

FIG. 1A and 1B

Fig. 1A

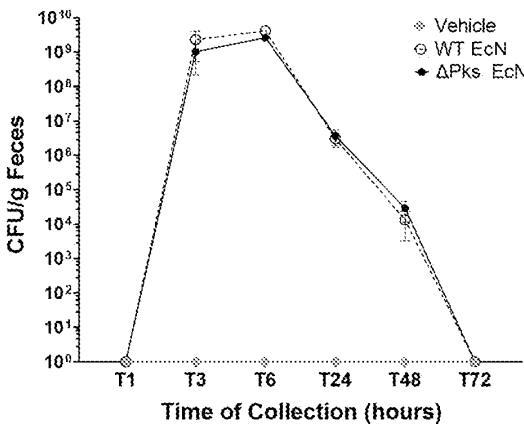


Fig. 1B

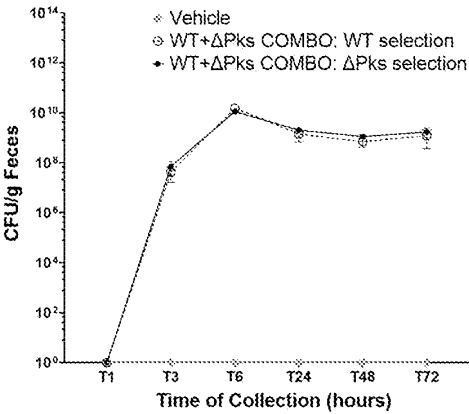


FIG. 2

Fig. 2

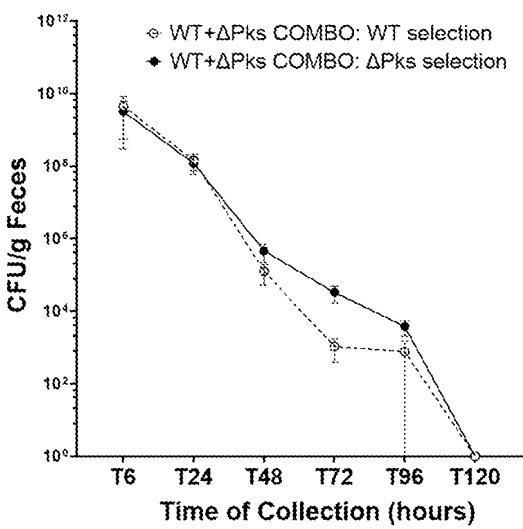


FIG. 3A

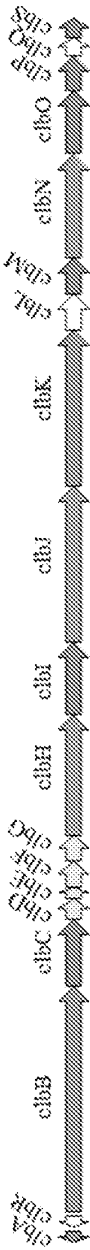


FIG. 3B

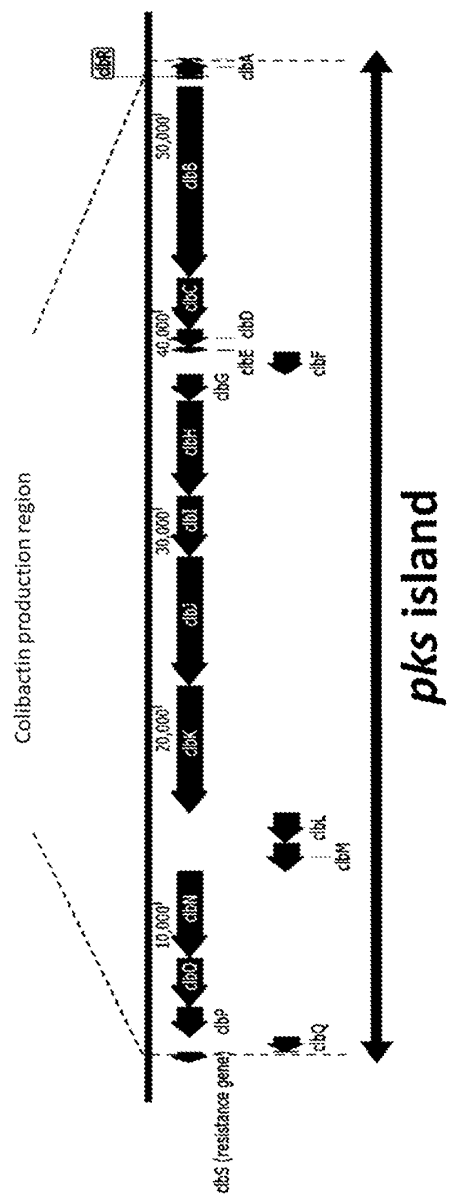


FIG. 4

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CTGGTTTCCTATCTGATTGGCTGGGGAGAGCTGGTGTTACACTGGCATGACCAAGAGGCAAAAGGAAAACTATT
ATTTTTCCTGAGGAAGGATTTAAATGGAATGAATTGGGGCGTTAGCACAGAAATTCTACCGTGACTATGAGGATA
TTACAGAGTACGAAGTTTTATTGGCACGGTTAAAGGAAAATAAGCAGCAACTCGTGGCTTTGATTGAACGATTCA
GTAACGACGAGCTTTACGGTAAACCTTGGTATAATAAATGGACCCGAGGTCGTATGATTCAATTTAATACCGCCTC
GCCTTATAAAAAATGCTTCGGGGAGGTTAAATAAACTGCAGAAATGTCTTGCAGAATAG

