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5 **Appendix Table S1. Bacterial strains used in this study.**

Bacterial Strains	Source	Identifier
<i>L. pneumophila</i> (Philadelphia-1) LP02	(Berger & Isberg, 1993)	N/A
<i>L. pneumophila</i> LP03	(Berger & Isberg, 1993)	N/A
LP02Δ <i>mavQ</i>	This study	N/A
LP02Δ <i>mavQ</i> (pZL507)	This study	N/A
LP02Δ <i>mavQ</i> (pMavQ)	This study	N/A
LP02Δ <i>mavQ</i> (pMavQ _{H149A})	This study	N/A
LP02Δ <i>mavQ</i> Δ <i>lepB</i> (pZL507)	This study	N/A
LP02Δ <i>lepB</i> (pZL507)	This study	N/A
LP02Δ <i>sidF</i> (pJB908)	(Hsu <i>et al</i> , 2012)	N/A
LP02Δ <i>sidP</i> (pZL507)	This study	N/A
LP02 (pZL507::SidP)	This study	N/A
LP03 (pZL507::SidP)	This study	N/A
LP02Δ <i>legA5</i> (pZL507)	This study	N/A
<i>E.coli</i> BL21 (DE3)	NEB	CAT#C2527I
<i>E.coli</i> XL1-Blue	Agilent	CAT#200249

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8 **Appendix Table S2. Plasmids used in this study.**

Plasmids	Source	Identifier
pZL507	(Xu <i>et al</i> , 2010)	N/A
pZL507:: <i>mavQ</i>	This study	N/A
pZL507:: <i>mavQ</i> _{H149A}	This study	N/A
pZL507:: <i>sidP</i>	This study	N/A
pSR47S	(Merriam <i>et al</i> , 1997)	N/A
pSR47S:: Δ <i>mavQ</i>	This study	N/A
pSR47S:: Δ <i>lepB</i>	This study	N/A
pSB157	(Fazzio & Tsukiyama, 2003)	N/A
pSB157m	This study	N/A
pSB157m:: <i>mavQ</i>	This study	N/A
pSB157m:: <i>mavQ</i> _{H149A}	This study	N/A
pSB157m:: <i>mavQ</i> _{N152A}	This study	N/A
pSB157m:: <i>mavQ</i> _{D160A}	This study	N/A
pcDNA3.1-mCherry	Addgene	CAT#128744
pcDNA3.1-mCherry:: <i>mavQ</i>	This study	N/A
peGFP::2 \times FYVE _{Hrs}	(Cao <i>et al</i> , 2008)	N/A
pET28a	Novagen	CAT#69864
pET28a:: <i>mavQ</i>	This study	N/A
pET28a:: <i>mavQ</i> _{H149A}	This study	N/A
pET28a:: <i>mavQ</i> _{N152A}	This study	N/A
pET28a:: <i>mavQ</i> _{D160A}	This study	N/A
pET28a:: <i>lepB</i> _NTD	This study	N/A
pET28a:: <i>mtm</i>	This study	N/A
pGEX-6P-1	GE Healthcare	CAT#27-1542-01
pGEX-6P-1:: <i>sidF</i>	(Banga <i>et al</i> , 2007)	N/A
pGEX-6P-1:: <i>sidP</i>	This study	N/A
pGEX-6P-1:: <i>sidP</i> _{R560K}	This study	N/A
pCMV-Flag	Sigma-Aldrich	Cat#C5864
pCMV-4xFlag	This study	N/A
pCMV-4xFlag:: <i>sidP</i>	This study	N/A
p425GPD	(Mumberg <i>et al</i> , 1995)	N/A
p425GPD:: <i>sidP</i>	This study	N/A
p425GPD:: <i>sidP</i> _{R560K}	This study	N/A
p425GPD:: <i>sidP</i> ₆₆₄₋₈₂₂	This study	N/A

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11 **Appendix Table S3. Primers used in this study.**

Primers	Sequences ^a	Notes
GL801	ctgAAGCTTATGGGTTTGCCCAAAAAG	<i>mavQ</i> 5F HindIII
GL802	ctgAAGCTTCGATGGGTTTGCCCAAAAAG	<i>mavQ</i> 5F HindIII
GL803	ctgGTCGACTTAGACCACCAAGCTCGT	<i>mavQ</i> 3R Sall
GL804	ctgGGATCCGCGCGAACGATTTATTTGTGTCCAG	<i>mavQ</i> knockout up BamHI-F
GL805	GAATTCAAAGTAGTTTCTTGAAACTGCAGTTGGC TCTCTT	<i>mavQ</i> knockout up-R
GL806	AAGAGAGCCAACTGCAGTTTCAAGAACTACTTT GAATTC	<i>mavQ</i> knockout down-F
GL807	ctgGAGCTCTATAATCTTGTCCAAAAACTGCTCA	<i>mavQ</i> knockout down SacI-R
GL808	TTAGATTATGCGGGGCACCATCATCATCAAG AAACCACCT	<i>mavQ</i> _{H149A} -1
GL809	AGGTGGTTTCTTGATGATGATGATGGTGCCCG CATAATCTAA	<i>mavQ</i> _{H149A} -2
GL810	CCCGGCCAAACTTAGAGCATGCGGGTGACCATC ATCAT	<i>mavQ</i> _{N152A} -1
GL811	ATGATGATGGTCACCCGCATGCTCTAAGTTTGGC CGGG	<i>mavQ</i> _{N152A} -2
GL812	ACCAATAAAAAACATATCAAAGCAATATCCCG GCCAAACTTAG	<i>mavQ</i> _{D160A} -1
GL813	CTAAGTTTGGCCGGGATATTGCTTTTGATATGTT TTTTTATTGGT	<i>mavQ</i> _{D160A} -2
GL814	ctgGGATCCATGGCTTCTGCATCAACTTC	<i>mtm</i> 5F BamHI
GL815	ctgGTCGACTCAGAAGTGAGTTTGCACATG	<i>mtm</i> 3R Sall
GL816	ctgGGATCCATGTTAATTTATCAAGG	<i>lepB_NTD</i> 5F BamHI
GL817	ctgGTCGACTTAGGACATATCTTTAAG	<i>lepB_NTD</i> 3R Sall
GL818	ctgGGATCCATGCACAACTTCAGGCTG	<i>lepB</i> knockout up BamHI-F
GL819	GTGAGTGGAGGAAATCGCTTTTTTTCTTTAAAT CGAACTATTTT	<i>lepB</i> knockout up-R
GL820	GAAATAGTTTCGATTTAAAGAAAAAAGCGATTTT CTCCACTCAC	<i>lepB</i> knockout down-F
GL821	ctgGTCGACGTGATCTTGATAATTAATTTG	<i>lepB</i> knockout down Sall-R

GL822	ctg <u>GGATCC</u> ATGGGAAAAGGTATAATTTTAC	<i>sidP</i> 5F BamHI
GL823	ctg <u>CTCGAG</u> TTACACATAAACCAAGCCAC	<i>sidP</i> 3R XhoI
GL824	ctg <u>GGATCC</u> ATGAGCAAGGATTTGCGTTC	<i>sidP</i> ₆₆₄₋₈₂₂ 5F BamHI
GL825	<u>GCAATAACTCTACTGCTTTTTTGTCTTTACCACTG</u> <u>ACACAG</u>	<i>sidP</i> _{R560K} 5'
GL826	<u>CTGTGTCAGTGGTAAAGACAAAAAAGCAGTAGA</u> <u>GTTATTGC</u>	<i>sidP</i> _{R560K} 3'

12 ^a Restriction enzyme sites are underlined.

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