

Supplementary Figures

for

**STRUCTURE AND FUNCTIONAL ANALYSIS OF RifR, THE TYPE II
THIOESTERASE FROM THE RIFAMYCIN BIOSYNTHETIC PATHWAY**
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Smith^{1,2}**

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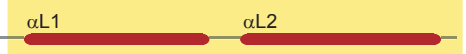
10 20 30 40 50 60 70

<i>A.mediterranei_RifR</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A.noursei_NysE</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S.fraidea_TyIO</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S.venezuelae_PikAV</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>P.aeruginosa_PchC</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S.tendae_NikP2</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>S.erythraea_Eryorf5</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Kutzneria.sp744_KtzF</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>A.migulanus_GrsT</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B.licheniformis_BacT</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B.brevis_TycF</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B.subtilis_SrfTEI_2RON</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>Rat_FAS_TEI</i>	METAVNAKSPRNEK	-----	-----	-----	-----	-----	-----	-----	-----	-----	14
<i>B.subtilis_SrfTEI_1JMK</i>	GGSD	-----	-----	-----	-----	-----	-----	-----	-----	-----	4
<i>E.coli_EntF_2ROQ</i>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<i>B.subtilis_FenTE_2CB9</i>	MARSQLSAAGEQH	-----	-----	-----	-----	-----	-----	-----	-----	-----	13
<i>B.subtilis_Myc_TE</i>	KTENVF	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
<i>B.licheniformis_BacC_TE</i>	DCMQL	-----	-----	-----	-----	-----	-----	-----	-----	-----	5
<i>B.brevis_TycC_TE</i>	RYGTA	-----	-----	-----	-----	-----	-----	-----	-----	-----	5
<i>B.brevis_GrsB_TE</i>	LP	-----	-----	-----	-----	-----	-----	-----	-----	-----	2
<i>hFAS_TEI_1XKT</i>	GAMVNLRSLLVNPEGPTLMRLNS	-----	-----	-----	-----	-----	-----	-----	-----	-----	23
<i>S.venezuelae_PikTE_2HFJ</i>	SGADTGAGAG	-----	-----	-----	-----	MFRALFRQAVEDDRYGEFLDVLAEASAF	-----	-----	-----	-----	38
<i>S.fraidea_TyIGV</i>	MGTGAAPADAGSG	-----	-----	-----	-----	L PAL YREAVRTGRAAEMAELL AAASRF	-----	-----	-----	-----	40
<i>Streptomyces.sp.CK4412_TmcB</i>	AQSDYFGELFLQA	-----	-----	-----	-----	MRTGELAQAQQLMAGAAQL	-----	-----	-----	-----	32
<i>S.erythraea_DEBSTE_1MO2</i>	MASQLDSGTPAREASSALRDG	-----	-----	-----	-----	YRQAGVSGRVRSYLDL LAGL SDF	-----	-----	-----	-----	44
<i>A.erythreum_EryAIII</i>	ATVVVFQHPTPRALAEVRLVLELGRAAGSPTPSAAGGSL	-----	-----	-----	-----	VEGY - RRAEAESSRVRPFLSLMADLAEF	-----	-----	-----	-----	62
<i>S.rochei_LkmAIII</i>	ATTLVFDHPSVTDVAAAYLRPLL TSETPHPAADGGGM	-----	-----	-----	-----	LRGL YERSVQQGRFDSYL EL LGEL AGH	-----	-----	-----	-----	63
<i>M.griseorubida_MycAV</i>	STVVFDQPTPRELAEYLDELGPPVSRAGATGGSAGAVGPTGEDS IG	-----	-----	-----	-----	VL FRRAVRDGRRDQGFDLL HAAAAL	-----	-----	-----	-----	71
<i>S.parvulus_BorA6</i>	ATL TL EQRT PAGL AAHLRER I ADRPVGSGAVPVPGSADVPEAGGGSGL GELWQEADRHRRL EF IDVL TAAAAF	-----	-----	-----	-----	SS I VFDKSPVKLARWL HQEL ANGPQPGATGPAAADARPAVRSDDTL - EGL FYNVAVRGGKL VEAMRML KAVANT	-----	-----	-----	-----	74
<i>S.noursei_NysK</i>	SS I VFDKSPVKLARWL HQEL ANGPQPGATGPAAADARPAVRSDDTL - EGL FYNVAVRGGKL VEAMRML KAVANT	-----	-----	-----	-----	-----	-----	-----	-----	-----	73