FIG. 5

>clbQ

MSNISLYCLPYSGGSAAMYYKWRSVLSDNITLRPLEPAGRGTRIRQPLCLTMVDAVADLYQQFVKHYTGGDYAIFGHSL
GGIMAFELVHYILDHGHDMPCALFFSGCRPPDRASHEVILHTLPDQAFMEEIVKLGCTPVDVFRNKELMTIFTPIIKNDY
RLYEQYVFQAKARTLTCPIVLFHGDADNLVMDQDELLAWEKFTTRKTRTIIFPAADHFFVDKHFEQVVGYNQTIESTLEIV
G*

>clbP

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ASQKANTLDTVYELGSMKASTGLVVQILIQEGRLRQGDDIITYLPEMRLNYQGKPSLTVADFLYHTSGLPFSTLARLEN
PMPGSAVAQQLRNENLLFAPGAKFSYASANYDVLGAVIENVTGKTFTEVIAERLTQPLGMSATVAVKGDEIIVNKASGY
KLGFGKPVLFHAPLARNHVPAAIYHSTLPDMEIWIDAWLHRKALPATLREAMSNSWRGNSDVPLAADNRILYASGWFI
DQNQGPYISHGGQNPFFSCIALRPDQQIGIVALANMNSNLILQLCADIDNYLRIGKYADGAGDAITATDTLFVYLTLLL
CFWGAVVVRGAFRVYRATAHGPGKQQRRLRVRDYIALAVPGLVAAMLYVAPGILSPGLDWRFILVWGPSSVLAIPF
GIILAFVLTLNHQIKRILLHNKEWDDE*

>clbO

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KLGFTGPAVSVQTACSSSLVAAYLACEGLLTFQADVALAGGVTLGFLQAHGYSPQGDKLVSQDGHCAFPSEATGTVYS
SGAGVVVLKRLEDALRDQDRVYAVIKGGAVNNDGGRRLLGFVAPSVGEQVEAINTALAAAEVVPTDIALIETHGTGTPLG
DEIELEALHRVFAPACAPHSIQLGAVKANLGHVGASGIVSLMKTALTLYTGLVPPQJNLVNHKKLLQPASPFYLSDVVT
SVPQTKRIHATVSSFGLGGTNAHLVLQNWCEPAQAVQENERLFFFSAKTPLALRQQLDAHYYHALATYAEADKDRIAY
TLAQRRAHFYPYCALAADSVALRASLAKLRDADMSFTPINMETTLVFLYPRDDKLESALHLLACQPNLRQRHQRLS
QDVAQICEPADWTPALRQFIQVSLSEWVIEQSISPVQHIGYLTGAAAAQYVARIISLENVQQVIVAETTPEQTLAGNS
ELSEILANLAVTEGTLMLEIGRAGTFSILYHQHAQWVGQTVFSPMLNTDTPEDILPLLGLTWQRGVTCICLPEMPAVQTIG
LPGYSFDRVRYEIQSSDARENAMLPSVYLSVSDFVEKTWRSLLCIDHYDEHAVIFEYGATSMHVISFVDSCHNHIYKIGLTA
ADIYARPAIREHSEFISECVDGIL*

>clbN

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WRDIRHLTFSPDYDKENLRPAAIETVDEWFRQPFTLLAHDLEFVFTFCGEQYSGYLFKAHHGIADGWSMALLSNHVK
RAYEQQDVPDDASPAYSAFLAQQSYQASTRFVDRGWWRDYIDEYRDCFPDSSPIVTEGISCSTWLEPAMINRLYR
LCNRYGCTLNTLFIALFALYRARVWGEEKGVIGVPLANRHTREARRCFGMFTNQLPLAYRLVRTERFCERVAFFQRELKR
GFKHSKYPITLNFQDLAEQGGGKLRAFDYCVNYNFTYERHIAGAAQRVESYYSGEQSYKLQIVLQTVNNHKESLRLSLE
ALRSAFTPHQLTAMKNGLLDLVTALDRQPDARLGDLEVYPAPHVALACGSLKPSFTSRFAAQVVEHGDRTALIDNEQSL
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ARKAAALFPQAVIYNEYGPTEATVGCMIYRTGQETLPSLPIDMAIDGCQVAICSPWGCVPPEGETGELVIYGASVTQG
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>clbM

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SIMLIGVMMGLFQGAGKIMVIMKASLLGALVNIMLDPIMIFVDFGVKGVALASFLAQLSMVAYFIYTLMLGLHIGLSIRI
ALRPFSWKIYREFLSVGMAQMLMQLIIVGIVYINFFIVRLDVNAMAFTLTGRIDYFIITPMLAIATALLTVGQNWGH
GNVTRTLNAYWAAVALAFSIVLVAVMHIVLAPWMYPLFTRVAVSDYAVLQTRIMALALPFVAISLLASEYYQAIGKP
WYSVLLTLMRHVFISVPVVYLLAIVLEMIRITGVYFGAMSGTFVAALLAWRLLRLSPRLLRWNEAVRSQHLDMEVAP*

