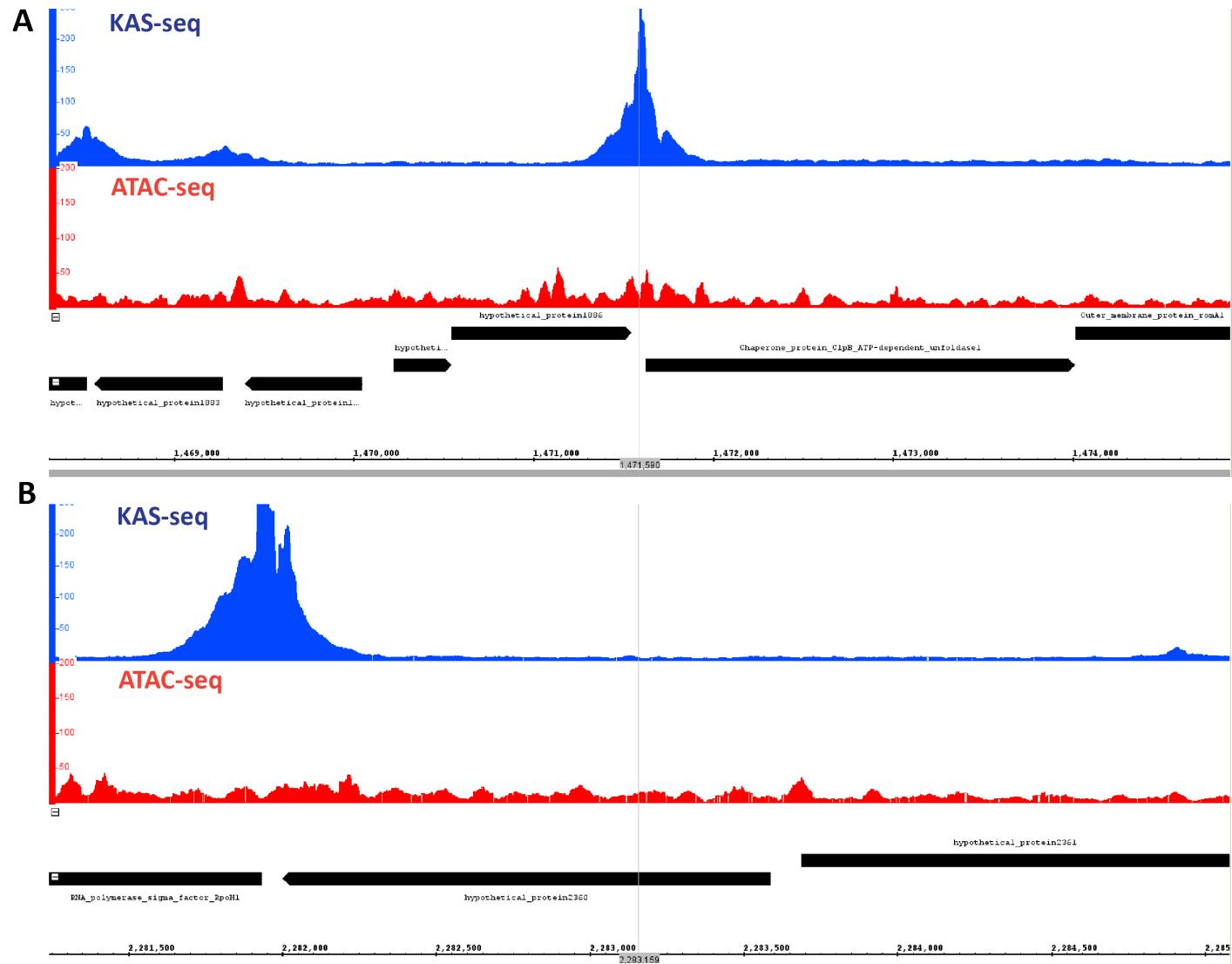
Bacteriovorax sp.



