



DNA and amino acid sequence of genes and proteins of *petI* and *petII* operons of *Leptospirillum rubarum*.

1. DNA sequence of putative Pet I operon of *L. rubarum*

gggtcccggaaggcagcgtgaatctcctccctccaccatccgggacaggagggctctccggttctctgtgaaagctgctgagtcctccgaga
acttccggcacagaaaaaagggaaaaaacccgcttccctcaaacgtccggaactgacgtccgaggaagctcttatcagaacagggaggga
atgATGCATCTACTGGAAGGAAAAAGGTTTCTTGTGACGGGAGTGGCAAACCGATGGTCCATCGCCTGGTTCAGTGGCAACGGCCATTATTTCG
CGAAGGAGGTCTGGTGACCTTTACTTACCAGGGGAAACCCAGCTCGCCAACTCGAGAAAAATGCTGGGGAACTTCCGTCAAGGAACTC
CCCTTCTGGTTCCTCTGGATGTTCAAAGTGACTCTTCTGTGCAAGAGGGCGGTACGGCGGGCGGAATCGGGAGGAAGACGCTACGATGGACTG
GTGCACAGCATTTGCTTTTGC AAAAAGGGAAGAGCTTGACGGAGCCTTTCTGGATACAAGCCGCGACGGATTTCTTGGCCCGAGGAAGTGAG
TGCCATTACTTGTCTGCTTTGCCGCGCCTTTTCCAGGCTTCTGAACGATGGTTCGTCGATCGTGGCCATGACCTATCTGGGTTCGGA
GGGTGTGCCCCACTATAATGTGATGGGGCTGCAAAAGCGGCCTGGAAGCTTCGGTGCCTATCTTGCCTTCGAGCTCGGCCAGCGTTCC
ATTCGTGTCAATGCATTGTCCGCGCGCCCGGTCAAAACAGCATCCGGCAGGGCAATCAAGGGGTTTACCAGATATGCAAGAACGGGTTCCGG
GCAGGCCTCTCAAAAAATCGCTGACAACAGAGGATGTGGGGGATGTTACGGTTTGCTGCTCTCAGACCTGTTTTCGCGAGTTACGGGAG
AGCTGATCCATGTGACATGGGGTACCATGCATTGGGGATGGTCTCCCTCGAGCAGGGTTAGggggaaacgtccgaaggaggagaaagaga
gcggacaatttagaaaaaggggattcATGCGGCAGGAAGTCACTTTTCTGATGGGCATTCCAGTCCAGAATGCCTCGGGGCAAGTCATCGG
TACTCTGGAAAGCTCGTTTCTGAGACCGGAAAAAAATTACGGAGATTGTCGTCGGGATCTTTCGGGCTCAAGCGGCTTCTCTCA
GTAGGGTTTCGGGAAATATCCGAACAGTTTCTGGTGTCTCAATCAGCCCGGTCTTCTGAGGACTTGCCGCTTTCGATATTTCCAGTTTCGAG
GAGGTCCCCACATGGTCTATCCGCGGGGATACCGGCTCGAAGTGGGATCGCTATTGACCTCAACCGTGCAGCAACGATTTCTCGGGGA
GGAGGAAGCCCTGTCCCGGAGGGATTTTATGGCAAGGAGCAGCTTCTCGTTGCCATCTGATCGGGATCAGCCTGGTCTGCTCCTATTGGCG
GTTATGTGCTGGCGCGCGGCAAAACAAAGCTGTCCGATCATTGGACACGCTCAGGTTTCGATGATCAGTTGGCGATGGACGAACCCGTC
TCACACAGCTTCAATGCGATGTCTGTGAGCGGATGGATGCGTGTGCCGCTGATCCGGACGGTGTGGCTCATCCGCCATTCCGGCAGCGCGGA
TCCCATGTCTCGTTTCAAGAGATCTGGTTTGGGCTTGATTCTCCATTGGAGAAAAAGGATTCTTCACTCTCTGACGGTTCTCTCCCCA
TCTGCCCTCATTTGGGCTGCTCTCTCAATGGTTTTCGATAAAAAACTGTTTATCTGTCCCTGCCATCACTCGATTATGAATTGAATGGC
AAACGTATCGGGGGCCCGCGCCTCGTCCGATGGACAGTTGCCGTCGGGATTAAAAAAGCGGAGAGATCTCCATCTCTATGAAGAGTT
