

**Supplemental Table S1: Characteristics of *H. pylori* strains and encoded HtrA proteins used in this study<sup>a</sup>.**

<i>H. pylori</i> strain	Origin	Pathology	<i>htrA</i> gene size (bp)	HtrA protein size (aa)	Accession Number	Reference	HtrA secretion <sup>b</sup>	E-cadherin cleavage <sup>c</sup>	HtrA mutant <sup>d</sup>
26695	UK	Gastritis	1,428	476	AFV42231.1	Tomb <i>et al.</i> , 1997	+	+	-
Lit75	Lithuania	Non-atrophic gastritis	1,428	476	ADU82875.1	Kersulyte <i>et al.</i> , 2010	+	+	-
Sat464	Peru	Not evaluated directly [Non-atrophic gastritis assumed]	1,428	476	ADO05177.1	Kersulyte <i>et al.</i> , 2010	+	+	-
Gam94/24	Gambia	Not evaluated directly [Non-atrophic gastritis assumed]	1,428	476	ADU81307.1	Kersulyte <i>et al.</i> , 2010	+	+	-
Safr7	South Africa	Not evaluated directly [Non-atrophic gastritis assumed]	1,428	476	ADU84449.1	Duncan <i>et al.</i> , 2013	+	+	-
B128	USA	Peptic ulcer	1,428	476	EEC25455.1	McClain <i>et al.</i> , 2009	+	+	-
B8	USA	Peptic ulcer	1,428	476	CBI66691.1	Farnbacher <i>et al.</i> , 2010	+	+	-
J99	USA	Duodenal ulcer	1,428	476	AAD05980.1	Alm <i>et al.</i> , 1998	+	+	-
G27	Italy	n.s.	1,428	476	ACI27174.1	Baltrus <i>et al.</i> , 2009	+	+	-
HPAG1	Sweden	Atrophic gastritis	1,428	476	ABF84495.1	Oh <i>et al.</i> , 2006	+	+	-
TN2-GF4	Japan	Gastric ulcer	1,428	476	---	unpublished	+	+	-
83	Japan	Gastric cancer	1,428	476	AEE70094.1	Yahara <i>et al.</i> , 2013	+	+	-
35A	Japan	Gastric ulcer	1,428	476	ADU40801.1	Yahara K <i>et al.</i> , 2013	+	+	-
Shi470	Peru	Not evaluated directly [Non-atrophic gastritis assumed]	1,428	476	ACD47894.1	Kersulyte <i>et al.</i> , 2010	+	+	-
Cuz20	Peru	Not evaluated directly [Non-atrophic gastritis assumed]	1,428	476	ADO03669.1	Kersulyte <i>et al.</i> , 2010	+	+	-
Pecan4	Peru	Gastric cancer	1,428	476	ADO06675.1	Kersulyte <i>et al.</i> , 2010	+	+	-
P12	Germany	Duodenal ulcer	1,428	476	ACJ07582.1	Fischer <i>et al.</i> , 2010	+	+	-
SJM180	Peru	Gastritis	1,428	476	ADO02048.1	Kersulyte <i>et al.</i> , 2010	+	+	-
India7	India	Not evaluated directly [Non-atrophic gastritis assumed]	1,428	476	ADU79653.1	Kersulyte <i>et al.</i> , 2010	+	+	-
B38	France	MALT lymphoma	1,428	476	CAX28976.1	Thiberge <i>et al.</i> , 2010	+	+	-
SS1	Australia	Peptic ulcer	1,428	476	---	unpublished	+	+	-

<sup>a</sup> Abbreviations used: aa (amino acids), bp (base pairs), n.s. not specified

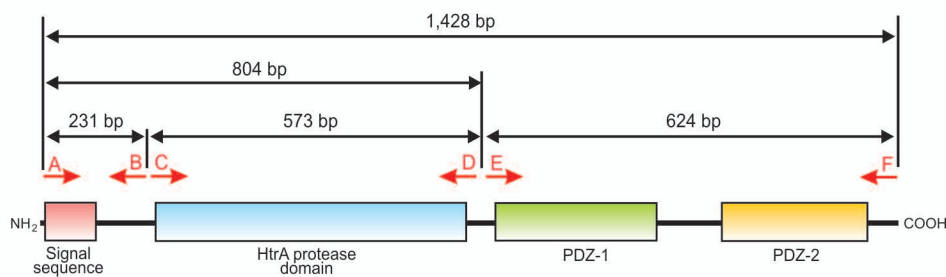
<sup>b</sup> HtrA secretion in the culture supernatant was done in BHI medium for 12h and tested by Western blotting as described in the Materials and Methods section.