RifR Secondary structure

SrfTEI Secondary structure

PikTE Secondary structure



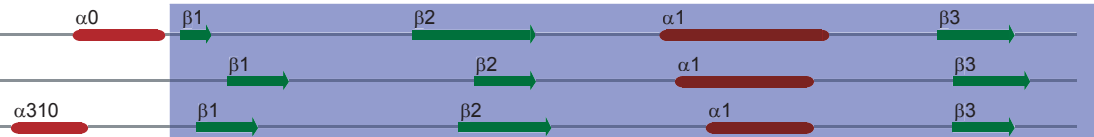
80 90 100 110 120 130 140

<i>A.mediterranei_RifR</i>	-----MHRPEAEKWLRRFERAP-D-----ARARLVCLPHA--GGSASFFFLAKALAP-A--VEVLAVQYP-55
<i>A.noursei_NysE</i>	-----MTTSTEEESLWARCFHPAP-A-----APVRLFCFPHA--GGSASFYFPVSAQLSS-V--AEVFAIQYP-56
<i>S.fraidea_TyIO</i>	-----MMLRCYAPVPGT-----PAHRLVCFPHA--GGSARAYRPFAL ELAAG--VETHAVQYP-50
<i>S.venezuelae_PikAV</i>	-----MTRDPLNVDSGLWIRRFHPAP-N-----SAVRLVCLPHA--GGSASYFRFSEELHP-S--VEALSVQYP-59
<i>P.aeruginosa_PchC</i>	-----MSAAWVRPFR-LTPM-----PRLRLACFPHA--GGSASFRRWSERLPP-D--IDLLALQYP-51
<i>S.tendae_NikP2</i>	-----MAPRQAAATRPDSPWLRTPGPPRPA-----APARLVCFPHA--GGAASYFRDWGGRDLA-G--AEVWAVQYP-62
<i>S.erythraea_Eryorf5</i>	-----MSTWLRRFPG-PVE-----HRARLVCFPHA--GAAADSYLDLARALAP-E--IDVHAVQYP-50
<i>Kutzneria.sp744_KtzF</i>	-----MSVEIAELVPESPYLWR-ARR-AG-----ARRRLICFPHA--GAGAAAADWVRWLPP-E--VELVAVQLP-59
<i>A.migulanus_GrsT</i>	-----MTFISQVKNWVFNANVN-SA-----AKLRLFCIPYA--GGGASAFYEWSHFFPK-E--IEVCSIQLP-56
<i>B.licheniformis_BacT</i>	-----MMLRCYAPVPGT-----PAHRLVCFPHA--GGSARAYRPFAL ELAAG--VETHAVQYP-50
<i>B.brevis_TycF</i>	-----MSTWLRRFPG-PVE-----HRARLVCFPHA--GAAADSYLDLARALAP-E--IDVHAVQYP-50
<i>B.subtilis_SrfTEI_2RON</i>	-----MSQLFKS-----FD-AS-----EKTQLICFPFA--GGYSASFRPLHAFLLQG-E--CEMLAAEPP-48
<i>Rat_FAS_TEI</i>	-----VLNCLYQN-PD-----AVFKLICFPWA--GGGSIHFAKWGQKIND-S--LEVHAVRLA-61
<i>B.subtilis_SrfTEI_1JMK</i>	-----GLQDVTIMN-QD-----QEQIIFAFPPV--LYGLMYQNLSSRLP-S--YKLCADFDTI-51
