Table S1. Strains and plasmids used in this study

Name	Description	Reference
Strains		
S. Typhimurium		
ΔspvD	12023 *ΔspvD*	(11)
ΔspvD, *p*ACYC *(EV)*	*ΔspvD p*ACYC	This study
ΔspvD, *p*ACYCspvD^{R161}	*ΔspvD p*ACYCspvD^{R161}	(11)
ΔspvD, *p*ACYCspvD$^{R161/C73A}$	*ΔspvD p*ACYCspvD$^{R161/C73A}$	This study
ΔspvD, *p*ACYCspvD^{G161}	*ΔspvD p*ACYCspvD^{G161}	This study
ΔspvD, *p*ACYCspvD$^{G161/C73A}$	*ΔspvD p*ACYCspvD$^{G161/C73A}$	This study
ΔspvD, *pWSK29 (EV)*	*ΔspvD p*WSK29	This study
ΔspvD, *p*spvD^{R161}-2HA	*ΔspvD p*WSK29spvD^{R161}-2xHA	This study
ΔspvD, *p*spvD$^{R161/C73A}$-2xHA	*ΔspvD p*WSK29spvD$^{R161/C73A}$-2xHA	This study
ΔspvD, *p*spvD^{G161}-2xHA	*ΔspvD p*WSK29spvD^{G161}-2xHA	This study
ΔspvD, *p*spvD$^{G161/C73A}$-2xHA	*ΔspvD p*WSK29spvD$^{G161/C73A}$-2xHA	This study
E. coli		
DH5α	wt	NCTC
BL21(DE3)	wt	NCTC
PC2	wt	(29)
Plasmids		
pET22b	Protein expression vector used for expression and purification of SpvD and SpvC proteins	Merck Millipore
pHiSH	Protein expression vector with prescision protease cleavable His-tag for expressing proteins for crystallography	(28)
*p*ACYC184	Rep$_{p15A}$ low copy number vector	(43)
*p*ACYCspvD and mutant derivatives	*p*ACYC184 with *spvD* cloned into *EcoRV* and *SalI* sites, Cm^R	This study
*p*GEX-4T-2sseL	GST fused to sseL	(22)
*p*WSK29SpvD-2xHA and mutant derivatives	*p*WSK29 with spvD containing C-terminal 2xHA tag, Amp^R	This study
*p*RK5-myc	Eukaryotic expression vector	Laboratory stock
*p*RK5-myc-SpvD and mutant derivatives	*p*RK5 with N-terminal myc-tagged SpvD cloned into *BamHI* and *EcoRI* sites, Amp^R	This study
ptCMV-IκBα$^{S32A/S36A}$	Positive NF-κB inhibition protein	Laboratory stock
ptCMV-GFP-SseK3	GFP-fused effector known to inhibit NF-kB in TNFα stimulated cells	Laboratory stock
M$_3$psinrevκB-*luc*	*luc* gene under control of NF-κB consensus promoter	Gift from Felix Randow
*p*RLTK	constitutively active Renilla luciferase	Gift from Felix Randow

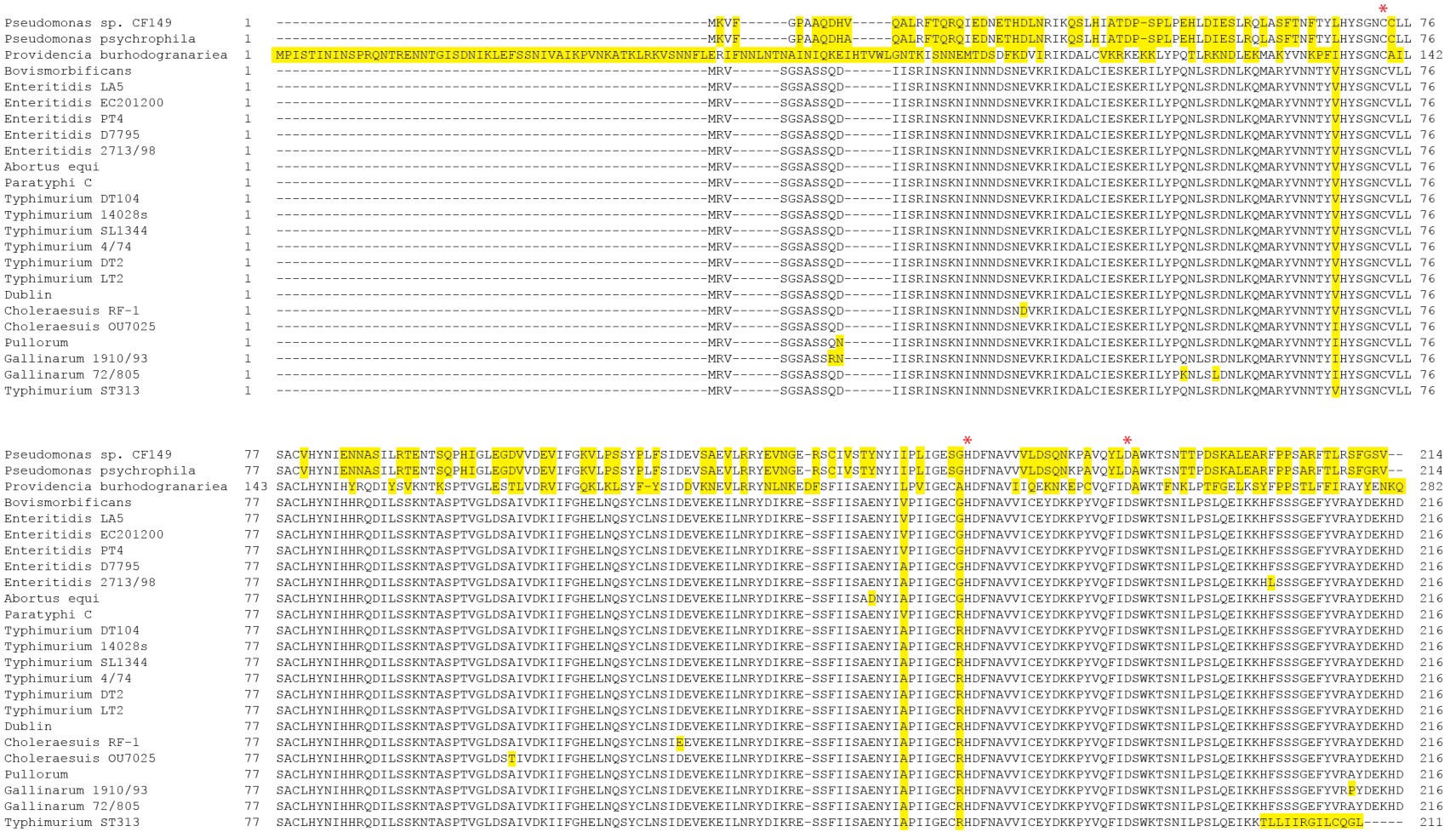
Pseudomonas sp. CF149
Pseudomonas psychrophila
Providencia burhodogranariea
Bovismorbificans
Enteritidis LA5
Enteritidis EC201200
Enteritidis PT4
Enteritidis D7795
Enteritidis 2713/98
Abortus equi
Paratyphi C
Typhimurium DT104
Typhimurium 14028s
Typhimurium SL1344
Typhimurium 4/74
Typhimurium DT2
Typhimurium LT2
Dublin
Choleraesuis RF-1
Choleraesuis OU7025
Pullorum
Gallinarum 1910/93
Gallinarum 72/805
Typhimurium ST313