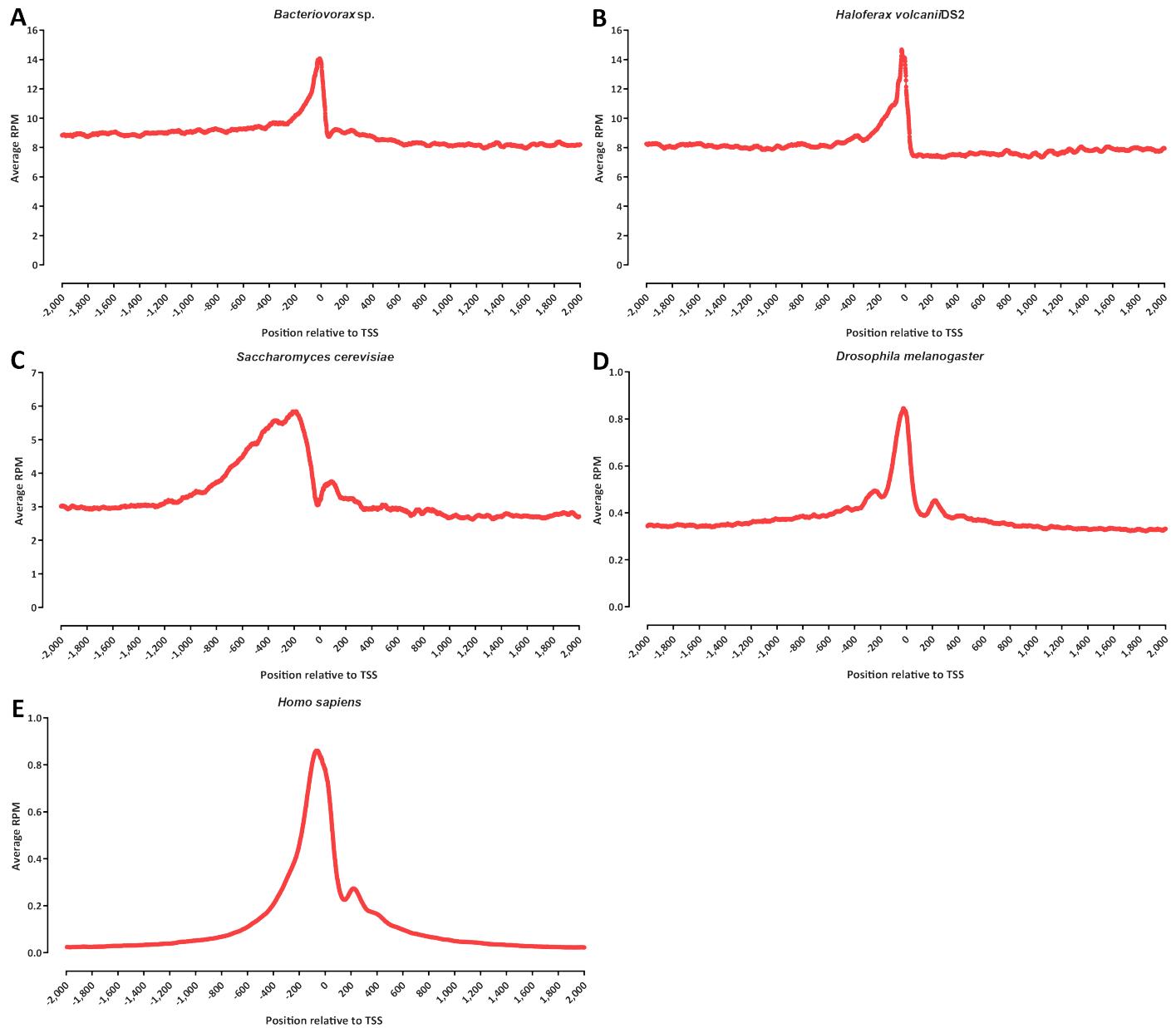
Bdellovibrio bacteriovorus



Supplementary Figure 1: Structural comparison between the doublet histone of *Bacteriovorax* sp. and the dimer of singlet histones in *Bdellovibrio bacteriovorus*. Shown are AlphaFold predicted structures for the *Bacteriovorax* sp. and for an *in silico* doubletized (with a short linker) *Bdellovibrio bacteriovorus* histone.



Supplementary Figure 2: Additional examples of extremely strongly paused promoters in *Bacteriovorax*.
 (A) Chaperone protein ClpB ATP-dependent unfoldase; (B) RNA Polymerase Sigma Factor RpoH1.



Supplementary Figure 3: ATAC-seq metaprofile around annotated in various histone-carrying prokaryotes and eukaryotes. (A) *Bacteriovorax* sp.; (B) *Haloferax volcanii*; (C) *Saccharomyces cerevisiae*; (D) *Drosophila melanogaster*; (E) *Homo sapiens*.