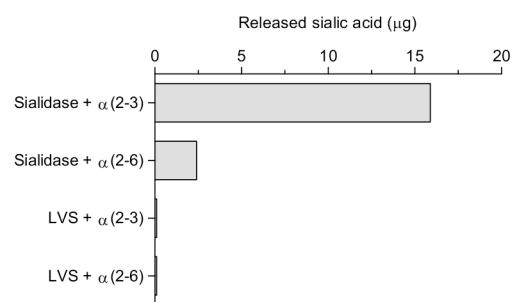
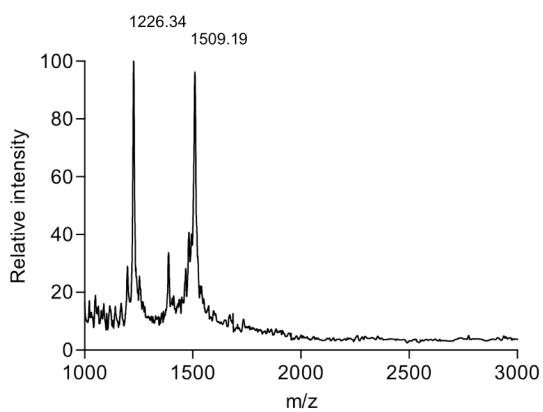


SI Figure 1

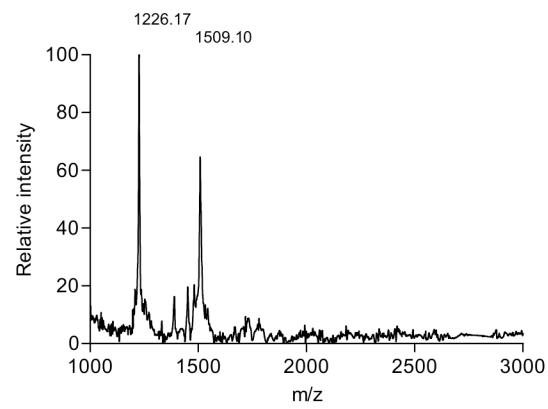


SI Figure 2

A



B



SI Figure 3

CLUSTAL 2.0.12 multiple sequence alignment

t2|Q4W55| Q24W55| PRATH
O5NHPB8| O5NHPB8| PRATU
MKHKh| KKLUFFAPVY| LLLUVFPIYYI| IOHNYSFS1S1TPRND-
MKKh| KKLUFFAPVY| LLLUVFPIYYI| IOHNYSFS1S1TPRND-
SITTKLN1DKT1| LNLYKFV| KYHASNE1| TD1N-KF1TM| SSDOR1| PNTD1VVAVA
SITTKLN1DKT1| LNLYKFV| KYHASNE1| TD1N-KF1TM| SSDOR1| PNTD1VVAVA
C3|K3L53| C3K13| PSEFS
MR-SAL| ICG| LFLPFAANQHP---PHILIPFAQAQP---NTAKAVALPAQSSRFSVOLTJ
IS|RPGFC| AALA7ANTALGPNFAPRFPVPAAAA---MAASCPGSLAASIWNLPD-
PRH|AVG| AVD|PQDF| FAWTF| GREGCT| VWAATTAAC| CWR---OHA|PTEQTS
04|8677| 04|8677| PSE14
MRVISON| TAMSAGL1| FLSAM| SH---ORHISFAPVSTAPV---DAEVSAPKA| ISRF| SSDL
C5|V767| C5|V767| 9PROT
MSWQR1| NLLVLAFCSCFGYV| PRRAA5PNSKOMATV
VKVTSA| EFTHS| SSKLF| TOVH| ASIEB| QGRF| SWFAGC| REGADM| EML
t4|A4SY97| A4SY97| POLSQ
MSR| IC| CPLLIA| FLFLHLD| RPPWFAPIDET1VTE| EAEPLIVKGNNSKD3| HS1| DCF02NMLPDGTCTSS| HS1| ELP| VMDR10
t2|P5303| 25303| HELPY
MEPPSR| R| KHAFFAVPG| F| LFLHLD| KRTOPP| YAFMRQNLRTVQT---
PPY| TOL| TIP| PKND| ALS-HSW| IASD| DSKTNWMS-| AP| E| T| EELS
t5|Q5RE3| Q5RE3| LEGPH
MKNM1PQFLMSSKHN| IYLGMI| F| FG1G| SKAPNCAFELESQPIKEENN
TNANPQ| TIREKLMLPKG| -IKKA| TD1| DSHE| AL| FCGS| REGD| PDKV| HISSI| D| HHRN| WST| -PKV| T| REKL
t8|H84C0| H84C0| ORYSJ
MTN-| KWSVLR| EET| TSFE| NWPK| -TO| HAS| VE| OKNNE| FV| KAGD| PDKV| HILW| HN| MS| P| DE| VPDPVNH
B9|IM5| B9|IM5| POPT
MSKDHCBNNWOLVK| EET| F| PANSB| -SG| HAS| VE| OKNNE| FV| FCG| KEGAD| PDKV| HILW| HN| MS| P| DE| VPDPVNH
t3|QE8A0| QE8A0| ARATH
-MKSQSMSETEFKV| ETT| F| PAP| FRSK| VE| OKNNE| FV| FCG| KEGAD| PDKV| HILW| HN| MS| P| DE| VPDPVNH

