Table S1. Oligonucleotides used in this study

159 1	GCTCTAGAGACGGATGGACCTTCGATCGCTCC
159 2	GCTCTAGACCCTTCTGCGGTTGCGCGACCAGC
187 1	GCTCTAGACGACCGGCAAGGGGCTGATGAGCC
187 2	GCTCTAGACGGCCATCGACGATTCAAGAAC
mcpAtagFw	AAGCTTGCACCGCCGCCACTCTGG
mcpAtagRv	GAGCTCGAAAGTCCTCCCATCCGGGC
cheAopprom	CTGTCCTCTGTCGAAGAACCG
pcheA42	GCTCCAGCCCTTCCAGATCG
Fwhyg	GGATCCCGGGCCAGCTCCGCCATCGCC
Rvhyg	GGATCCGGCGGCCCGGGGCGTCAGGC
cheOpromFw	GCTCTAGAGGCAAGGGCCATGCGCAT
cheOpromRv	GCGAATTCCTCGGGCAGGGTGCGGAAC
cheOprommut	GCTCTAGAGGGCCCCAGAACGGCAGG
cheY5XbaFw	CTAGTCTAGACGCCCATGGAGACGGCGATG
cheY5PstRev	AAAACTGCAGTCAGGCGCCGGCCACCTTCTTGAC
cheY6UP	CGCGATATAGAGACGCATCATGGC
tlpTdown	CAGCTTCGCAGATGGTGGCGGCCCAG
cheOp2B	GTCCCGGACAGGGTCAGTGGGGTCATC
cheY4Fw	CATGCCATGGCGACGAAAACCGTCCTCGCA
cheY4Rev	CGCGGATCCGGCCAAGAAGCTTCTTCATCAC
flgHFw	GCGAATTCTCGACCTATGTCGAGGACCGC
flgHRv	GCAAGCTTGAAGCGCTGCGAGAAGGAGAG

CheY2

CheY5

Flag

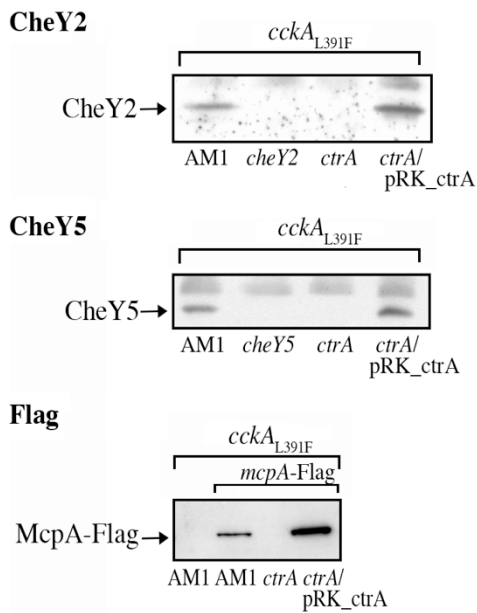Fig. S1. Determination of the presence of CheY2, CheY5 and McpA-Flag in the strains AM1, ∆*ctrA* and ∆*ctrA* carrying the plasmid pRK_ctrA. The experimental procedures to obtain the cells extracts and for blotting are described in Fig. 2A.


```
      * ** * *                    *  ** * *
ccccTCAAATATCCCGCTGCGCGGTCGTTCAcagtgccggactgggcacggaccggccgtgcct

tcgaggcaggatgagcggatgcagagcaggagataccggatcggcagaaccgatcgggcggaggcaaggcc

ATG ACG AAA ACC GTC CTC GCA GTG GAC
 M   T   K   T   V   L   A   V   D
```
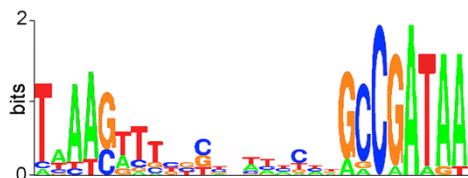

Fig. S2. Nucleotide sequence upstream of *cheY4*. The first residues of CheY4 are shown below the corresponding codons. The putative Shine-Dalgarno sequence is underlined, and

nucleotides similar to the σ^{28} consensus promoter are shown in bold and capital letters. The LOGO sequence of the σ^{28} consensus promoter obtained from http://prodoric.tu-bs.de/vfp/vfp_promoter.php is shown. Asterisks at the upper part of the sequence indicate nucleotides that match with the most frequent base in the LOGO sequence.
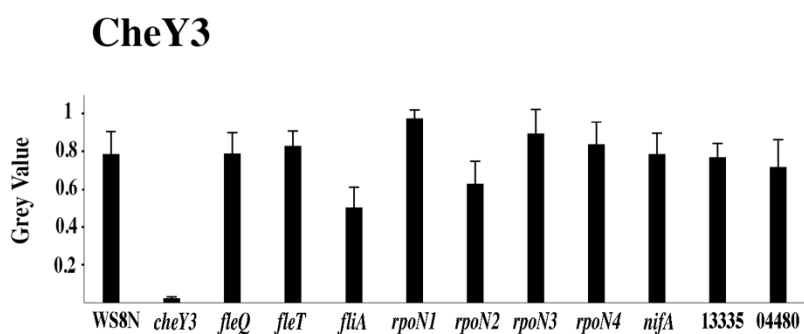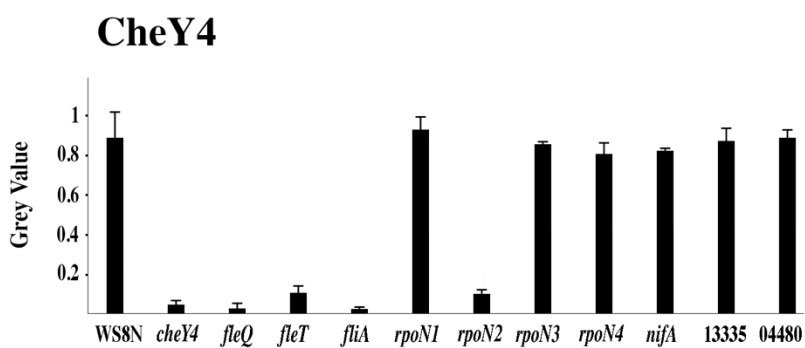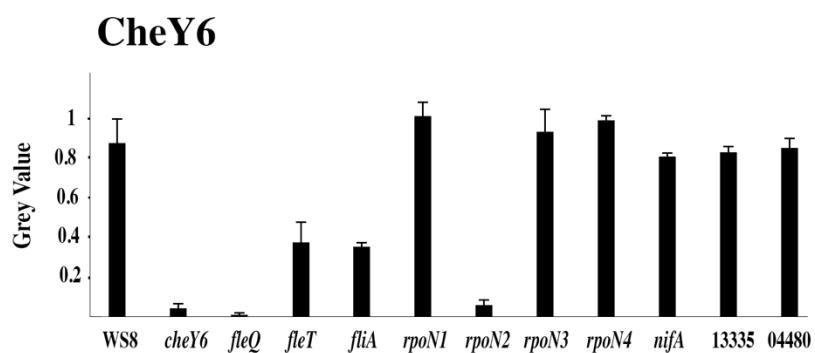
Fig. S3. Quantification of the CheY levels in different mutant strains. The value of each column is the average of three independent experiments. Image analysis was done with Image J.