<i>E.coli_EntF_2ROQ</i>	-----PTLFCFHPA--SGFAWQF SVLSRYLDP-Q--WSIIGIQSP-35
<i>B.subtilis_FenTE_2CB9</i>	-----V IQLNQ-Q-----GGKNLFCFPP I--SGFGIYFKDLALQLNH-K--AAVYGFHF I-57
<i>B.subtilis_Myc_TE</i>	-----VKLN-QN-----GSIPVFCFPPL--IGYGLVYNEMANRLDG-D--CVVYAADFT-49
<i>B.licheniformis_BacC_TE</i>	-----TRA-EE-----GGKNLFCFPPA--ASMG IAYMGLAKHLKQ-H--SVYSFNFI-46
<i>B.brevis_TycC_TE</i>	-----ILLN-QE-----TARNVCFPTPI--GAQSVYYQKLA AE I QG--VSLYSFDFI-47
<i>B.brevis_GrsB_TE</i>	-----ILLN-EE-----TDRNVFLFAPI--GAQGVFYKLA EQ IPT--ASLYGFDFI-44
<i>hFAS_TEI_1XKT</i>	-----V-QS-----SERPLFLVHP I--EGSTTVFHSLSARLS-----IPTY-56
<i>S.venezuelae_PikTE_2HFJ</i>	RPQFASPEACSE-RLDPVLLAGG--PTDRAEGRVLVCGCTGTAANGGPHEFLRLSTSFQE-E--RDFLAVPLP-105
<i>S.fraidea_TyIGV</i>	RPAFGTA--DRQ-PVALVPLADG--AEDTGLPL--LVGCAGTAVASGPVEFTAFAGALADLPAAPMAALPQP-106
<i>Streptomyces.sp.CK4412_TmcB</i>	RLKYGDPAPEA-VPEIVRLGRG-QL--GPQLILVCPTVM--TG PQVYSRLAEELDA-G-RR-VSALVPP-94
<i>S.erythraea_DEBSTE_1MO2</i>	REHFDGSDGFS--LDLVDMDAG--P--GEVTVICAGTAAISGPHEFTRLAGALRG-I-AP-VRAVPQP-104
<i>A.erythreum_EryAIII</i>	RERSADPDVLAENV-VPVALGTS--G--DGPVLVCCAGTAAPSGPHEFARLAAALDG-S-WS-VLGLPQP-124
<i>S.rochei_LkmAIII</i>	RDHFTGPELDS-ASVDLVELASG--P--GEIRLVCVAGTAPVAGPHEFLRLAAAFEG-S-MP-VSALPQP-125
<i>M.griseorubida_MycAV</i>	RPQFDEASELAG-APEPVRLADG--P--GAIRLACVPAPMGMGGAHQYARFAERFRA-V-RP-VLAVPMP-133
<i>S.parvulus_BorA6</i>	RPAYREPAAELE--LPPLRLTSG--G--DEPPLFCIPSHLKGADPHKFLRFAAALRG-R-RD-VFVLRQP-134
<i>S.noursei_NysK</i>	RPMFDTPAELEE-LSEPVTLADG--P--GRPRLIFVSAPGATGVHQYARIAAHFRG-S-RH-VSALPLM-135