t_02Q4W5 Q2A9W5 FRATH SIFK YHHLNPLYL-SARS-ALV-LT-TSS-RCGWTTS-NS-ELD-LK-MLP-PLT-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
05NHPB8 05NHPW8 FRATU SIFK YHHLNPLYL-SARS-ALV-LT-TSS-RCGWTTS-NS-ELD-LK-MLP-PLT-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
C3XKL3 C3K13 PSEEF DCTQ YIYRLNGNPV ALPGDPRV HEM-PEVNSIGGWANLNS-ELD-MLP-PLT-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
ALK1P9 ALK1P9-Z A2OSB ADVG-LV-MLP-PLT-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
048677 048677-PSE14 SGTC YIYRLNGNPV ALIAPDNDN-LTY-PEVNSIGGWANLNS-ELD-MLP-PLT-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
C5V676 C5V676-9PRT STLE YIYRLNGNPV ALIAPDNDN-LTY-PEVNSIGGWANLNS-ELD-MLP-PLT-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
A44S97 A44S97-POLSO KGLG YIYRLNGNPV ALR-MLP-PLT-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
025303 025303-HOLPY HYSHYE YIYRLNGNPV ALR-MLP-PLT-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
052R3E5 052R3E5-LEGPH KNSHOGLKLGNPVL-YIN-QNG-LLEV-VNTAF-GWAIS-CHYHFED-MLP-PLT-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
08H4C0 08H4C0-CORJSY L-MLP-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
B91M45 B91M45-POPTR -MLP-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR
03E8A0 03E8A0-ARATH -MLP-PLS-N-ELF-ELR-ELDRNNR-PYVCHNLNGLR-GVFNND-CELLIFUSE-TND-GVNL-OP-VPLS-KTBL-LAY-YR

tr_1	Q2A4W5	Q2A4W5	FRTAH	TTTPVPPDIDVII	LAFSDKTGIGI	WIKGENSNV--	372	<i>F. tularensis</i> LVS
tr_2	Q5MHP8	Q5MHP8	FRATU	TTTPVPPDIDVII	LAFSDKTGIGI	WIKGENSNV--	372	<i>F. tularensis</i> Schu S4
tr_3	K1K531	K1K531	FEES	YFSRSPGDYHVVVSNP	INRSEK	PAEPL	422	<i>Pseudomonas fluorescens</i>
tr_4	A1K3P9	A1K3P9	AZOSB	LILRAAAGVYVYVYVYV	IKH	SENEA LABSLL	423	<i>Pseudomonas syringae</i>
tr_4	Q4TC77	Q4TC77	PSE14	YF-PSRDPHEVYVYVYV	IKH	SENEA LABSLL	423	<i>Gallionella ferruginea</i>
tr_5	C5V767	C5V767	9PROT	LLQASGEFHVVVNNR	IKH	WENFA LD--	417	<i>Polynucleobacter necessariu</i>
tr_6	A4S9Y7	A4S9Y7	POLSQ	LLQASGEFHVVVNNR	IKH	WENFA LD--	417	<i>Helicobacter pylori</i>
tr_7	P25303	P25303	HELPY	LLQASGEFHVVVNNR	IKH	WENFA LD--	372	<i>Legionella pneumophila</i>
tr_7	SYSLNPN	SYSLNPN	-HFD	LLQASGEFHVVVNNR	IKH	WENFA LD--	372	<i>Legionella sativa Japonica</i>
tr_8	Q5REB1	Q5REB1	LEGPB	STVDR	DYVYVYVYVYVYVYV	IHFENKYI LDSLXK	391	<i>Populus trichocarpa</i>
tr_8	O84H40	O84H40	ORYJSY	AV+OTSGLD	HVTVTVTVTV	PRGIVVLPMLFSCILWVITSFIIHVFKVNEFLVTLAICMSFSYNOARFDAVSNOTCGFVGSKVKEFEL	391	<i>Arbidopsis thaliana</i>
tr_9	B194M5	B194M5	P0PTR	AV+OASGS	HVTVTVTVTV	PRGIVVLPMLFSCILWVITSFIIHVFKVNEFLVTLAICMSFSYNOARFDAVSNOTCGFVGSKVKEFEL	321	<i>Populus trichocarpa</i>
tr_9	O3EBA0	O3EBA0	ARATH	AV+OAGDG	HVTVTVTVTV	PRGIVVLPMLFSCILWVITSFIIHVFKVNEFLVTLAICMSFSYNOARFDAVSNOTCGFVGSKVKEFEL	352	<i>Arbidopsis thaliana</i>