

# A

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NoIW RhizobiumT3SS-1 ----MPTTPIPFTHLHFRLLCVGLFLFAGIHTTLGATLPLPSTSYKYTVLDDQLSAAALQEFGNLKI SVNISAEVKGK 76
NoIW M. loti -----MRLLCAGFFLSAGTNGTLGVPLSLSKTPYRYTVLDDQISEALQQFGNLLNIRVNI SAEVKGK 62
RhcC1 B. japonicum MSGRRQGLMARSTVVHILKRIFCAGVLICVGLIRTSASASLSPAPYSYTVLDDQLAALQEFGNLNI RNVNSADVRGR 80
HrcIIC1 Pph T3SS-2 -----MKHFRADPPVSKLLMLLILLCLLSGLVKAASERQPDWFSEPYAVVLVDQDIRGALTEFGQHLGLIVV FSEKVRGN 74
HrcIIC1 Psory T3SS-2 ----- 0
RhcIIC1 NGR234T3SS-2 ---MRTIGTFAMKVMVMTGRLCVFAIATLAATAASFABAPRWYDSRYSYVLIHQDVRDALKEFGRNLSL PVVLSDRIRGQ 77

NoIW RhizobiumT3SS-1 IRGRIPELSPRREFLDRITDLYDQWYVDGVLYVSAAKEAQT RMLVLSVSHFSAFKLALDKLDTSDERYVVR P APGNGLV 156
NoIW M. loti IRGSMPDLPPREFLDRITANMYGLQWYVDGLVLYVSAAKEAQT RMLVTSIRFDTFKGLDKLDTSDDRYVVR P APGDGLV 142
RhcC1 B. japonicum IRGRMPDLPPREFLDRITALYNLQWYVDGLVLYVSAAKEAQT RMLVNPISFDALKALDALNLSDERYIVK P APGEGLV 160
HrcIIC1 Pph T3SS-2 ARGTVRGEDAGEFLTRITCDANQLSWYFDGNVLIHAGADEVA R VFDLQGPRLLEELQRYMARLELVSGQPMSR VSPDSDSL 154
HrcIIC1 Psory T3SS-2 -RGTVRGKTAGEFLGHITCDANQLSWYFDGNVLIHAGADEVGR VFDLQGAPLQELQDYLTRLELVSGQPMSR VSPDNDST 79
RhcIIC1 NGR234T3SS-2 VRGEIRAATAGEFLDRITQANGLIWFYDGSIIHINTSDEFSTQI IDGRANGRSVIDEIERLDTMDGRFSVRATTNPAI 157

NoIW RhizobiumT3SS-1 LVSGPPREFMALTLEQTLNGLLAVAQAQ-PRATDTPARESVMLFRGSSSTTVVGRGRPEVFYITSEMLPENDDGGKAELS K 234
NoIW M. loti LVSGPPREFMALTLEQTFNGLVAEAQGG-PRVHETPTSESVLTLFRGSSSTTVVGRGRPEVFYITSEMLPENDDGGKAELS K 220
RhcC1 B. japonicum LASGPPREFMALTLEQTLKGLVAEAQARRSPAERSQHESVLTLFRGSSSTTVFRDGRPEA--SPETPLHGGAVR EAGPGQK 237
HrcIIC1 Pph T3SS-2 FVSGPPREFMALTLEQHHVDRQPAEAVP-----VVRERGVRFVFRGG-----VVTQVATDRQ----- 203
HrcIIC1 Psory T3SS-2 FVSGPPREFMALTLEQHHVDRQPAEAAAP-----VVRERGVRFVFRGG-----VVTQVATDRQ----- 128
RhcIIC1 NGR234T3SS-2 RVSGPPREFMALTLEQKVAASVQPPPATQ-----VDDPR-VRFVFRGGQRDEVTADLVETDRQAAPANR KKTSPAGEQ-- 226
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# B