<sup>c</sup> HtrA cleavage of recombinant E-cadherin was done as described in the Materials and Methods section.

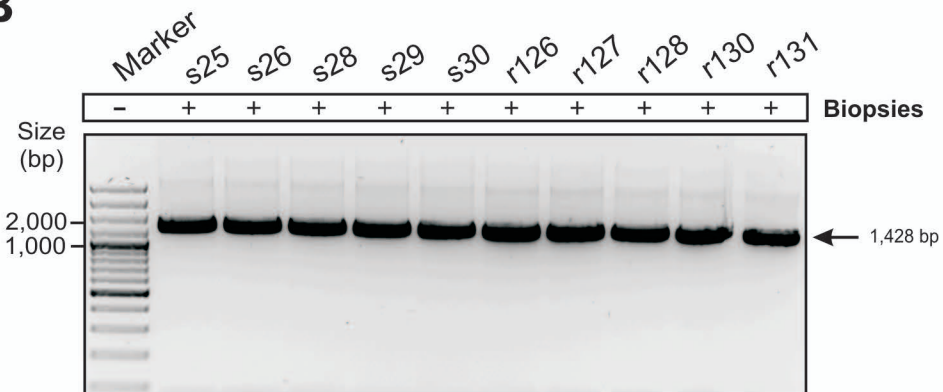
<sup>d</sup> HtrA gene knockout mutagenesis was attempted both by natural transformation and electroporation as described in the Materials and Methods section.