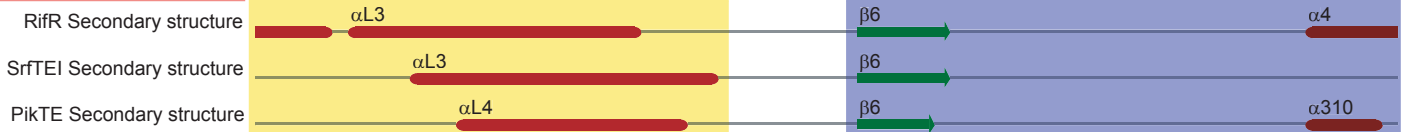
RifR Secondary structure

SrfTEI Secondary structure

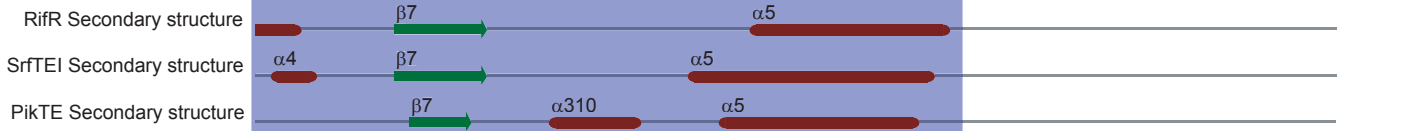
PikTE Secondary structure



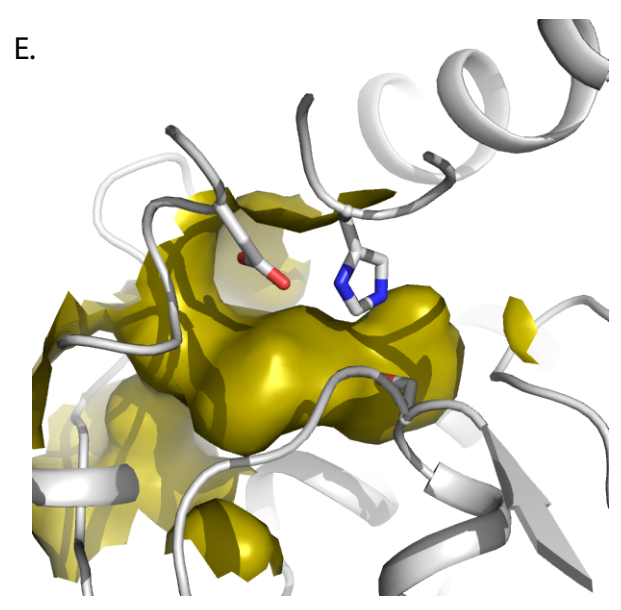
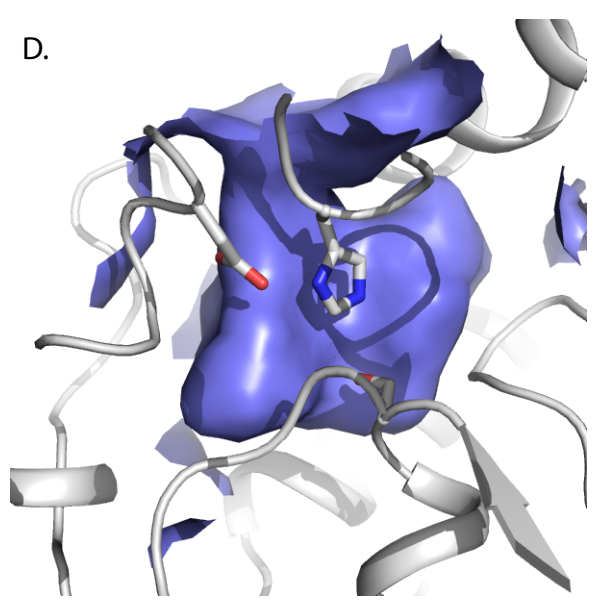
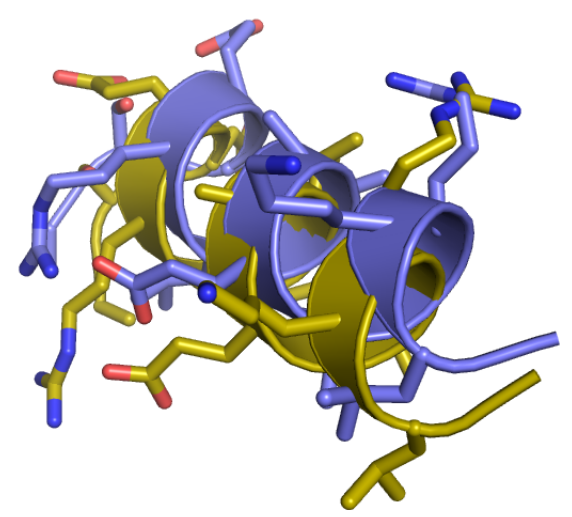
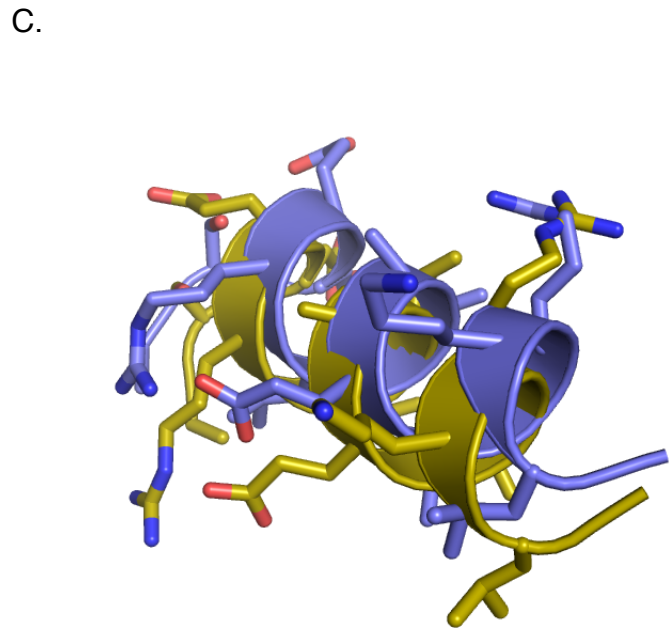
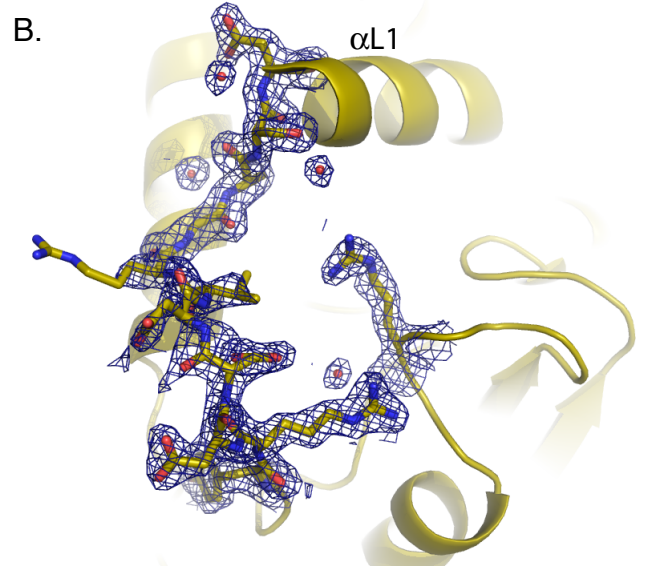
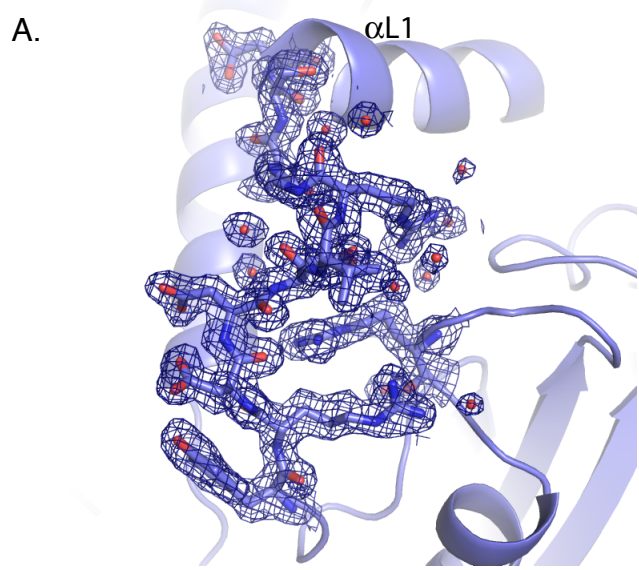
	300	310	320	330	340	350	360	
<i>A.mediterranei_RifR</i>	AMLADPELLAMVLPAIRSDYRAVETYRHEPG	--RRVDCPVTVFTGDHDP	-----RVS	-----VGEARA	210			
<i>A.noursei_NysE</i>	ALLGDEEILRMLIPAIRSDYQAIETYRCPDP	--VTVRAPLTVLTGDRDP	-----KTS	-----LDEAEA	211			
<i>S.fraidea_TyIO</i>	GALADEEVLRMVLPALRSDYAAVGRYRHVPG	--PRPGCLTVFTGDADP	-----NVT	-----LPEAEA	209			
<i>S.venezuelae_PikAV</i>	RFLQDDELLRVLPALRSDYKAAETYLHRPS	--AKLTCPVMALAGDRDP	-----KAP	-----LNEVAE	215			
<i>P.aeruginosa_PchC</i>	ELLEADALRALFLPILRADYQAIETYRRAQP	--IALACALDVLGEGHDE	-----EVS	-----AAEAQA	203			
<i>S.tendae_NikP2</i>	GLLDDPDMRSVFLPAVRDDYRIVQSYVPRAG	--GPLLRTDVTAFVGRQDE	-----AVG	-----VGDAGA	223			
<i>S.erythraea_Eryorf5</i>	AALAEALLAMSLPVLRADYVLRSYAWADG	--PPLRAGITALCGDADP	-----LTA	-----TGDAER	204			