Figure S1. Amino acid alignment of SpvD sequences.
The alignment was prepared using BioEdit software (http://www.mbio.ncsu.edu/bioedit/bioedit.html). The protein BLAST search was performed with BLASTP 2.2.29+ software (BLOSUM62 matrix; E threshold= 1.0) using *S.* Typhimurium 14028s SpvD input sequence (http://www.uniprot.org/uniprot/A0A0F6AW50). Sequences lacking a significant portion of the protein or the catalytic triad components were omitted. Polymorphisms are highlighted in yellow and catalytic triad positions are marked with red asterisks.

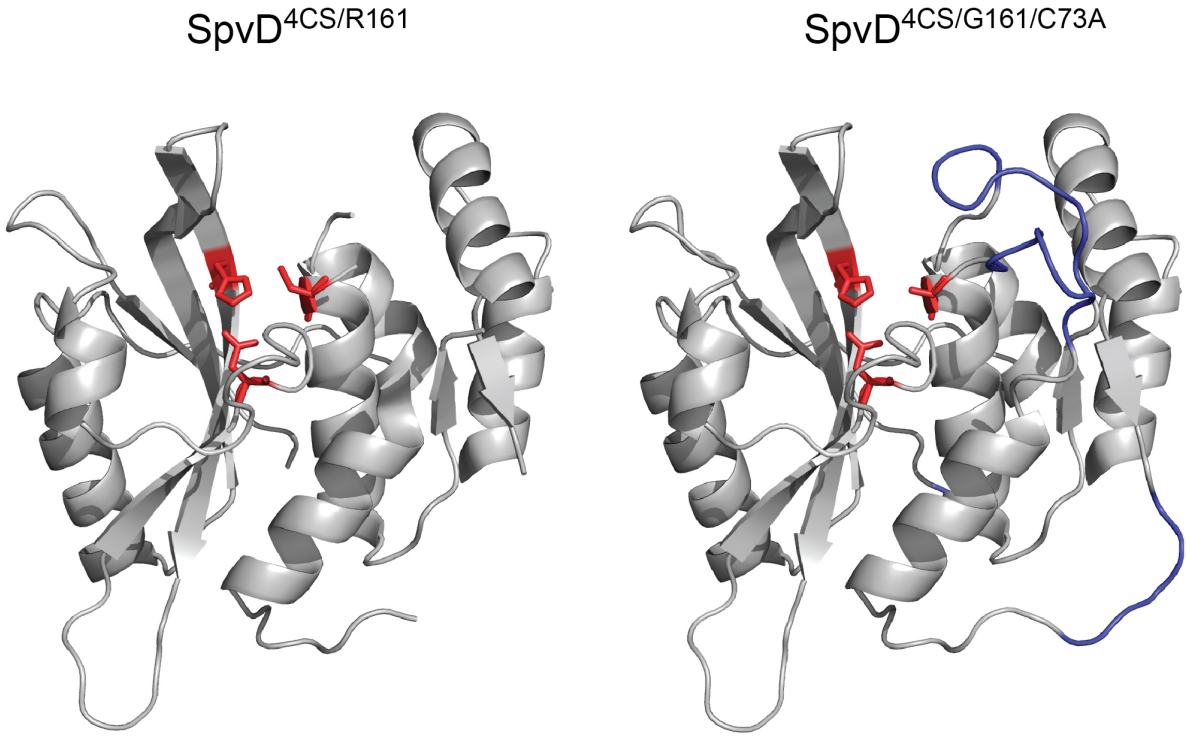

Figure S2. Comparison of SpvD$^{4CS/A154/R161}$ and SpvD$^{4CS/A154/G161/C73A}$ structures.
Catalytic triad residues are represented with red sticks. Additional loop regions that were mapped in SpvD$^{4CS/A154/G161/C73A}$ structure (right) are coloured in blue.