# Suppl. Figure 1

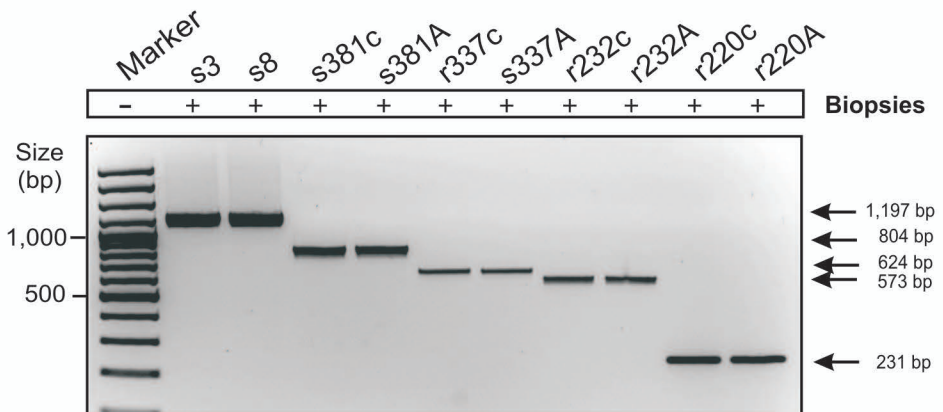
**A**



**B**



**C**

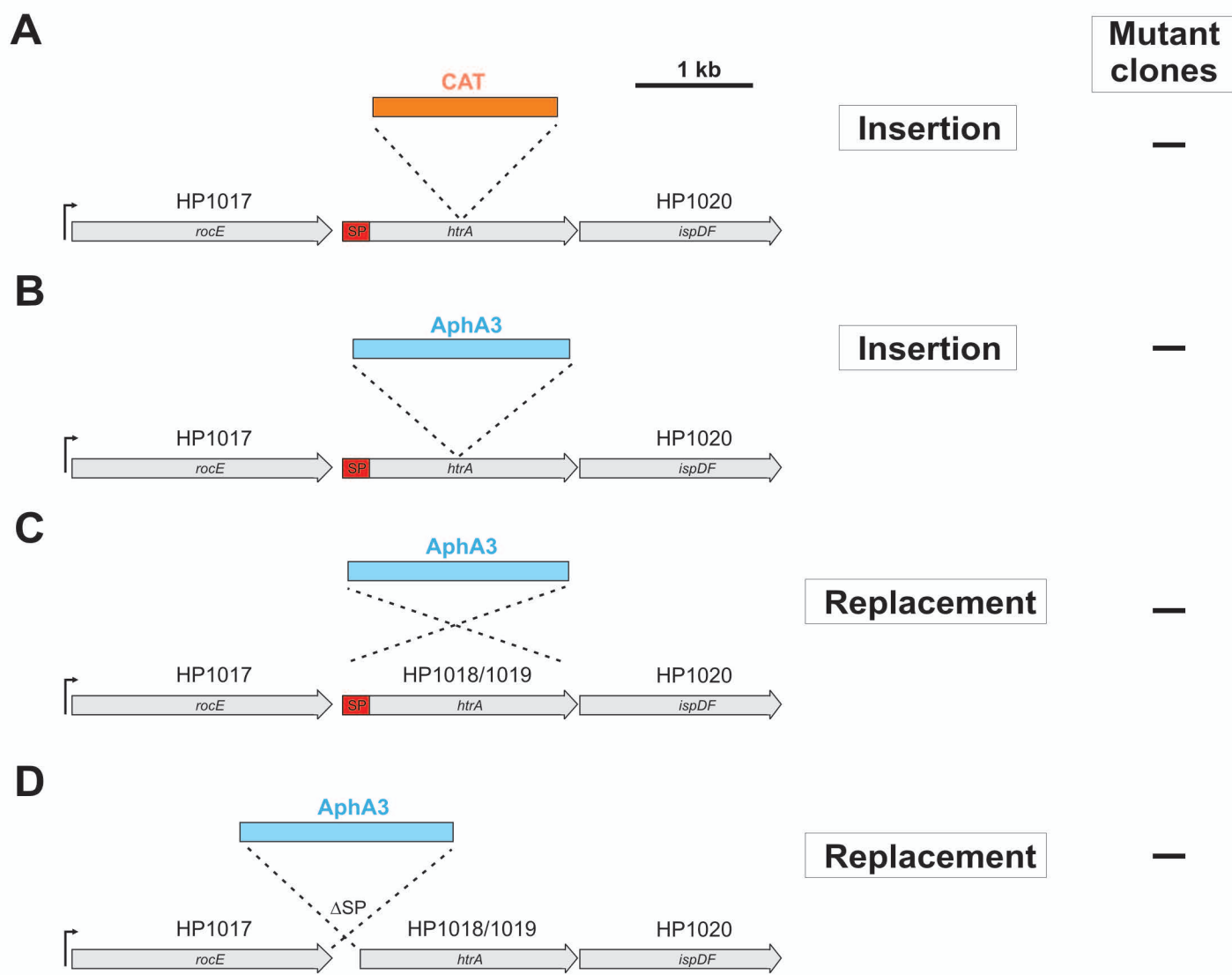


# Suppl. Figure 2



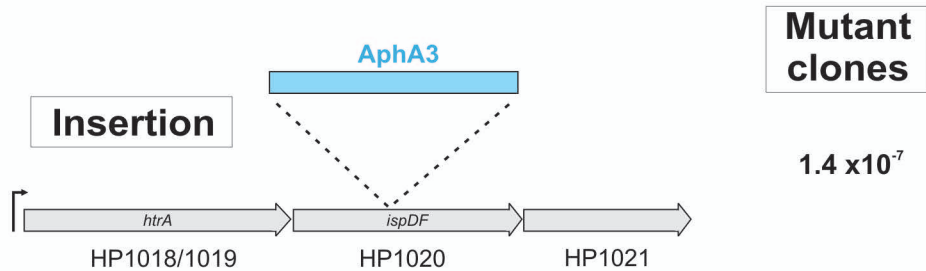
Country	Accession	Sequence
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Peru	Cuz20	MMKKTFLFISLALALSLSNA GNIQIQSPMPVKKERISVPSKDDTIYSYHDSIKDSIKAVVNIS
India	India7	MMKKTFLFISLALALSLSNA GNIQIQNMPVKKERISVPSKDDTIYSYHDSIKDSIKAVVNIS
Japan	TN2-GF4	MMKKTFLFISLALALSLSNA GNIQIQSPMPVKKERISVPSKDDTIYSYHDSIKDSIKAVVNIS
Gambia	Gambia94/24	MMKKTFLFISLALALSLSNA GNIQIQNMPVKKERISVPSKDDTIYSYHDSIKDSIKAVVNIS
Sweden	HPAG1	MMKKTFLFISLALALSLSNA GNIQIQNMPVKKERISVPSKDDTIYSYHDSIKDSIKAVVNIS
USA	B128	MMKKTFLFISLALALSLSNA GNIQIQNMPVKKERISVPSKDDTIYSYHDSIKDSIKAVVNIS
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South Africa	SouthAfrica7	TEKKIKNNFMGSGMFNDPFFQQFFGDLGGMI PKERMERA LGSGVVIISKDGYIVTNNHVID
Peru	Cuz20	TEKKIKNSFIGGGVFNDPFFQQFFGDLGGMI PKERMERA LGSGVVIISKDGYIVTNNHVID
India	India7	TEKKIKNNFIGGGVFNDPFFQQFFGDLGGMI PKERMERA LGSGVVIISKDGYIVTNNHVID
Japan	TN2-GF4	TEKKIKNNFIGGGVFNDPFFQQFFGDLGGMI PKERMERA LGSGVVIISKDGYIVTNNHVID
Gambia	Gambia94/24	TEKKIKNNFIGGGVFNDPFFQQFFGDLGGMI PKERMERA LGSGVVIISKDGYIVTNNHVID
Sweden	HPAG1	TEKKIKNNFIGGGVFNDPFFQQFFGDLGGMI PKERMERA LGSGVVIISKDGYIVTNNHVID
USA	B128	TEKKIKNNFIGGGVFNDPFFQQFFGDLGGMI PKERMERA LGSGVVIISKDGYIVTNNHVID
		*****.*:*.*:*****:*****:*****:*****:*****
South Africa	SouthAfrica7	GADKIKVTIPGSNKEYSATLVGTDSSEDLAVIRITKDNLP TIKFSDSNDILVGDLVFAIG
Peru	Cuz20	GADKIKVTIPGSNKEYSATLVGTDSSEDLAVIRITKDNLP TIKFSDSNDILVGDLVFAIG