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RhcC2 M. loti -----MQDQGAPRAASNSIDGTLNLSSTSGKTVLHPAPATITIFVADPTIADYQAA S 51
Y4xJ RhizobiumT3SS-I -----MPRAAPNSINATLNLSSSTGKTVLHPAPATITIFVADPTIADYQAA S 46
RhcC2 B. japonicum -----MPRAAPGSTTGTNLITSSQKTVLHPAPATITIFVADPTIADYQAA S 46
HrpIIC2 Pph 1448A -----MTSVSVIRMFVGVGALLIGTGSFAENIAKGA K--TVDLAIGEGRVLHFSAPVDSVMVAEPGIADLQVVS 69
HrpIIC2 Psory 1_6 -----MIRVLFALGALLAGGANAQTI AKGAEG--TIDL AIGEGRVLHFSAPVDSVMVAEPGIADLQVVS 64
RhcIIC2 Rhizobium 2 MLVLRSLRPVRTGKVFLLILLTVLAVHICALPSASAQVKVDAINGQVLELTVGEGTILRFDEPVEVSVFLADTAIADVRVVS 80

RhcC2 M. loti NNTIFVFGKKSGRSLEALDDKGEALALRIVVVQPIEELRAMLMDQVGDSSITQVSYTPRGAILSGTAPNAEVA DTAKR V 131
Y4xJ RhizobiumT3SS-I NRTIFVFGKKSGRSLEALDENGAEALAEHLVVVQPIADLRAMLRDQVGDYPTIHVSYTPRGAILSGTAPNAE VDI AKR V 126
RhcC2 B. japonicum SSTIFVFGKKSGRSLEALNENGEALAEHLRIVVVQPLEDLRAALKAEVGDYPTIQVSYTPRGAILSGIAPNADVVEAARKV 126
HrpIIC2 Pph 1448A PGVIYVFGKAAGQTSLEALDSGRETAAALSLAVSSGTAAVTRPLKALHPQSQARINASGSRV LASGSVDVGEATDLNLAL 149
HrpIIC2 Psory 1_6 PGVIYVFGKTAGQTSLEALDSEGRETAALSLAVSSGTAAVTRPLKALHPQSQARISASGNRV LASGSVDVGEATDLNLAL 144
RhcIIC2 Rhizobium 2 PGVVIYATKTDGTLNLEALSADQMTRITVQVVRVSGNPRAAEQSALALQPTTRVDIISLFGGQYVGTGQTRNVGEAMD MESV 160

RhcC2 M. loti TEQYLDGDAQVWNINIKVAGSLQVNLVSRVAEVSRSAMKALGVNLSAFGQIDNFRVGLLSGGGTGSGAAQGGG-TAGIGFN 210
Y4xJ RhizobiumT3SS-I TEQFLGDGAPIWNINIKVAGSLQVNLVSRVAEVSRSGLKALGINLSAFGQFGNFKVGVINRAGLGSATGSGG-TAEIGFD 205
RhcC2 B. japonicum TEQFVGAGAPVWNKIQVAGSLQVNLVSRVAEVSRTAVKDLNINFTASGFNG---AFLATGKPGGSGRAGGGG-TIGIGFS 202
HrpIIC2 Pph 1448A LSTEGNQFQSTVNSATYAGSAQVNI RVRFAEVSRSSELLRYGVWNALFNNGTFSFGLITGGALAAADAAGGASNVISAGLA 229
HrpIIC2 Psory 1_6 LSSEGQNFQSSVNSATYAGAAQVNI RVRFAEVSRSSELLRYGVWNALFNNGTFSFGLITGGALAAADAAGGASNVISAGL 224
RhcIIC2 Rhizobium 2 LQSYSTPDRPALNNTTITAGSNQVNI RVRFAEVSARNELTRFGLDWSL FVNSGFSFGIWR---TGGASNEEDTGTIAGAR 236

RhcC2 M. loti NGAVNIGAVLDALAKEHIASVLAEPNLTAMSGETASFLAGGEFFIPVLQENKQVSVFRRHFGVSLFEFVPTVLN NNRINIH 290
Y4xJ RhizobiumT3SS-I NDAVSNGAVLDALAKEHIASVLAEPNLTAMSGETASFLAGGEFFIPVLQENQTSVFRFRFGVSLFEFVPTVLN NNLINIH 285
RhcC2 B. japonicum TGNINISAVLDALASEHLASVLAEPNLTAMSGEASFLAGGEFFIPVMQDNQVSVQFRQFGVSLFEFVPTVLN NQIIVR 282
HrpIIC2 Pph 1448A SGNVNI DAMEALQSNQVLEVLAEPNITAMTGTASFLAGGEVAVPVNREVVGIEYKPYGVSLLFSP TLLPNGRIFAQ 309
HrpIIC2 Psory 1_6 SGNVNI DAMEALQSNQVLEVLAEPNITAMTGTASFLAGGEVAVPVNREVVGIEYKPYGVSLLFSP TLLPNGRIFAQ 304
RhcIIC2 Rhizobium 2 GDHVNINVL DLDALQANGELTILAEPNITAVTGTASFLAGGEIPVVPVAGDQIGIEYKQFGVSLQFPTLLPN NRIIFAQ 316