<i>Kutzneria.sp744_KtzF</i>	EIAADPDVIGSLLDVLRADFELWERHVPPTG	--PPLDCPITVLAGDADP	-----RAP	-----RAELAA	214			
<i>A.migulanus_GrsT</i>	IVLQDAEMMSILLPRLRADFSVCGSYQYK	--N-DEPFECPIATFGGKNDN	-----GVT	-----YQSLEA	212			
<i>B.licheniformis_BacT</i>	ELINHEELFELFIPILKSDFKMVENYIQER	--NSKIDCDITVLNGKEDA	-----MS	-----KEDVSD	192			
<i>B.brevis_TycF</i>	DVLENQELLEFLPILRADFQAVQTYEMNPDL	--PRQVPMNMTLVYGTEDT	-----IA	-----LEDIWA	196			
<i>B.subtilis_SrfTEI_2RON</i>	ELVENKEVMSFFLPSFRSDYRALQFELYDL	--AQIQSPVHVFNGLDDK	-----KC	-----IRDAEG	199			
<i>Rat_FAS_TEI</i>	HLIEDQDVLRFMLPILLKADAGVVKKFI	--FDKPSKALLSLDITGFLGSED	-----T	-----IKDIEG	219			
<i>B.subtilis_SrfTEI_1JMK</i>	E-----AVKHGLKQKTHAFYSYVNL	ISTGQVKADIDLLTSGAD	-----FDI	-----PEWLAS	188			
<i>E.coli_EntF_2ROQ</i>	AQQGSTSTELFTTIEGNYADAVRLLTTA	--HS--VPFDKATLFAAERT	-----LQ	-----E--GMSPERA	189			
<i>B.subtilis_FenTE_2CB9</i>	-----AVRETVMQKKRCYQEYWAQL	INEGRIKSNIHFIEAGIQT	-----ETSG	-----AMVLQK	184			
<i>B.subtilis_Myc_TE</i>	L-----LTIPISEKIRGYLAYHNQL	INSGTINANIHHLLCDD	-----MTERG	-----	183			
<i>B.licheniformis_BacC_TE</i>	VEKL--LSDYLVDLV--MKSyv-YIQNTVTTGA	IGHISYIKS-SD	-----NQR	-----GENMMM	182			
