

## Supplementary Material

### 1 Supplementary Tables

**SUPPLEMENTARY TABLE 1** Oligonucleotides used in this work

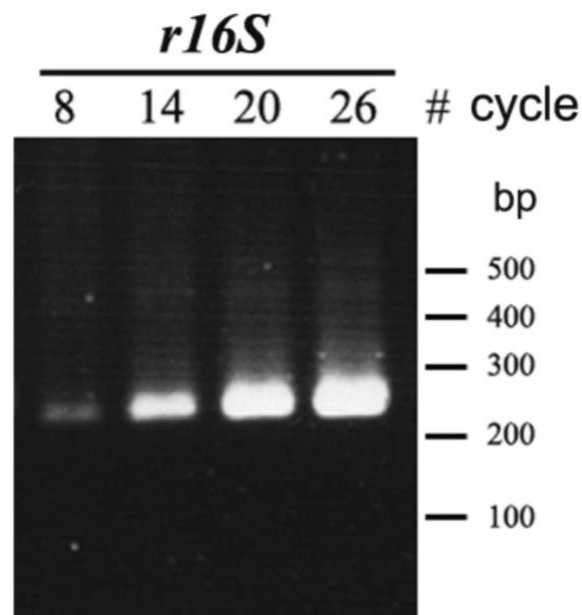
**SUPPLEMENTARY TABLE 2** Differentially expressed genes in the  $\Delta ihfA-1$  strain as compared of the DL1 strain

**SUPPLEMENTARY TABLE 3** Differentially expressed genes in the  $\Delta ihfB-2$  strain as compared of the DL1 strain

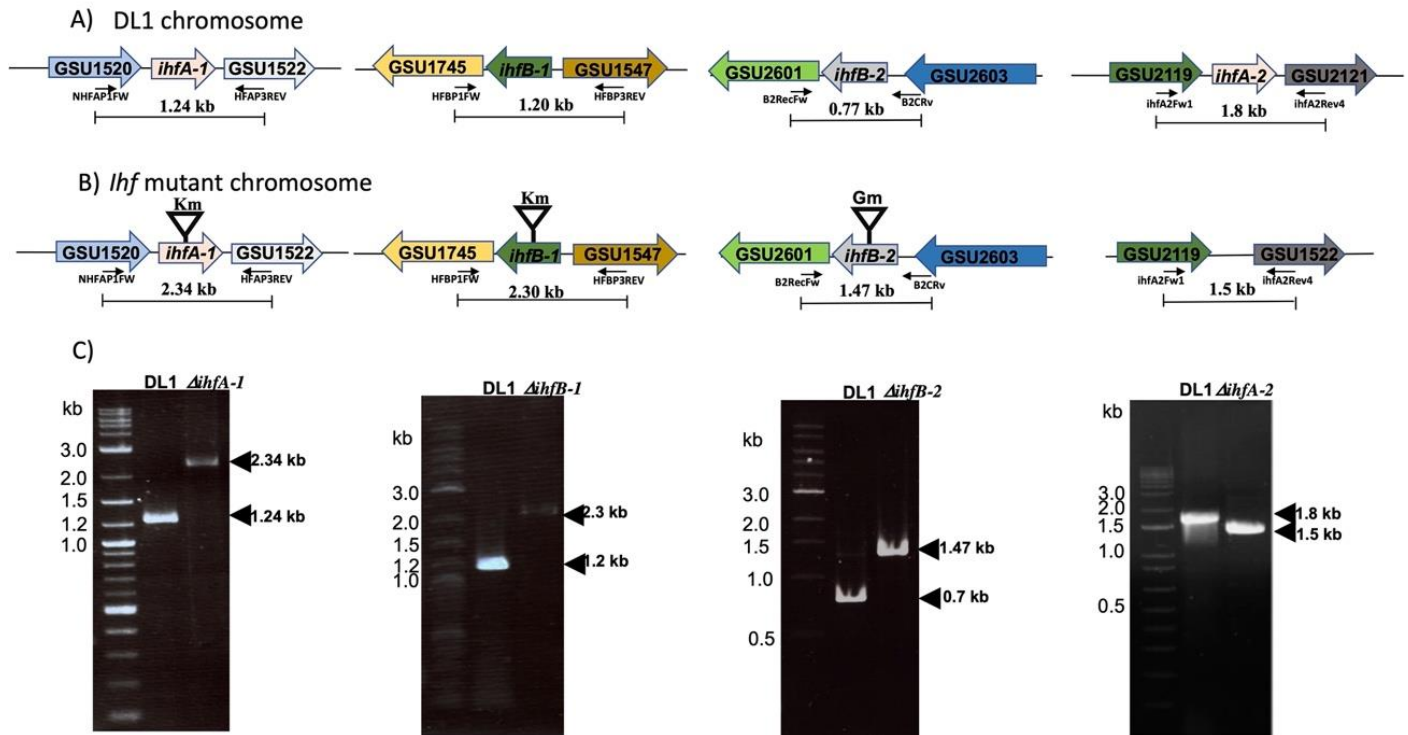
**SUPPLEMENTARY TABLE 5** List of differentially expressed genes in  $\Delta ihfA-1$ ,  $\Delta ihfB-2$  and  $\sigma^{54}$  transcriptome (Leang et al., 2009)