RhcC2 M. loti VKPEVSELSSQGAQVINGISVPAVSTRADTVVELASQSFAGGLIRRNVN NVNSAFVWLGEMPILGALFRSSSFQKRE 370
Y4xJ RhizobiumT3SS-I VKPEVSELSTQGAQVINGIAVPAVSTRADTVVELASQSFVIGGLIRRNVNNDISAFVWLGRIPI LGALFRSSSFQKRE 365
RhcC2 B. japonicum VKPEVSELSTEGVKINGMAVPAVSTRADTVVELASQSFAGGLIRRNFNNTDICEFVWLDGVPILGALFRSSSFQKRE 362
HrpIIC2 Pph 1448A VRPEVSELMSSTTLDVNGYQVPSFRVRRADTRVEVSGQTFATAGLRFQRESSQDMDKVPEMLGDMPI LGNLFRSKRFORNE 389
HrpIIC2 Psory 1_6 VRPEVSELMSSTTLDVNGYQVPSFRVRRADTRVEVSGQTFATAGLRFQRESSQDMDKVPEMLGDMPI LGNLFRSKRFORNE 384
RhcIIC2 Rhizobium 2 VRPEVSELVSDSVVSLVSGLVVSLRIRRADTRVEVSGQTFATAGLRFQRESSQTLNKTEPVVGDVPEILGELFKSKRFORNE 396

RhcC2 M. loti SELIILVTPYIVKPGSSPNQMSAPTDRMAPALD-----PPADPPRGRAARTGAPGAKRGRGFIIE 432
Y4xJ RhizobiumT3SS-I SELVILVTPYIVRPGSNPNQMSAPTDRMAPALG-----TPPRARAAISTDAPSVKGDLCFIIE 423
RhcC2 B. japonicum TELVIVVTPYIVRPGSNPSQISIPTRNRIAPPSDAGRILTNTVARPPQGRDAPRASAPGLTGNAGFIIE 430
HrpIIC2 Pph 1448A TELVILITPYLVPE-VKDRVATPLDKQRAASTAS-----AGPRSGGAFVYFYM 437
HrpIIC2 Psory 1_6 TELVILITPYLVPE-VKERVAATPLDKQRASTAS-----AGPRSGGAFVYFYM 432
RhcIIC2 Rhizobium 2 TELVILITPYLVPE-TSERNMKTEPLDSPAGAITSPR-----KKAKPAVNKGYGFYVE 447
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## Additional File 4. Figure S4 :

Multiple alignments with ClustalW version 1.8 [19] for A) RhcC1 proteins (ref|YP 274720.1| Hrc<sub>II</sub>C1

[*Pseudomonas syringae* pv. phaseolicola 1448a], ref|ZP 04589253.1| Hrc<sub>II</sub>C1 [*Pseudomonas syringae* pv.

oryzae str. 1\_6], ref|YP 002824487.1| Rhc<sub>II</sub>C [*Rhizobium* sp. NGR234], ref|NP 444156.1| NoIW [*Rhizobium* sp.

NGR234], ref|NP 106861.1| NOLW [*Mesorhizobium loti* MAFF303099], ref|NP 768451.1| RhcC1

[*Bradyrhizobium japonicum* USDA 110] and B) RhcC2 proteins (ref|ZP 04589255.1| Hrp<sub>II</sub>C2 [*Pseudomonas*

*syringae* pv. *oryzae* str. 1\_6], ref|YP 002824481.1| Rhc<sub>II</sub>C2 [*Rhizobium* sp. NGR234], ref|NP 106858.1| RhcC2 [*Mesorhizobium loti* MAFF303099], ref|NP 768482.1| RhcC2 [*Bradyrhizobium japonicum* USDA 110] and ref|NP 444146.1| Y4xJ [*Rhizobium* sp. NGR234]. Visualization of the alignment was performed in [http://www.bioinformatics.org/sms2/color\\_align\\_cons.html](http://www.bioinformatics.org/sms2/color_align_cons.html).