>clbL

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GGSSGGA AVA AADFTPVEFGSDLFGSLRIPAHYTGVIYAHRCSLGLMSVRGHVPGGGPQATDEPD LSTAGPMARSAA
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DALFDIAVKLSGRLVSTALNGRQRLTAGLAALGFRLVGKLADVPEGITSYYQGMLKDSGEQRNTDKLRHEYSRVIETLFA
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>clbK

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TNPLLPQDPVCSLMLDDAASDANRTALEALGQLWLAGVSLDWRWVDAERMLGSQRIALPGTVFTPQRYWVEAVRP
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HSM LRAIVNDDGMQQILPNVPEYHVAFYTTQCEDAFQQRCELRLDTLSHQ MIDCSRWPLFQMEVVVD PQQKARLH
VSI D LLIADAWSLELFIRELAYHYRHPQAALPTLTYSFRDYVLTLSYKTEKTPQFERARDYWRARIETLPPGPRLPLRTDPTKL
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GTPKGV MIDHRAAMNTLEDINERFGLNAQDRVFLSSLSFDLSVYDAFAPFMVGAALVLEAGREKDP RHVWQTVMA
HGHVS VWN AVPALMQMLCEYHSGDRMSYPTLRLALLSGDWIPLTLPEQMRERLNETMDIISLGGATECAIWSVYPI
GEVESTWTSIPYGRGLRNQPVYVLNAQLEECPVGVEGEICIGGMGLAQGYLND AEKTAASFVWREASGERIYRTGDRG
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GPIQVDSALQQRLVALWQEV LGVSHVSAEDDFSLGGSSIELVRIQQALEAIIGQEIPVDLFR LPTIADVARYLDEQLHNL
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>clbJ

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LQDAPLLSTFPSLHPRPAQPSTHGSRSF SITLDETL SLALKHVARTQETTPFVLM LTA FQLVLMRYAQQQRLVIGMPVSGR
IRPELQSSIGYYASTAVIYTD FNGVEVGREALQRVKASVKETQGRQQLPFENLVNMLDLPRSLSHSPLFQILYIYHNH VTP
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ERAADSFRMIPLIADYRPTLMQATPSFWHG LLMAGWRGDPEL CVLAGGEALPTKVAEELLRCCGSLWNLYGPTETT IW
SLKSQITQ AENITLGAPIANTRIYILDNEGHPVPQGV DGELYIAGDGVAQGYDGGPELNAQFFLSEPGVPGGRMFRTGD
LVRSDAQGQLFFVGRKDSQIKLRGYRIELGEIERTLARHPHVDAAVVACIERAPLHKALAAFIITSEPPSLFEQLKNELRQQ
LPDYMVPTLWQRVADFPNTDNGKIDRKRLAENFVADSSLVSPQTQALSDEQMLLALWMRYLPIKNVDPECDFFRLG
GHSL LAVTLVAEINRTFHCALT LKDIHYSTLRALSARIAQQSITDAAASQDDWVIVHDPEHRHQPFPLTDVQRAYWLG
RQTGATS IATHIYHEFDVEHFNVTRFTHAVNALIARHEMLRARVLPDGTQQILA QVPAYQLEQRDLSALSPNARNDAL
MAIRDRLSHHVHPADRWPLDFSYSACTAQHGRLHFSLDLLIADALSMRTLQQELMMLYREPHVSLPLLPFSFRDYVQ
ALLVEQASEAYARDQAYWQRALPQLYGPPTLPVQGD LAQLSAIRFVRRRHRLSAHNWGVLSALAQRTRITKTALLTVF

SQVLARWSLSPTFTLNLTFLNRPQGYPNAEAVIGDFTAVSLLNVCYDSQHSYAHNAQRIQVQLWEDLEHRRFSGIRASE
ALIHSGRFHAMPVVFSTMLDIDGETTAQDPRDTRFTLCPDANITQTPQVWLDHQVIELAGELHFNWDAVEQLFDDT
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STAADHVARALLALGVQHGDRAVAVVMEKGWQQIAAVHGILRLGAVYLPVDPVLPQRRQLLLTVGEVRVQVTQPGLT
QLEPSLPVLIIDDGMLDTPAAPLPEVAGDVTDLAYIIFTSGSTGTPKGVMIIDHRAAMNTLEDINERFGLNAQDRVFGSS
LSFDLSVYDAFAPFMVGAALVLEAGREKDPRHWTVMAGHVSVWNAVPAALMQMLCEYHSGDRMSYPTLRLALL
SGDWIPLTLPEQMRERLNETMDIISLGGATECAIWSVYPIGEVESTWTSIPYGRGLRNQPVYVLNAQLEECVPVGEI
CIGGMGLAQGYLNDAEKTAASFVWREASGERIYRTGDRGRYFADGQVAFGLGRNDTQVKVNGYRIELGEVKSHLEQLD
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RMSQSTSQKSRAALHASPYEQQAALWCEVLQREQIGLNDNFFEAGGGSIQIVLLHRRIEEIFKVTVPJAEFLRLTTVKRI
AGYLQAMQDNARAVNQTTQRDASRSRAQQRLVRRHQQR*