**SUPPLEMENTARY TABLE 5** List of differentially expressed genes in  $\Delta ihfA-1$ ,  $\Delta ihfB-2$  strains with predicted  $\sigma^{54}$ -regulated promoter (Leang et al., 2009)

### 2 Supplementary Figures

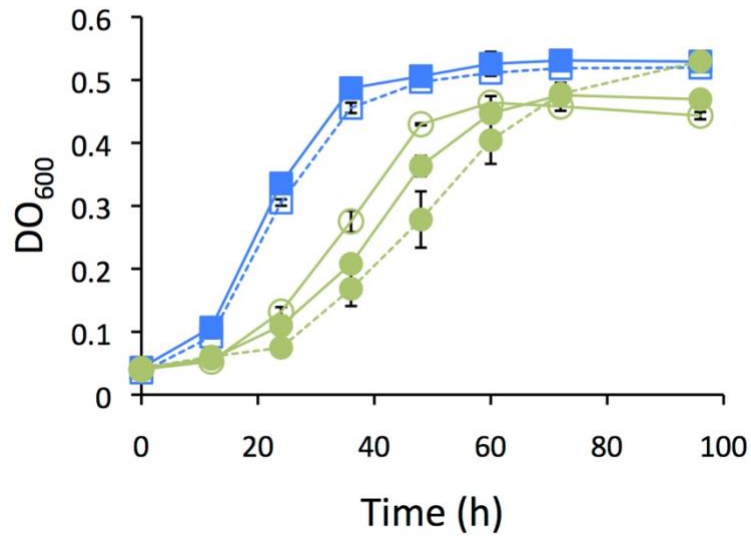


**SUPPLEMENTARY FIGURE 1** sqRT-PCR of r16S used as a positive control in expression analysis of *ihf* genes. Specific oligonucleotides for r16S were used as control. Negative controls were performed without cDNA synthesis, in these cases no amplification was observed after analyze PCR final products (data no shown).

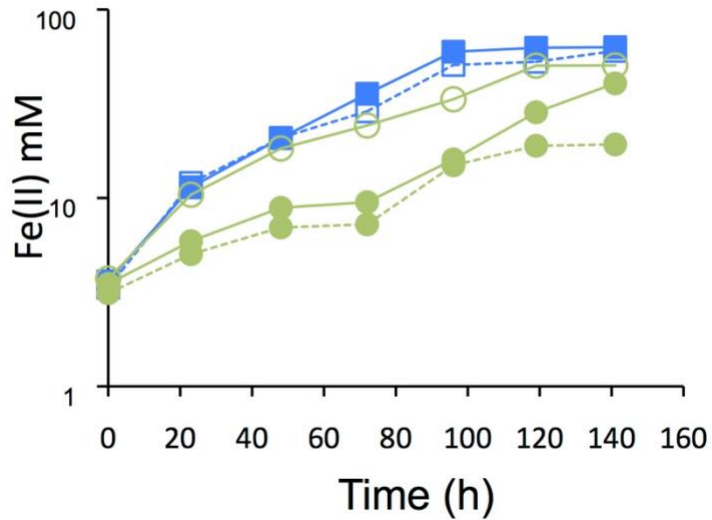


**SUPPLEMENTARY FIGURE 2** Confirmation of the mutations in the *ihf*'s genes from *Geobacter sulfurreducens*. A) Organization of the *ihf*'s genes on DL1 chromosome. B) Reorganization of *ihf* locus after of the km or gm resistance gene insertion on *ihfA-1*, *ihfB-1* or *ihfB-2*, and *ihfA-2* deletion. C) Confirmation by PCR of *ihf* mutants. The primer pairs used are enlisted in ST1, and the expected amplicons sizes are shows in A) and B). The arrowheads in C) indicate the expected DNA fragments.

