

1 **Supplemental materials:**

2

3 **Additional Figure 1: Structural and sequence comparison of *C. jejuni* and *H. pylori***

4 **HtrA proteins.** (A) Schematic diagram of the domain arrangement of HtrAs from *C. jejuni*
5 (*Cj*) and *H. pylori* (*Hp*). (B) Multiple sequence alignment of HtrA from different *C. jejuni*
6 and *H. pylori* strains. The protein sequences of *Cj* 81-176, *Cj* RM1221, *Cj* NCTC11168, *Hp*
7 26695, *Hp* P12 and *Hp* 35A are aligned. The conserved amino acids of the catalytic triad are
8 indicated in red and shaded with yellow (H: Histidine; D: Aspartic acid; S: Serine).

9

10 **Additional Figure 2: Analysis of wild-type *C. jejuni* and *htrA* mutants by negative**

11 **staining and electron microscopy.** Investigation revealed that wild-type (wt) *C. jejuni* and
12 different *htrA* mutants of strain 81-176 and NCTC11168 produce intact bipolar flagella (blue
13 arrows) and only slight morphological differences, thus confirming results from FESEM
14 (Figure 1). Each bar corresponds to 1 μ m.

15

16 **Additional Figure 3: Overexpression and purification of *C. jejuni* HtrA.** *C. jejuni* HtrA

17 was expressed as GST-tag fusion in *E. coli* BL-21, and then purified as described in Materials
18 and Methods. A Coomassie-stained gel of different fractions and purified HtrA proteins
19 during the purification procedure is shown.

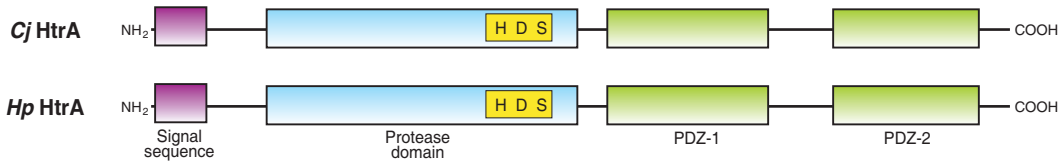
20

21 **Additional Figure 4: Recombinant *C. jejuni* HtrA cleaves E-cadherin but not**

22 **fibronectin at 42°C.** The experiments were performed under identical conditions as shown in
23 Figure 4D/E, but were incubated not incubated at 37°C but 42°C. (A) *In vitro* cleavage of the
24 recombinant E-cadherin NTF domain performed with purified *Cj* HtrA or *Hp* HtrA results in
25 several indicated subfragments. (B) *In vitro* cleavage assay of fibronectin incubated with
26 purified HtrAs under identical conditions shows that fibronectin can be cleaved by *Hp* HtrA,
27 but not *Cj* HtrA. All reactions were incubated for 16 h.

Additional Figure S1 (Boehm *et al.*, 2012)

A



B

Cj81-176 -MKK-I FLSLSLASALFAASINFNESTATANRVN-PAAGNAVLSYHDSIKDAKKSVVNIST 58
 CjRM1221 -MKK-I FLSLSLASALFAASINFNESTATANRVN-PAAGNAVLSYHDSIKDAKKSVVNIST 58
 CjNCTC11168 -MKK-I FLSLSLASALFAASINFNESTATANRVN-PAAGNAVLSYHDSIKDAKKSVVNIST 58
 Hp26695 MMKKTFLFISLALALSLNAGNIQIQSMPKVKERVSVPSKDDTIYSYHDSIKDSIKAVVNIST 61
 HpP12 MMKKTFLFISLALALSLNAGNIQIQSMPKVKERVSVPSKDDTIYSYHDSIKDSIKAVVNIST 61
 Hp35A MMKKTFLFISLALALSLNAGNIQIQSMPKVKERVSVPSKDDTIYSYHDSIKDSIKAVVNIST 61
 *** :*:**:** :* *..*:... . . :**.* : :... :***** :*:*****