>clbl

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ITTTIAYHLNLRGPAITVQTSSTSLVAVCVACQSLLTWQCMAIAGGVTLGPPAKTGYLSQEGGITAADGHCRAFSNDS
SGFVPGTGAGLVVLKRVDALRDGDNIYAVIKGFAVNNDGSEKISYTAAPSVDAAQARAIAQAQRLAGLTPQDITYVEAHG
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YINTTCQPWQPESGIRAGVTSLGMGGTNAHVLEQAPAVDLQARAPVPAYSILPFSAKTDSALSSGLARFADFLQHE
LPDRDLAWTSLQGRKAFAHRAALVTRDLHAAGTLLQQAATAPFARGVAQTQLGLGLLFSGQGSQYQRMGHQLYQV
WPAYADAFDRCATLLEREYQLDIRHELFRAEVSQAQGERLAQTCLTQPLLSVEYALALQLWLSWGITPTVMIGHSLGEW
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QNIINKRLHTSHAFHSSMMQDAAQALRQAFENVRNPPTLTIISTVTGAHVSADTLTPDYWIEQMLMPVQFSAALQE
AQATFDVDFLEIGPGATLTQLTNGHALGDRLAFSSLPAGARSSDEHKHILDTVAALWVRGHNIDLSAFAGEQPRRVSLP
TYAFDKIRYWVDSPEEQRSVTPVADAGSVIPSESVRRQPRPAFSVPYAAPESKTQRLVAICEALLGIDGLGIDNFFE
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>clbH

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VVNGYGLTESGICSTYFPVAKRREQETGALPIGRPIQNTQAYVVDDAYNRLVPPGACGELCFSGLGISPGYLDARQDPERF
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FYCSVNGVALDAQQLRVWLSRLPLHMLPLLYVPLSAMPLGVNGKIDPQCLPLVDLRQLEGPGEYVPPATELEQRLAEI
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>clbG

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AERETRQQVGIACFNSPQQFMLS GQNSAIIAAEQYLLDHDRQVEVVPLIGGVPHYSPLLKPCGQQLRKALDRCEWRRP
CCPVISNVNAQPYPDVTPVQWLEQQLSQP VQWQRS LTYLTGHLSPIAIEGPQSVLKNLLENRY PAPVYAFDNRHDR
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>clbF

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ACGSLGLCRAAVDVAARYIRQRKQFKRRLF SHGIVQHLFATMLTQTRSAQLMCFSAAEYRETLHPAMINQILMAKYVA
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>clbE

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>clbD

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>clbC

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GTRIGDPIEFAALTEAFDTSHRQYCALGAVKANIGHTHAAAGVAGLIKTALVLHHRITIPPLANYQMPNSKDLAHSFYIP
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ACQ*

>clbB

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LSYHHIVMDGWSLSLFIKQLQLYGAADVSGVRDSDAIIPSSLKPLVDTLARRHTFQHDYWAAYLREGTPTCIVPLSYQH
TDTEAENNSYVNQTNHVEINLSPDVCQKIQTLCSDYRITPAVIFYAWGILLQRWCYADDVLFGATISGRNIPIDGIEETL
GLFINTLPLRLRDDGATLLQHLQRMHQTIAHYSNEHDALASIQRLVHKEGHAGDLFNTLVVLENYPVDMTLLSCASPV
AIRHLSVHEQTHYPLTLTITQQGFRFSIAYALNYLTNNMAQALLMHSYLLLEQLVDNPQRPIAALVNLSPCQQAQVLQ
PYLERMACRDWDSQSNVIEQFHQVAATSPAQVAVVDELALTYSELAQAQELAAYLVQQQVMVGDVTGIIISERRVN
TVVAIIAIMLIGAAVYPISPDYPVGRMQEIIDDSGLALLLVHGKPLDALNVAQSDLCAPVAPSVFVITPDSRAYVIYSS
GSTGPKPGIAVAHRGLRLLIQGDSPKVESGETTLLTCPFEFDVSFEMWSTLLNHGKLVLLSKQALLDINHRRITIADEQ
VARAWFTSSLFNSYVAEGADFFGMLQHITVGGAEVSAWHVNDVMQKYPHLVVTNGYGPTEINTFTAYRNLQPA
RVPIGYAVPGTSLYITDLHGHLPIGATGELVAGGVGVAIGYQNNPALSATVFPDPFIPGGMMYKTDYARLLDDGCV
DCFGRKDGQIKINGQRIETGEIEQRILLECSGII EAVVVPYRVRETLHIAAVVCVND SYDEVEVRGQLADRLPPFAIPESLVV
VTEIAKSHSGKADLAQLRYLLPATQCNVSTTISEVHSDMEHALHAIWQRVLD RQDIDSNASFFALGGTSLD TIRVKGDI
KRQLGLEIDITDLFKYPTLTALAHFLDTAVSPEDAIPTRAVVYS DMPVAIVGMAGRFPGAANIAALWTLVVGESGLTLF
SDEELRAHGVTPDTLKQANYIKTKGIVDDHEWFDADFFGYTPNEAECMDPQIRLLHQCCWQTL EHA GCDPATFTGAI
GIYAGLLTSPHWLNAV MQD TTDSTALYKASILNIH SVTALIAHALNLTGPAVTLDTACSTSAVAIHQACIALNRNDCDAA
LAGGVSIEMPAYRGYEHYEGMINARDGVCRPFDSQASGTVTGDGLGMLLLKRLDDALADRDCIYGVIKGS AVNNDGN
NKIGYTAPSVIGQSTVIRTS LRRAGFDS SIGLVEAHGTGTVLGDPIELRALNEVFGPTPVPFCVVSALKSNIGHLNSAAGV
AGVIKTTALHHQVLPPTAHFRQLNPAIDLSRSALYVNQQVQWPSTRPRRALVSSFGIGGTNASIALEAHQHEDDPSA
TGVRDSYLLLFSAKTPAAELRVASTLEYVKHGVGVRLPDVAYTLQTGR TAFDHRRAYLVSRGSKIDLSCATILQAEIFNG
QRTTAEICFMFPGQGSQYHGMASALYAHQPMFRQHMDRCFAAFQRYSTVDLKALLFDD ETRDIDQTQFTQPALFC
VEYSLARTLIDLGITPDSMIGHSLGEYVAACIAGVFTLEDALHVIEARGRLMQSMRPGSMMAVYLSREQLTPWLAAERG
IELAANNSAHFCVVAGEQA AISRLSTRLVEGGIQHRRKTS SHAFHSAMMTPMLHDF AQLLGQIPMHAPHKRFISNVSG
TWITEEQATSPDYWVQVVRNAVLFSEGA AQLLVQPTLFIECGPGNTLSTFIQGHNQYSDQPTLLTLRKANAAIDDEHM
LHRTL AALWVRGENIDWRRFNQTALGKHIPLDPYFEQTYYYRYGAALSGYRQYPNPLRRPQDEWLQRVLWRMHDT