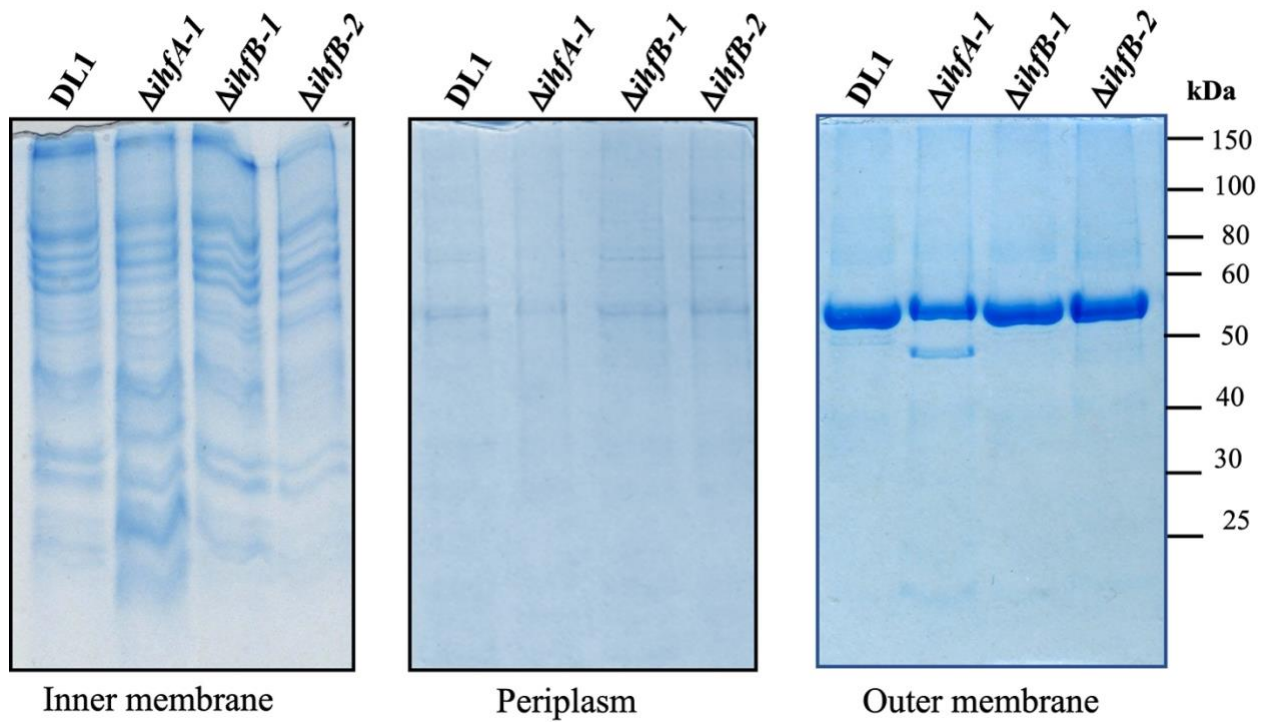
A)



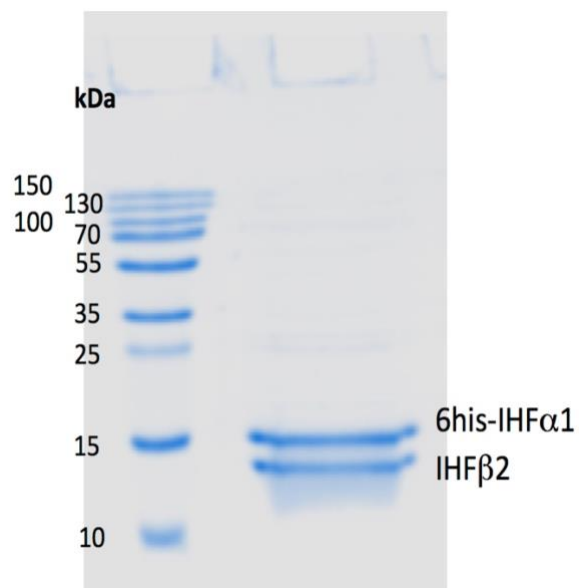
B)