India	India7	GADKIKVTIPGSNKEYSATLVGTDSSEDLAVIRITKDNLP TIKFSDSNDILVGDLVFAIG
Japan	TN2-GF4	GADKIKVTIPGSNKEYSATLVGTDSSEDLAVIRITKDNLP TIKFSDSNDILVGDLVFAIG
Gambia	Gambia94/24	GADKIKVTIPGSNKEYSATLVGTDSSEDLAVIRITKDNLP TIKFSDSNDILVGDLVFAIG
Sweden	HPAG1	GADKIKVTIPGSNKEYSATLVGTDSSEDLAVIRITKDNLP TIKFSDSNDILVGDLVFAIG
USA	B128	GADKIKVTIPGSNKEYSATLVGTDSSEDLAVIRITKDNLP TIKFSDSNDILVGDLVFAIG
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South Africa	SouthAfrica7	NPFVGVESVTQGIVSALNKSIGINSYENFIQTDASINP GNSGGALIDSRGGLVGINTAI
Peru	Cuz20	NPFVGVESVTQGIVSALNKSIGINSYENFIQTDASINP GNSGGALIDSRGGLVGINTAI
India	India7	NPFVGVESVTQGIVSALNKSIGINSYENFIQTDASINP GNSGGALIDSRGGLVGINTAI
Japan	TN2-GF4	NPFVGVESVTQGIVSALNKSIGINSYENFIQTDASINP GNSGGALIDSRGGLVGINTAI
Gambia	Gambia94/24	NPFVGVESVTQGIVSALNKSIGINSYENFIQTDASINP GNSGGALIDSRGGLVGINTAI
Sweden	HPAG1	NPFVGVESVTQGIVSALNKSIGINSYENFIQTDASINP GNSGGALIDSRGGLVGINTAI
USA	B128	NPFVGVESVTQGIVSALNKSIGINSYENFIQTDASINP GNSGGALIDSRGGLVGINTAI
		*****:*****:*****:*****:*****:*****
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Peru	Cuz20	ISKTTGGNHGIGFAIPSNMVKDIVTQLIKTGKIER GYLVGLQDLSDGLQNSYDNKEGAVV
India	India7	ISKTTGGNHGIGFAIPSNMVKDIVTQLIKTGKIER GYLVGLQDLSDGLQNSYDNKEGAVV
Japan	TN2-GF4	ISKTTGGNHGIGFAIPSNMVKDIVTQLIKTGKIER GYLVGLQDLSDGLQNSYDNKEGAVV
Gambia	Gambia94/24	ISKTTGGNHGIGFAIPSNMVKDIVTQLIKTGKIER GYLVGLQDLSDGLQNSYDNKEGAVV
Sweden	HPAG1	ISKTTGGNHGIGFAIPSNMVKDIVTQLIKTGKIER GYLVGLQDLSDGLQNSYDNKEGAVV
USA	B128	ISKTTGGNHGIGFAIPSNMVKDIVTQLIKTGKIER GYLVGLQDLSDGLQNSYDNKEGAVV