<i>B.brevis_TycC_TE</i>	DFQLYAAN-EFVKQSFVRKTVSYVMFHNNLVNT	GMTTAAIHLIQSELE	-----ADEEAPVAAKWNSA	202				
<i>B.brevis_GrsB_TE</i>	DFELYFAN-EFVKQSFTRKMRKYSFYTQLVNY	GEVATIHLIQAEFEEEKIDENEKAD	-----EETKYL	EKKWNEKA	210			
<i>hFAS_TEI_1XKT</i>	SHQGLDR-QEL-SFAARSFY-YKLRAAEQYTP	KAKEYGNVMLLRAKTG	-----GAYGE	-----DLGADYN	250			
<i>S.venezuelae_PikTE_2HFJ</i>	-----DARLLAMGRYARFLAG-PRPGRS	SAPVLLVRA-SEP	-----LGDW	-----QEEGRD	250			
<i>S.fraidea_TyIGV</i>	-----DHRLTAMGAYHRLLLD-WSPT	PVRAPVLLHRA-AEP	-----MGDW	-----PPGDTG	245			
<i>Streptomyces.sp.CK4412_TmcB</i>	-----SQRITAQVWCLELL-RG--WRPEGL	TAPTLYVRP-AQ	-----PLV	-----EQEKPE	236			
<i>S.erythraea_DEBSTE_1MO2</i>	-----DTRLTALGAYDRLTGQ-WRPRET	GLPTLLVSA-GEP	-----MGPW	-----P-DDS	241			
<i>A.erythreum_EryAIII</i>	-----DTRLTAMGAYDRMLGG-WVPDD	QQVATLLVRA-VDP	-----IAAW	-----P-DDD	261			
<i>S.rochei_LkmAIII</i>	-----DTRLTALGAYHRFTST-WQPRDL	AVPTLLVRA-CEP	-----LGEW	-----PDGTS	262			
<i>M.griseorubida_MycAV</i>	-----TARLTGMARYARLLDR-CAVGE	PVPLFVRP-GKL	-----FVLD	-----GQPQ	276			
<i>S.parvulus_BorA6</i>	-----EAWLTAMGHYFGFD--WTPC	PVDVPLHVRA-GDP	-----MTGM	-----PVEGR	270			
<i>S.noursei_NysK</i>	-----SAMAHWFAMMTDIQAPAPTAPT	LLVRA-ARA	-----LDGF	-----R-LD	275			



