**Supplementary figure S1**

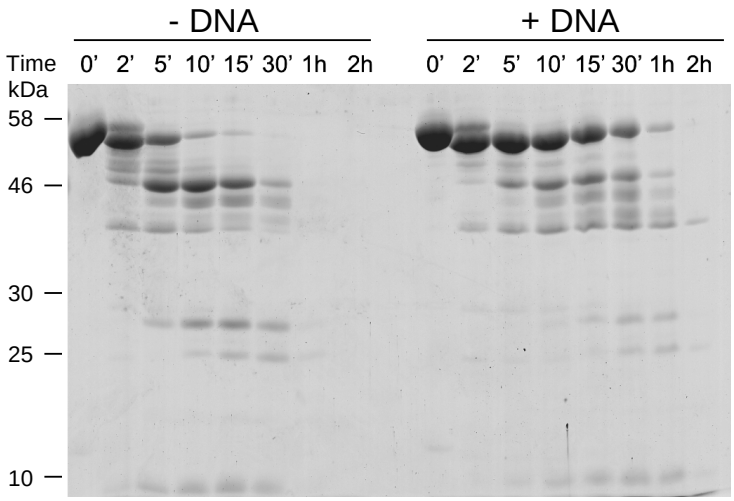


Fig. S1: Time dependent degradation of the GgpS protein by trypsin in absence or presence of DNA. The recombinant GgpS protein was incubated with trypsin (20 ng $\mu l^{-1}$) and at the indicated time points samples were taken and analyzed.

**Supplementary figure S2**

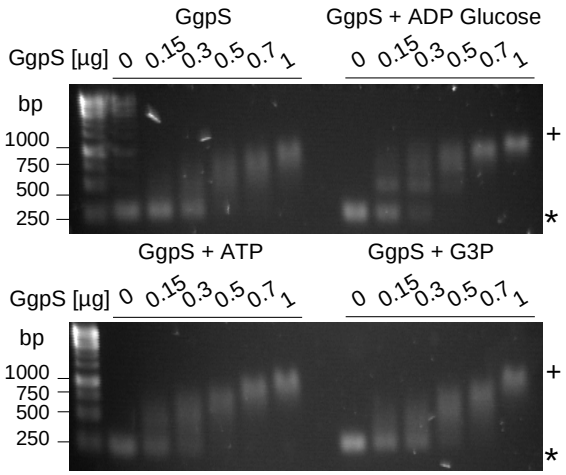


Fig. S2: Impact of substrate binding by GgpS on protein DNA interaction. EMSAs were performed as described for Fig. 5 but the GgpS enzyme was incubated with ADP-Glucose, ATP, or glycerol-3-phosphate (each 3mM) prior to addition of the DNA probe. Free DNA and DNA bound to GgpS is indicated by an asterisks or plus, respectively.

**Supplementary figure S3**

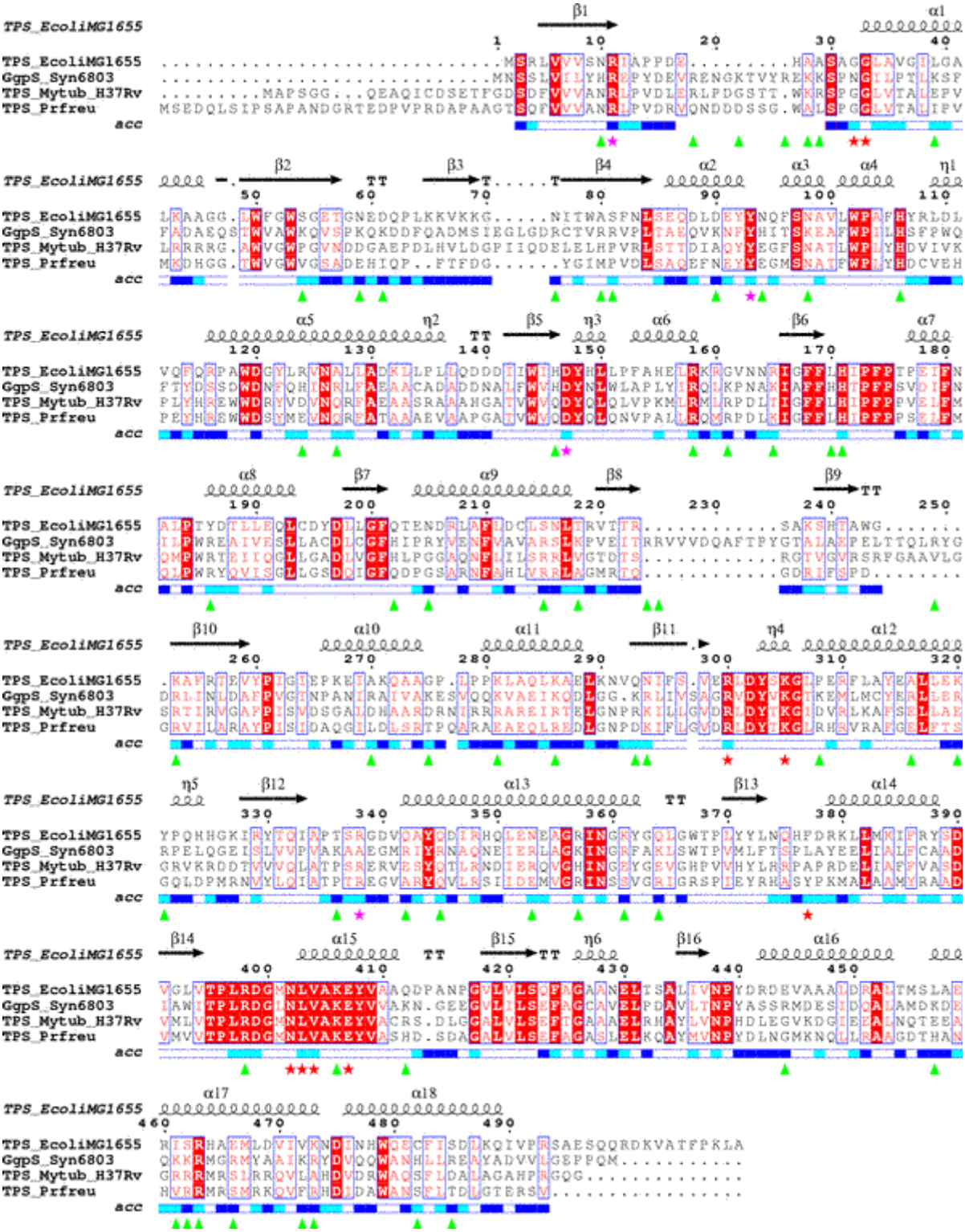


Fig. S3: Structure and sequence comparison of the trehalosephosphate-synthase (TPS) of *E. coli*, *M. tuberculosis* H37Rv and *P. freudenreichii* and GgpS of *Synechocystis* sp. PCC 6803. The secondary structure of TPS (1uqu) was used and accessibility of residues was calculated by using the DSSPcont algorithm (29). Sequence comparison was performed using the ClustalX program (30) and the structure as well as the sequence comparison was visualized by using the ESPript 2.2 program (31). Accessibility is indicated by blue color (blue: accessible, light blue intermediate, white: buried). Residues responsible for substrate binding in *E. coli* TPS are indicated by asterisks (glucose-6-phosphate pink, UDP-glucose red). Basic amino acids in GgpS are indicated by green triangles.

## References


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