SLREAFYAPGELIIISADGDKLQQTLMSGGVDSITMPLPISSEDDVWDNDRILTHFDICALLAHKTYRQLHCLYAPGAEA
GSSLTQSLSGLYRVARWCMHSTTPLASLTVLTHGAFRVQEEDNPEPTLAALSGAVNVFAQELHPTVRLIDIDAQSSDE
NLNLLTQRLAPKQETVMALRQGMLYLRRFIPTRLLAHLPPQTGCIPGNVLWIIGGEKGIGRMIGEALAQREGVRVVLSS
RTGYHHEAVQQDALDVIHCDVTQAEAVRACLATLLERYGRLDGVIFAADATTTTLHQLSESALRDTLTVKERGTANVL
HALAQRNLLDERLLLLFCNSLAAVNAEIGQTGYATASAYLDALAQQLRTRYKVNALSIGLDALREQGMLLDAINGSEYDV
LRGLRPLMTGTLLQAYKQQGADTSYARLSPESDWLLDEHRISGIATLPGTGYLALAYEALRHYFVQDQICIDELVFLAPL
TVMDNCSVDVFVDISPNGQGVSVEVKSMTERFSGTLTTHARGRATRLMVDDNVCDLTGLMREMHTITPPTKELSST
HFHYGPRWHSVQQLYGNTAQTQVFATLALPTVAANDTIALHPALLDIASSVVEQLPGFHTDSVPFLYQDLRLYRPLPNT
LHVALTVNRHDEEGDSYAFTLYDMAGEMVARCAAMVKRKVQLHIQDVDDTRLRVPSADNYQLRLAAEGEGAGKLA
LCPTPRLALGDSQVEIEVLATGLNFKDVLFTTGLLRQQPGEAPLQLGLECAGRITRVGKNVTEFAPGEDVMAVLNGGFV
QYARVESDCVVRKPAHCRIEQAAALPIAYLTAYYALVVRANLQPGERVLIHSAAGGVGLAALHIAKRCGAQIFATAGSEQ
KRDYLLSLGVHAVADSHDEQFAATLLTASDGQGMVDVILNSLTGRLLDASLALLAPLGRFLELSKSDIVEDKALPMRFFAQ
GGTFIPINFHAAHGAFSRYLQQIVAWIDDNTLPLPCKSVPLPEVARAFATLTTPQHIGKVVTTHRTAAGMDRLNAMIA
ERRLGGYALSMSNAEVMRQLWPILNTRSPWAQLLSPRAIDRLARGNRVDRGVPSAANDTITQQTVKKRPRPEIGVPY
SPATREVERVLCQILEEYLGDRVGIDDNYAELGATSLDMVQLSGQMARHYPQVSVVSLYNHATVRQLATFCQPPEGE
SNAPSPQPAVQTNTRANQIAKRALQIAKNTARSHTSLH*