	380	390	400	410	420	430	
<i>A.mediterranei_RifR</i>	WEEHTT-GPADLRVLPGGHFFLV	-----QAAPMIATMTEKL	-----	-----	-----	-----	246
<i>A.noursei_NysE</i>	WRGHTT-GDFDLKVLPGGHFFVSS	-----EAPAIIDLRAHL	-----	-----	-----	-----	247
<i>S.fraidea_TyIO</i>	WRELTT-GAFALRVFPGGHFYLND	-----QREAVCRTIETL	-----	-----	-----	-----	245
<i>S.venezuelae_PikAV</i>	WRRHTS-GPFCRLRAYSGGHFYLND	-----QWHEICNDISDHLVLT	-----	-----	-----	-----	254
<i>P.aeruginosa_PchC</i>	WSDASR-TPARLRRFPGGHFYLSE	-----GRDAVIEHLLRRL	-----	-----	-----	-----	239
<i>S.tendae_NikP2</i>	WAGATL-GRFTLRFPGGHFYLGE	-----HPDHVLHALR-EVL	-----	-----	-----	-----	259
<i>S.erythraea_Eryorf5</i>	WLQHSV-IPGRTRTFPGGHFYLGE	-----QVTEVAGAVR-RDL	-----	-----	-----	-----	240
<i>Kutzneria.sp744_KtzF</i>	WRACTT-AEFTTRFFTGGHFYLVD	-----SLAEVVG	-----	-----	-----	-----	244
<i>A.migulanus_GrsT</i>	WREQTK-REFSVCMPGDHFFLYE	-----SKYEMIEFMCKQLR	-----	-----	-----	-----	249
<i>B.licheniformis_BacT</i>	WKHHTS-GHFTAYYFEGNHFFLHH	-----HVEKITEIINHSLTA	-----	-----	-----	-----	230
<i>B.brevis_TycF</i>	WRDYCQ-GACQFFPVSGGHFFIHH	-----QTSPILEIINQVLKE	-----	-----	-----	-----	234
<i>B.subtilis_SrfTEI_2RON</i>	WKKW-A-KDITTFHFGCGHMFLLS	-----QTEEVAERIFAILNQH	-----	-----	-----	-----	237
<i>Rat_FAS_TEI</i>	WQDLTS-GKFDVHMLPGDHFYLKMP	-----DNENFIKNYIAKCLELS	-----	-----	-----	-----	260
<i>B.subtilis_SrfTEI_1JMK</i>	WEEATT-GAYRMKRGFTHAEMLQG	-----ETLDRNAGILLEFLNTQT	-----	-----	-----	-----	230
<i>E.coli_EntF_2ROQ</i>	WSPWI-A-ELDIYRQDCAHVDIISP	-----GTFEKIGPIRATLNRLE	-----	-----	-----	-----	230
<i>B.subtilis_FenTE_2CB9</i>	WQDAAE-EGYAETGYCAHKDMLG	-----EFAEKNANIILNILDKINS	-----DQKVL	PNKHGS	-----	-----	238
<i>B.subtilis_Myc_TE</i>	WTHSTA-HNYKEYELKGDHVTIFDP	-----QYIENMSTIRSIMKCI	-----EEQQLGEL	VPHEQL	SYMSRT	KSDRT	249
<i>B.licheniformis_BacC_TE</i>	WEKATS-KTFTVVQAGTTHMQMIS	SKSHPDILERNARLIHDIIIN	-----KTVKI	-----	-----	-----	229
<i>B.brevis_TycC_TE</i>	WANATQ-RLLYTSGHCISRMLAG	-----DYASQNASILKNILQEL	FILK	-----	-----	-----	246
<i>B.brevis_GrsB_TE</i>	WNKAAK-RFVKYNGYCAHSNMLGG	-----DGLERNSSLKQILQGT	FVVK	-----	-----	-----	254
<i>hFAS_TEI_1XKT</i>	LSQVCDG-KVSVHVIEGDHRTLL	LEG---SGLESIISIHSSLA	-----	-----	-----	-----	289
<i>S.venezuelae_PikTE_2HFJ</i>	WRAHWD-LPHTVADVPGDHFTMMRD	-----HAPAVAEAVLSWLD	IEGTEGAGK	-----	-----	-----	298
<i>S.fraidea_TyIGV</i>	WQSHWD-GAHTTAGIPGNHFTMMTE	-----HASAAARLVHGWL	AERTPSGQGGSP	SRAAGREER	-----	-----	304
<i>Streptomyces.sp.CK4412_TmcB</i>	WRGDVLAAAGQVVEAPGDHFTIIEG	-----EHVASTAHIVGDWLR	TEE	-----	-----	-----	279
<i>S.erythraea_DEBSTE_1MO2</i>	WKPTWP-FEHDTVAVPGDHFTMVQE	-----HADAIARHIDAWL	GGNSSSV	DKLA	AAALE	-----	294
<i>A.erythreum_EryAIII</i>	WRASWP-FAHATADVPGDHFTMMQE	-----HAGQVAARITDWEAR	-----	-----	-----	-----	301
<i>S.rochei_LkmAIII</i>	WQSTWP-FPHTCVDVPGNHFSMVQE	-----HAGVAER-IRTW	-----	-----	-----	-----	298
<i>M.griseorubida_MycAV</i>	WRASWR-RMDTVREVPGNHFTMLE	-----EVAATAEVVSW-	IAGLR	-----	-----	-----	317
<i>S.parvulus_BorA6</i>	WQARWN-LPHTAVDVPGDHFTMMED	-----HAPRTADTVHDWL	GTAVRR	PERTR	-----	-----	318
<i>S.noursei_NysK</i>	--TSSV-PADEVDRIDADHLSLAKE	-----HSALTAQAI	EGWL	AEL	PDPAA	-----	318