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South Africa	SouthAfrica7	ISVEKDSPAkkAGILVWDLITEVNGKVKVNTNELRNL IGSMLPNQRVTLKVIDRDKKERVF
Peru	Cuz20	ISVEKDSPAkkAGILVWDLITEVNGKVKVNTNELRNL IGSMLPNQRVTLKVIDRDKKERAF
India	India7	ISVEKDSPAkkAGILVWDLITEVNGKVKVNTNELRNL IGSMLPNQRVTLKVIDRDKKERAF
Japan	TN2-GF4	ISVEKDSPAkkAGILVWDLITEVNGKVKVNTNELRNL IGSMLPNQRVTLKVIDRDKKERTF
Gambia	Gambia94/24	ISVEKDSPAkkAGILVWDLITEVNGKVKVNTNELRNL IGSMLPNQRVTLKVIDRDKKERTF
Sweden	HPAG1	ISVEKDSPAkkAGILVWDLITEVNGKVKVNTNELRNL IGSMLPNQRVTLKVIDRDKKERTF
USA	B128	ISVEKDSPAkkAGILVWDLITEVNGKVKVNTNELRNL IGSMLPNQRVTLKVIDRDKKERTF
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South Africa	SouthAfrica7	TLTLAERKNPNKKETISSQNGAQQGLNGLQVEDLTQ KTKRSMRLSDDVQGVLSQVNENS
Peru	Cuz20	TLTLAERKNPNKKETISSAQNQAQQGLNGLQVEDLTQ KTKRSMRLSDDVQGVLSQVNENS
India	India7	TLTLAERKNPNKKETISSAQNQAQQGLNGLQVEDLTQ KTKRSMRLSDDVQGVLSQVNENS
Japan	TN2-GF4	TLTLAERKNPNKKETISSAQNQAQQGLNGLQVEDLTQ KTKRSMRLSDDVQGVLSQVNENS
Gambia	Gambia94/24	TLTLAERKNPNKKETISSAQNQAQQGLNGLQVEDLTQ KTKRSMRLSDDVQGVLSQVNENS
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Peru	Cuz20	PAEQAGFRQGNIIITKIEEIEVKSVADEFNHHALEKY KGKPKRFLVLDLNQGYRIILVK
India	India7	PAEQAGFRQGNIIITKIEEIEVKSVADEFNHHALEKY KGKPKRFLVLDLNQGYRIILVK
Japan	TN2-GF4	PAEQAGFRQGNIIITKIEEIEVKSVADEFNHHALEKY KGKPKRFLVLDLNQGYRIILVK
Gambia	Gambia94/24	PAEQAGFRQGNIIITKIEEIEVKSVADEFNHHALEKY KGKPKRFLVLDLNQGYRIILVK
Sweden	HPAG1	PAEQAGFRQGNIIITKIEEIEVKSVADEFNHHALEKY KGKPKRFLVLDLNQGYRIILVK
USA	B128	PAEQAGFRQGNIIITKIEEIEVKSVADEFNHHALEKY KGKPKRFLVLDLNQGYRIILVK
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# Suppl. Figure 3