>clbR

MDKFKEKNPLSLRERQVLRMLAQGDEYSQISHNLNISINTVKFHVKNIKHKIQARNTNHAIHIANRNEII*

>clbA

MRIDILIGHTSFFHQTSRDNFLHYLNEEEEIKRYDQHFVSDKELYILSRILLKTALKRYQPDVSLQSWQFSTCKYGKPFIVFP
QLAKKIFFNLSHTIDTVAVAISSHCELGV DIEQIRDLDNSYLNISQHFFTPQEATNIVSLPRYEGQLLFWKMWTLKEAYIKY
RGKGLSLGLDCIEFHLTNKKLTSKYRGSPVYFSQWKICNSFLALASPLITPKITIELFPMQSQLYHHDYQLIHSSNGQN*

>clbS

MAVPSSKEELIKAINSNFSLNKKLESITPQLAFEPLLEGHAKGTTISVANLVSYLIGWGELVLHWHDDQEAAGKTIIFPEEG
FKWNELGRLAQKFYRDYEDITEYEVLLARLKENKQQLVALIERFSNDELYGKPWYNKWTRGRMIQFNTASPYKNASGRL
NKLQKCLAE*

FIG. 6

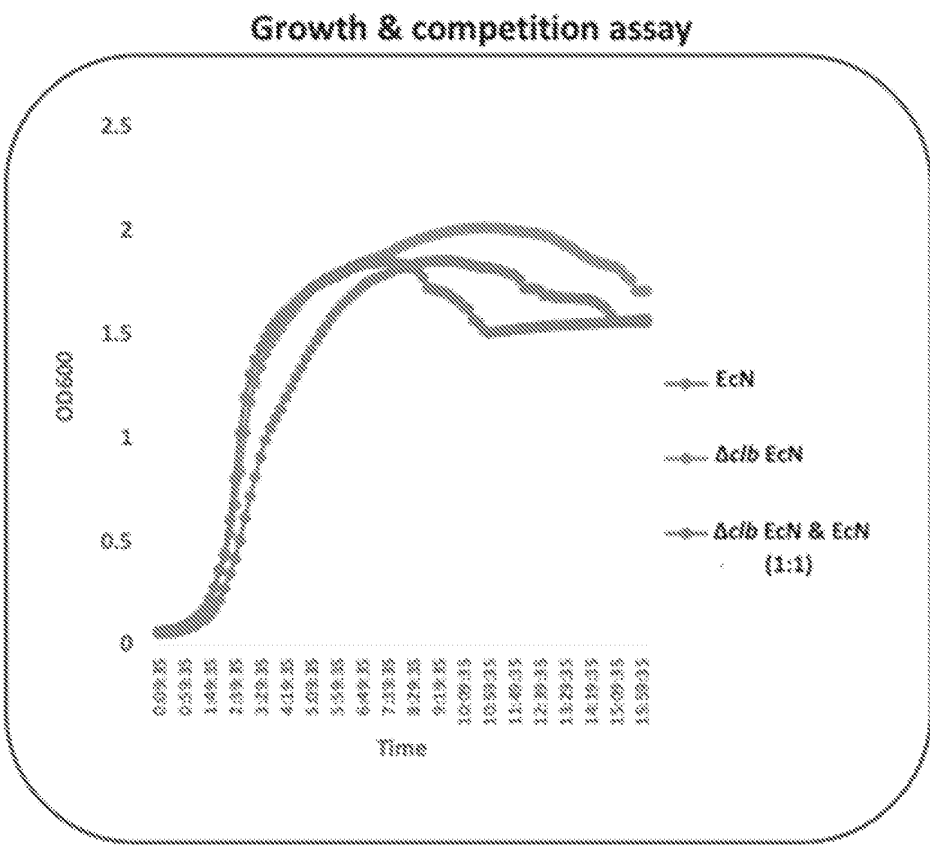