Supplementary Figure 1. Structure-based sequence alignment of TEIs and TEIIs. PKS/NRPS/FAS TEIIs and TEIs were first aligned using the EXPRESSO(3DCoffee) server (1), then manually edited based on 3-D structures. Conserved residues were highlighted with Jalview 2.4 (2). Asterisks mark the active site residues of both TEIs and TEIIs. TEII sequences are highlighted in violet, FAS/NRPS TEIs in green, and PKS TEIs in red. The following TEIs were aligned: *A. mediterranei*_RifR (AAG52991), *A. noursei*_NysE (AAF71777), *S. fraidea*_TylO (AAA21345), *S. venezuelae*_PikAV (AAC69333), *P. aeruginosa*_PchC (CAA57967), *S. tendae*_NikP2 (CAC11138), *S. erythraea*_Eryorf5 (AAA26497), *Kutzneria.sp744* (ABV56586), *A. migulanus*_GrsT (P14686), *B. licheniformis*_BacT (BAA36683), *B. brevis*_TycF (AAC45933), *B. subtilis*_SrfTEII_2RON (AAF87217), Rat_FAS_TEII (CAA68411), *B. subtilis*_SrfTEI_1JMK (1JMK), *E. Coli*_EntF_2ROQ (2ROQ), *B. subtilis*_FenTE_2CB9 (2CB9), *B. subtilis*_Myc_TE (AAF08797), *B. licheniformis*_BacC_TE (AAC06348), *B. brevis*_TycC_TE (AAC45930), *B. brevis*_GrsB_TE (AAC06348), hFAS_TEI_1XKT (1XKT), *S. venezuelae*_PikTE_2HFJ (2HFJ), *S. fraidea*_TylGV (AAB66508.1), *Streptomyces.sp.CK4412*_tmcB (AB194380), *S. erythraea*_DEBSTE_1MO2 (1MO2), *A. erythreum*_EryAIII (AAU93805.2), *S. rochei*_LkmAIII (BAC76491), *M. griseorubida*_MycAV (BAC57032.1), *S. parvulus*_BorA6 (CAE45672.1), *S. noursei*_NysK (AAF71768).



Supplementary Figure 2. Electron density and model for flexible linker region for form 1 (A. – experimental density contoured at 1σ) and for form 2 (B. – $2Fo-Fc$ refined density contoured at 1σ). C. Stereodialog of α L1 helices from form 1 (blue) and form 2 (gold). Form 1 (D.) and form 2 (E.) substrate chambers have unique shapes, and different access to the exterior of RifR.

References

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