Cj81-176 SKTITRANRPSPLDDFFNDPYFKQFFDFDFPQRKGKNDKEVVSSLGSGVIISKDGYIVTNN 119
 CjRM1221 SKTITRANRPSPLDDFFNDPYFKQFFDFDFPQRKGKNDKEVVSSLGSGVIISKDGYIVTNN 119
 CjNCTC11168 SKTITRANRPSPLDDFFNDPYFKQFFDFDFSQRKGKNDKEVVSSLGSGVIISKDGYIVTNN 119
 Hp26695 EKKIKNNFIGG---GVFNDFFFQQFFG-DLGGMIPK--ERMERALGSGVIISKDGYIVTNN 116
 HpP12 EKKIKNNFIGG---GVFNDFFFQQFFG-DLGGMIPK--ERMERALGSGVIISKDGYIVTNN 116
 Hp35A EKKIKNNFIGG---GVFNDFFFQQFFG-DLGGMIPK--ERMERALGSGVIISKDGYIVTNN 116
 *.*** . . .*****:***.* : * :... :*****:*****

Cj81-176 HVVDDADTITVNLPGSDIEYKAKLIGKDPKTDLAVIKIEANNSAI FTFTNSDDLMEGDVVF 180
 CjRM1221 HVVDDADTITVNLPGSDIEYKAKLIGKDPKTDLAVIKIEANNSAI FTFTNSDDLMEGDVVF 180
 CjNCTC11168 HVVDDADTITVNLPGSDIEYKAKLIGKDPKTDLAVIKIEANNSAI FTFTNSDDLMEGDVVF 180
 Hp26695 HVIDGADKIKVTIPGSNKEYSATLVGTDSESDLAVIRITKDNLP TIKFSDSNDISVGDLVF 177
 HpP12 HVIDGADKIKVTIPGSNKEYSATLVGTDSESDLAVIRITKDNLP TIKFSDSNDISVGDLVF 177
 Hp35A HVIDGADKIKVTIPGSNKEYSATLVGTDSESDLAVIRITKDNLP TIKFSDSNDISVGDLVF 177
 :*.*. :****: **.*:*. :*:***.* :... :*. :*:***: **:**

Cj81-176 ALGNPFGVGF SVTSGIISALNKDNI GLNQYENFIQT DASI NPGNSGGALVDSRGLVGIN 241
 CjRM1221 ALGNPFGVGF SVTSGIISALNKDNI GLNQYENFIQT DASI NPGNSGGALVDSRGLVGIN 241
 CjNCTC11168 ALGNPFGVGF SVTSGIISALNKDNI GLNQYENFIQT DASI NPGNSGGALVDSRGLVGIN 241
 Hp26695 AIGNPFGVGF SVTQGI VSALNKSGIGINSYENFIQT DASI NPGNSGGALIDSRGGLVGINT 238
 HpP12 AIGNPFGVGF SVTQGI VSALNKSGIGINSYENFIQT DASI NPGNSGGALIDSRGGLVGINT 238
 Hp35A AIGNPFGVGF SVTQGI VSALNKSGIGINSYENFIQT DASI NPGNSGGALIDSRGGLVGINT 238
 *:***** **.*:****. :*. :*****:*****:**** *****:

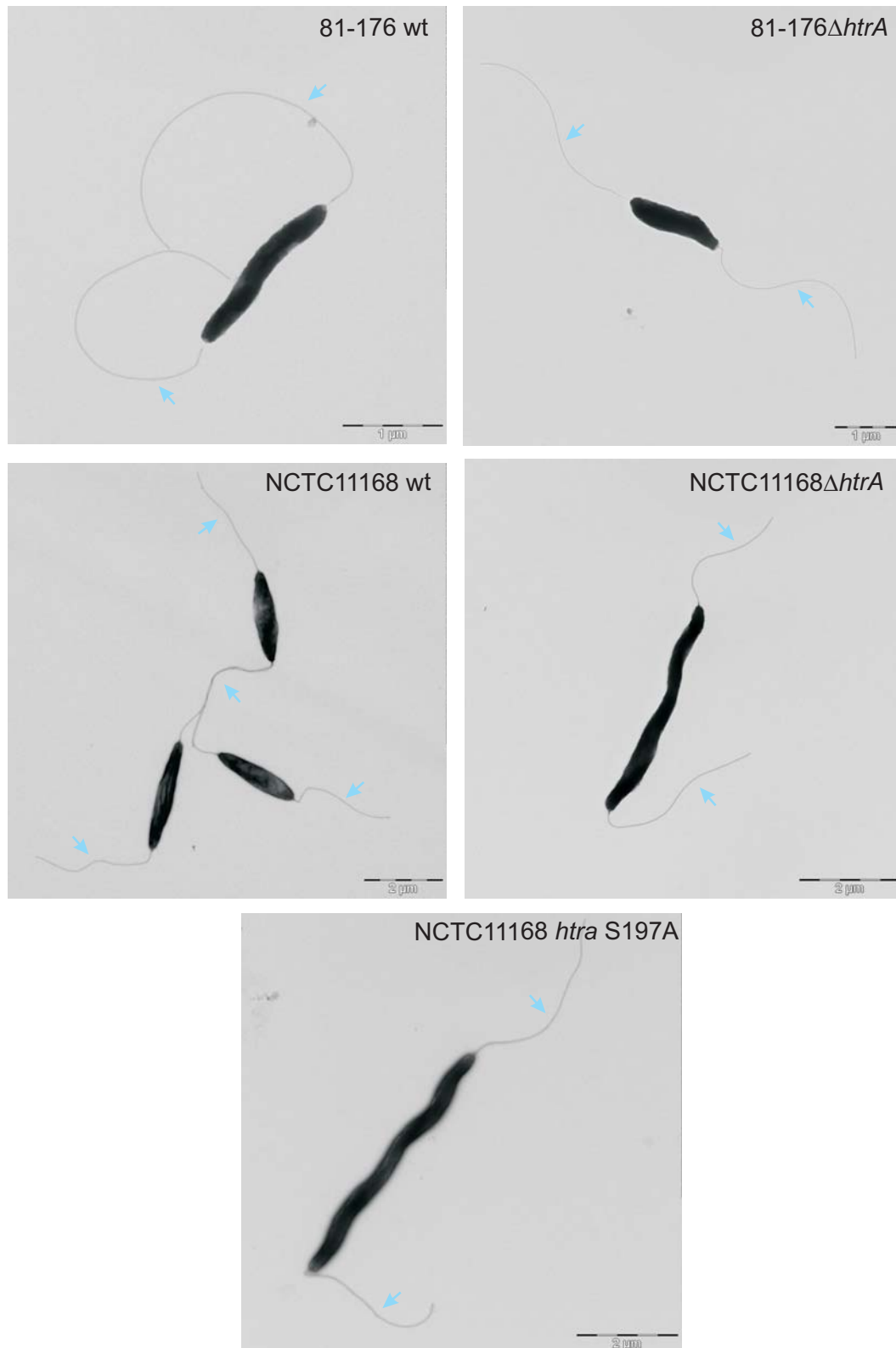
Cj81-176 AILSRGGGNNIGFAIPSNMVKDI AKKLEKGI DRGFLGVTILALQGD TTKAYKNQEGAL 302
 CjRM1221 AILSRGGGNNIGFAIPSNMVKDI AKKLEKGI DRGFLGVTILALQGD TTKAYKNQEGAL 302
 CjNCTC11168 AILSRGGGNNIGFAIPSNMVKDI AKKLEKGI DRGFLGVTILALQGD TTKAYKNQEGAL 302
 Hp26695 AIISKTGGNHGIGFAIPSNMVKDVTVQLIKTGKIERGYLGVLQDLSGDLQNSYDNKEGAV 299
 HpP12 AIISKTGGNHGIGFAIPSNMVKDVTVQLIKTGKIERGYLGVLQDLSGDLQNSYDNKEGAV 299
 Hp35A AIISKTGGNHGIGFAIPSNMVKDVTVQLIKTGKIERGYLGVLQDLSGDLQNSYDNKEGAV 299
 :*. :*:*****:***. :*. :***:***:*** : *.* :*:***:***:

Cj81-176 ITDVQKGS SADEAGLKRGLVTKVNNKVIKSPIDLKNI IGTLEIGQKISLSYERDGENKQA 362
 CjRM1221 ITDVQKGS SADEAGLKRGLVTKVNDKVIKSPIDLKNI IGTLEIGQKISLSYERDGENKQA 362
 CjNCTC11168 ITDVQKGS SADEAGLKRGLVTKVNDKVIKSPIDLKNI IGTLEIGQKISLSYERDGENKQA 362
 Hp26695 VISVEKDSPAKKAGILVWDLITEVNGKVKNTNELRNLI GMLPNQRVTLKVIRDKKERAF 359
 HpP12 VISVEKDSPAKKAGILVWDLITEVNGKVKNTNELRNLI GMLPNQRVTLKVIRDKKERAF 359
 Hp35A VISVEKDSPAKKVILVWDLITEVNGKVKNTNELRNLI GMLPNQRVTLKVIRDKKERTF 359
 : .*:*. :*. :****:*. :*. :*. :***:*. :*:***. ** :..