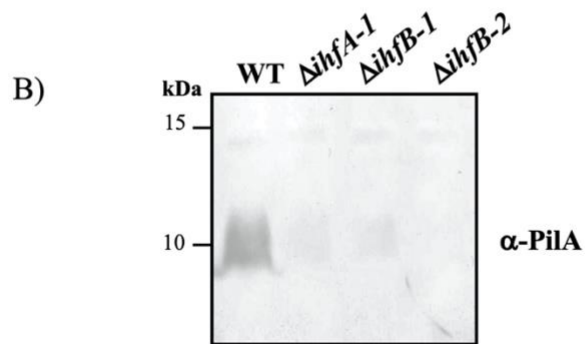
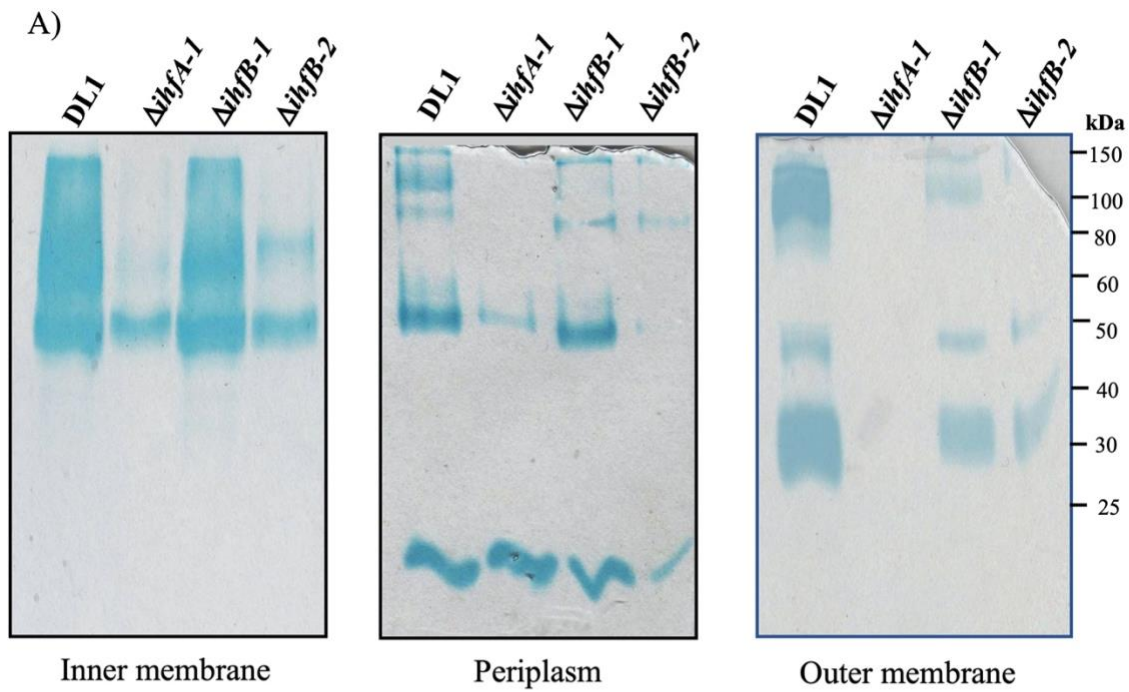
**SUPPLEMENTARY FIGURE 3** Complementation of  $\Delta ihfB-2$  mutant. A) Growth on fumarate as electron acceptor. B) Soluble Fe(III) reduction in  $ihfB-2$  complementation. DL1 blue line with squares filled, DL1/pRG5.1 dashed blue line with empty squares,  $\Delta ihfB-2$  brown line with circle filled,  $\Delta ihfB-2/pRG5.1$  dashed brown line with circle filled and  $\Delta ihfB-2/pRG5.1 ihfB2$  brown line with empty circle.



**SUPPLEMENTARY FIGURE 4** Content of total protein from different cellular fractions of *ihf* mutants of *G. sulfurreducens*. The PageRuler Pre-stained Protein Ladder standard (ThermoScientific) was used as a molecular weight.



**SUPPLEMENTARY FIGURE 5** IHF heterodimer purified with Ni-NTA agarose (Qiagen).



Full scan of the entire original gel shown in **FIGURE 5**.