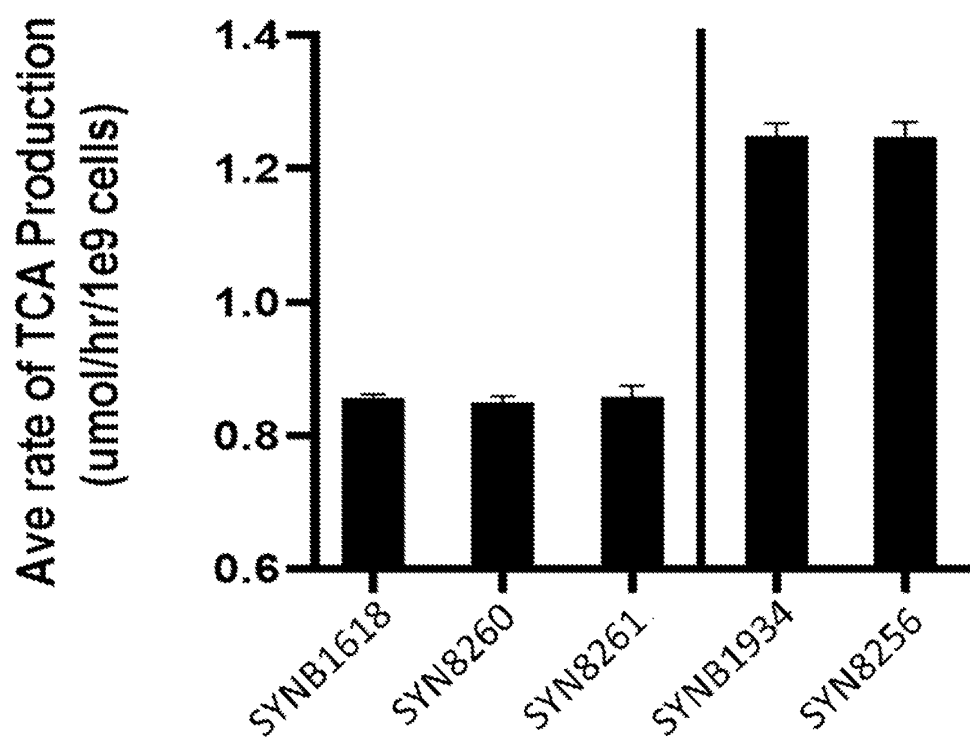
FIG. 7

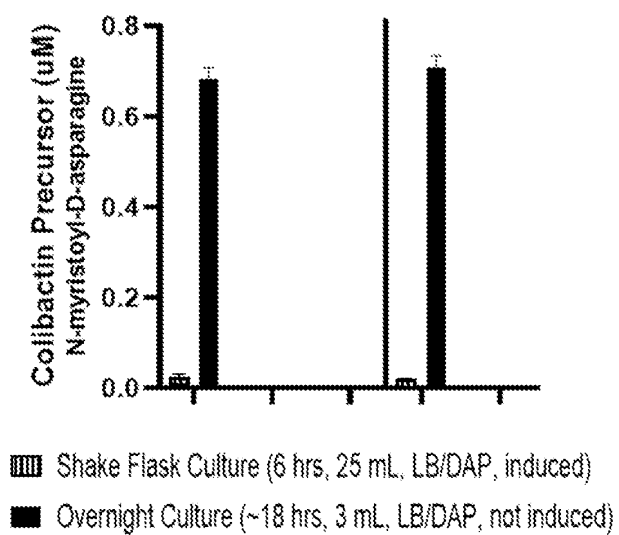
FIG. 8

FIG. 9A

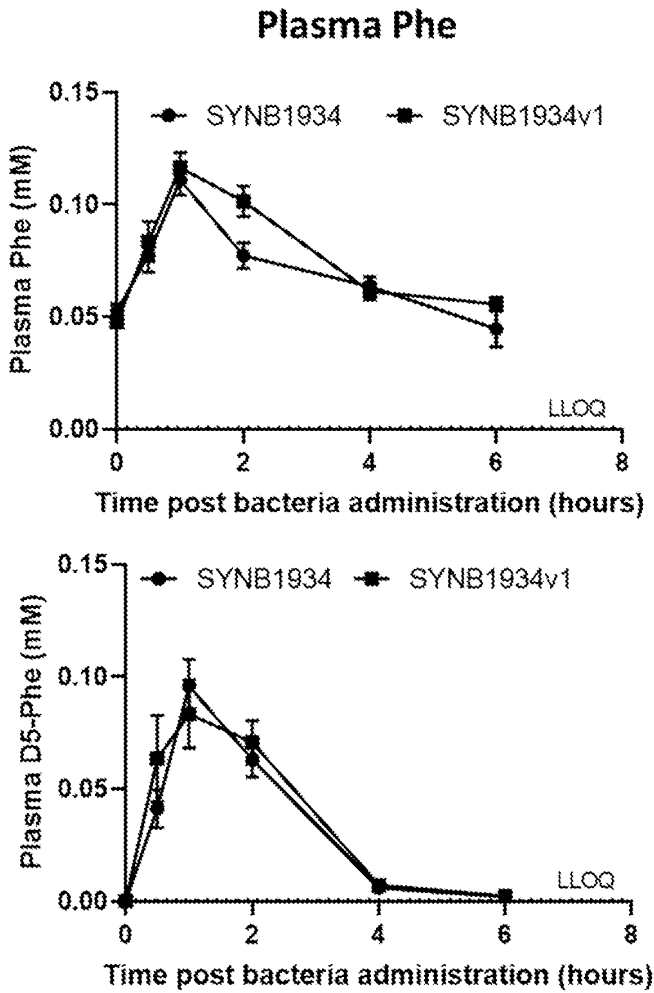


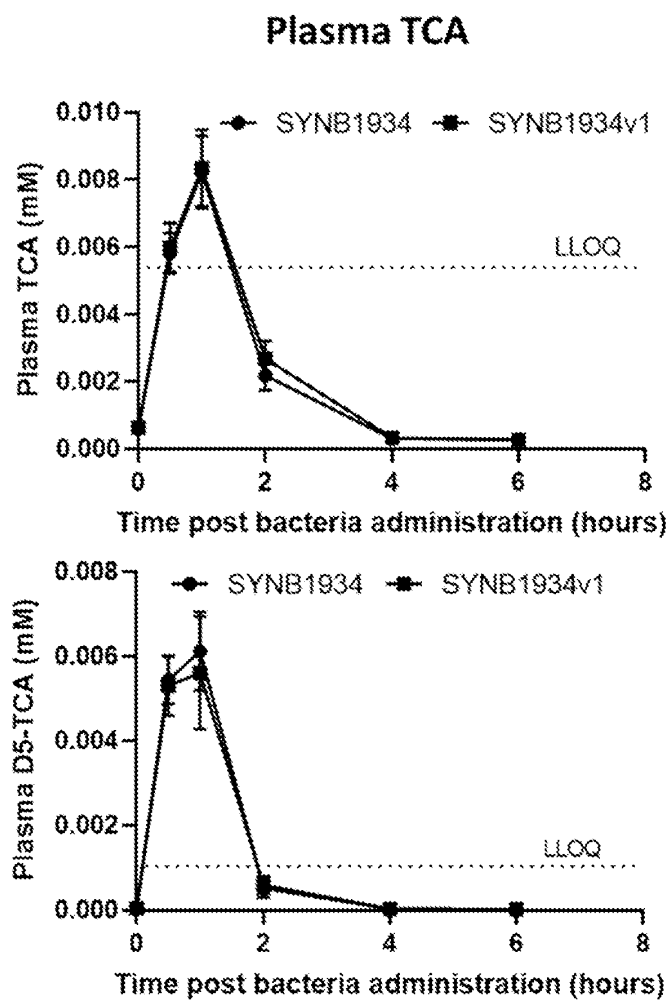
FIG. 9B

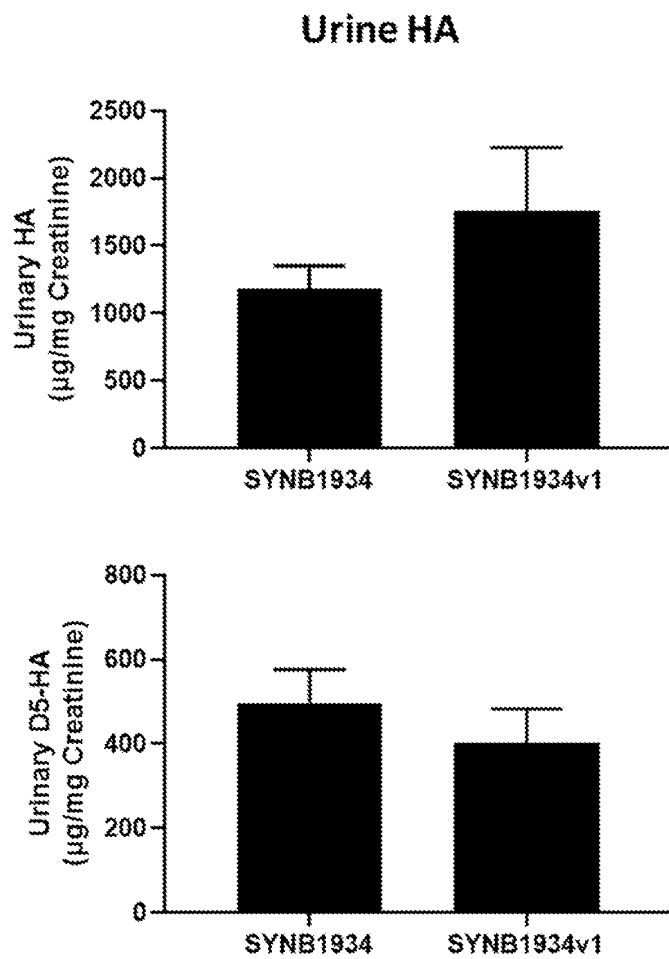
FIG. 9C

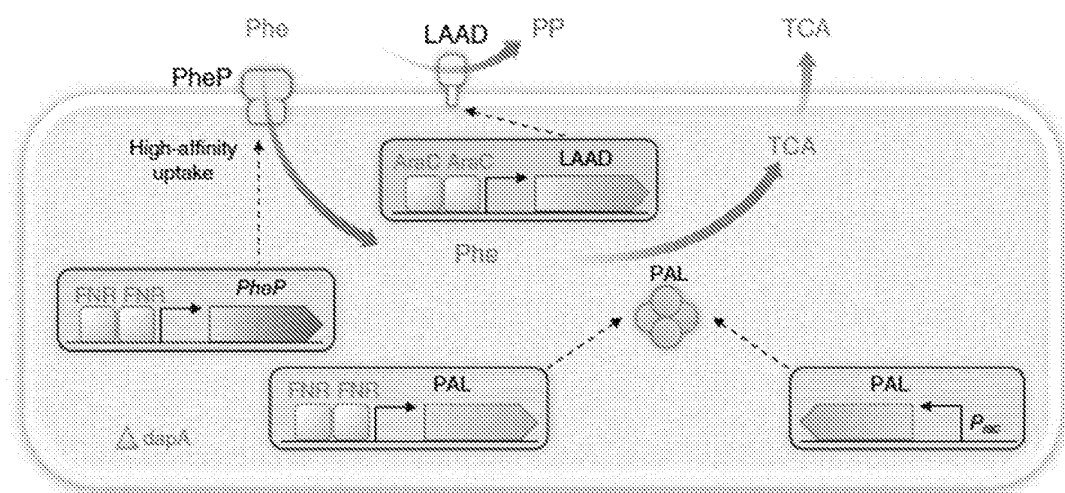
FIG. 10

FIG. 11