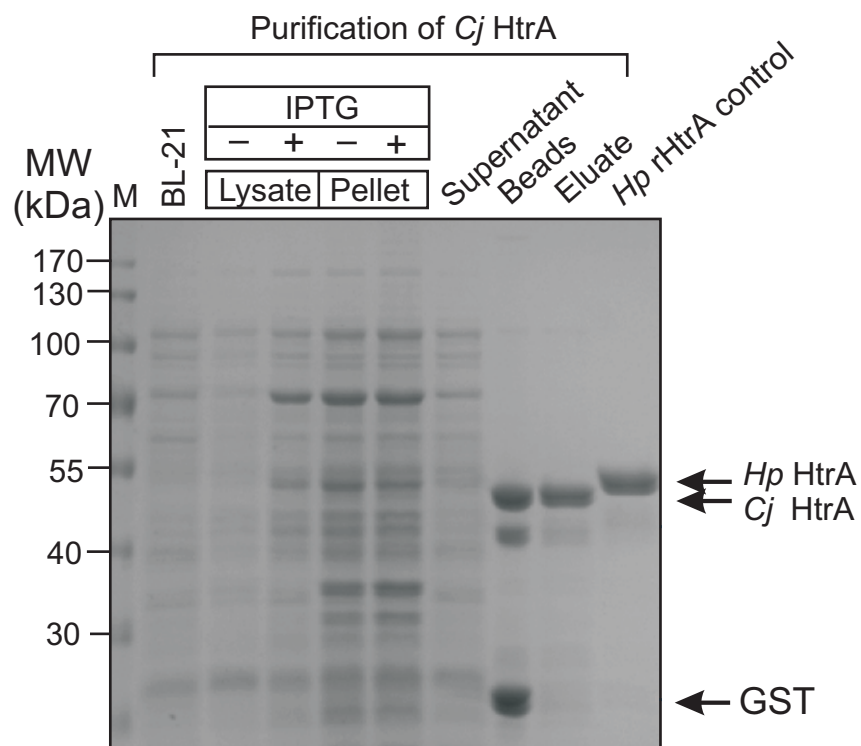
Cj81-176 SFILKGEKE-NPKGVQSD-----LIDGLSLRNLD PRLKDR LQIPKDVNGVLVDSVKEKSK 417
 CjRM1221 SFILKGEKE-NPKGVQSD-----LIDGLSLRNLD PRLKDR LQIPKDVNGVLVDSVKEKSK 417
 CjNCTC11168 SFILKGEKE-NPKGVQSD-----LIDGLSLRNLD PRLKDR LQIPKDVNGVLVDSVKEKSK 417
 Hp26695 TLTLAERKNPNKKETISAQNGAQQLNGLQVEDLTQETKRSMRLSDDVQGVVLSQVNENSP 421
 HpP12 TLTLAERKNPNKKETISAQNGAQQLNGLQVEDLTQETKRSMRLSDDVQGVVLSQVNENSP 421
 Hp35A TLTLAERKNPNKKETISAQNGSQQLNGLQVEDLTQETKRSMRLSDDVQGVVLSQVNENSP 421
 :. : * .*: * . * . * :**.:**.* . * :... :**.*:***. :*:**

Cj81-176 GKNSGFQEGDIIIGVGQSEIKNLKDLEQALKQVN-KKEFTKVWVYRNGFATLLVLK 472
 CjRM1221 GKNSGFQEGDIIIGVGQSEIKNLKDLEQALKQVN-KKEFTKVWVYRNGFATLLVLK 472
 CjNCTC11168 GKNSGFQEGDIIIGVGQSEIKNLKDLEQALKQVN-KKEFTKVWVYRNGFATLLVLK 472
 Hp26695 AEQAGFRQGNIIITKIEEVEVKSVA DFNHALEKYKGPKRFLVLDLNLQGYRIILVK- 476
 HpP12 AEQAGFRQGNIIITKIEEVEVKSVA DFNHALEKYKGPKRFLVLDLNLQGYRIILVK- 476
 Hp35A AEQAGFRQGNIIITKIEEVEVKSIA DFNHALEKYKGPKRFLVLDLNLQGYRIILVK- 476
 :. :**.*:*. :*:*:***:***:*** : * : * :**.*:***. :*:**

Additional Figure S2 (Boehm *et al.*, 2012)



Additional Figure S3 (Boehm *et al.*, 2012)



Additional Figure S4 (Boehm *et al.*, 2012)