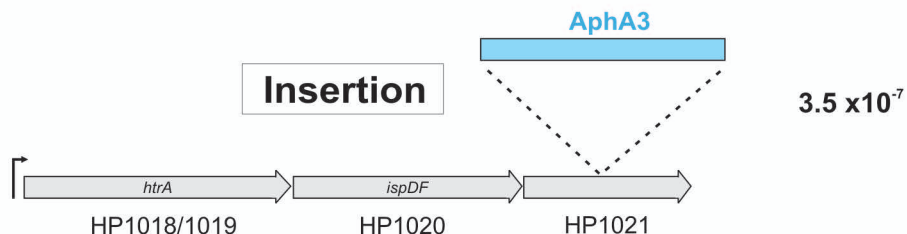


# Suppl. Figure 4

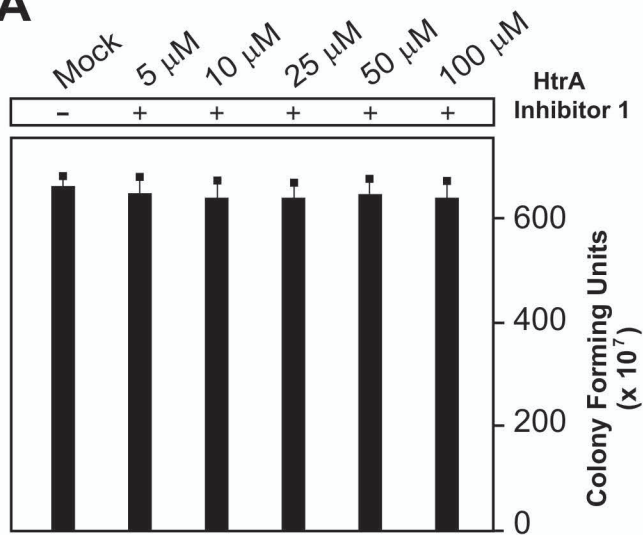
**A**



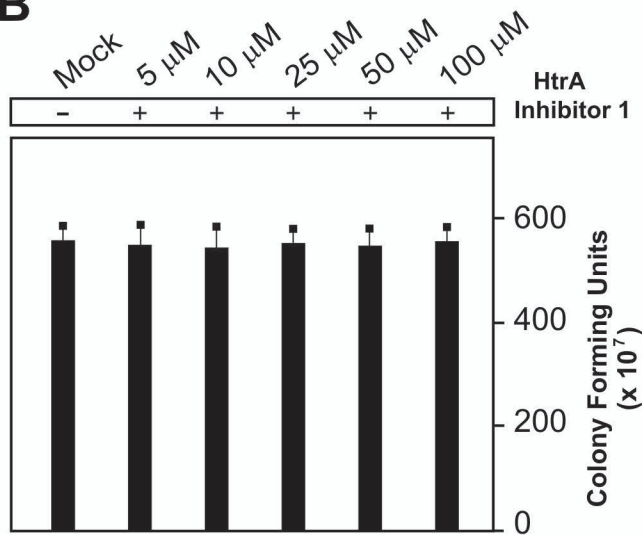
**B**



# Suppl. Figure 5

**A**

*Salmonella typhimurium*

**B**

*Shigella flexneri*