TCAGGTCGGAACCCCTCAAAAAATCCGTTTGTCTGATCGCAATCCGGAGGCCGTCATGAAAAAATCCCATTCGACAGTCGGATCATGC
AATATCTCGATGAGCGCATTCGTTTGGGTCAGTCTCCGTTTCTTCTCGAAGAGCCATGCCTGGAGGGGCGCGTGGGCTTATGTGTTT
GGGAGTATGGTTCTCTTTACGCTCATCTGCAATTTGTACCGCGCTCATGCTGGCTTTTATATGGTGGCACTCCCGATCATGCTGGGA
CAGCGTCAACTATATTGATCACCTTCACTACGGAACCCCTGGATGTGGGACGACTGATCCGGGGTTTCACTTGGGGTGCTTCGATCATGG
TTGTGCTGGTGGGGCGCATCTTCTCCAGGTGTTTATGAGGAGCCTACAAAAGGCCAGGGAAATCATGTTGGCTGGTTGGCGTCATCCTC
CTGGCCCTGACCATGACGCGCGCTTTTACCAGGTATCTTCTCCCTGGGACGAGCGGCCTATTGGGAACGATCGTCGGAACAAACATGAT
TGGTCTCGTCCCGGTCTGGGACCACTTCTGAAAAGTGCCATCCGTTGGAGGAAGTGGTCTGGGAGCCTTGACACTCTCCCATTTCTTGGCA
TTCACACCATGATGCTTCCATCGTTTATCCTGTCTGTCGTTTCTTCTGACGTTGTCGGACCGCGGGGCTTCCCG
GGGTCTCTCCACTCTGGAAGCGCAAAAAGAGTATTTTACCCAGACAGGTCGCTGATGGATGCTCTCGCCATGCTGGCCGATTTGTCTT
GATCGCGAGTCTGTCTGTTCTTCTCCCGCCGGTCTGGAAGCGATGGCCAAATCCGGCCAATCTTCTACAGTCCGACTCCGGCGTGGTATT
TTGATCGGATCTTCGAGCTTCTGAAAATGATTCGTCGGGAGATTCTGGGTGTTATTGGAGTCCGGCAATCATCGCCCTGGTTCTCTTGATG
CTGCTTTTGTGGATCAACGACCGGAGCGCTCTCCTTTTCACTGCTCGGTCGCGCTTGTCCATGCTTTTGGTTCTGGGGAGTATGCTGGG
ATTGTGATCGCCCGGAAGCAGGCTTCAAAAAGCTCGTCCCTTGTATCCGGCAGCAGTGAAGAGGGGAAAACTTGTGTTTCGAGCACTTCGG
GATGATGGGGTGCCATACGATGATGGGAAAGGGGGACATATCGGCCCGACCTTTTCAAGAAAGGGCTTGTGTTGTCATTTCGAGCACTGG
CTGATCGTTAGTTTGTAACTCTTCGGCCCACTTTCGGGTTCTTCAATGCCGCCCTTTACCTTTCTGACACCTGAACAGAGACATGATCT
GGCCCATGATCTCTCTCTTTTGGGCGGACCGGATGGCCGATACGACGCGCTAGGTCCTTTTCTGAAAAAGGGGACGGTCTTTTACTTAA
GCGTTTTTCAGGAGGTGAATGGCCCGGATTTTTCAGGCTTGCCGACAAAATACACCCTTCCGTTGACAAGGGTGGTCCGAACCGACTGAATG
GAGTGACGTTGAGCCAGTTCTTTTCCCGTTTCGAATCGATGTTGATTTCCTCATACTGAAAGGGAATATCG

sdrA

petA

petBC

1. *sdrA* product: Enoyl-(Acyl-carrier-protein) reductase (EAY57193.1)

MHLEGRFLVTGVANRWSIAWSVATAIIREGGLVFTFYQGETQLANLEKMLGELPSKETPLLVPLDVQSDSSVEEAVRRAESGGRRYDGLV
HSIAFAKREELDGAFLDTSRDGFLLAQEVSAISLVLLCRAFSRLNDGSSIVAMTYLGSERVPHYNVMGAAKAALASVRYLAFLDLGQRSI
RVNALSAGPVKTASGRAIKGFTDMQKAVSGQAPLKKSLTTEDVDVTVCLLSLDFRAVTGELIHVDMGYHALGMVLPLEQG

2. *petA* product: Probable Rieske iron-sulfur family protein (EAY57192.1)

MRQEVTFRMGIPVQNASGQVIGTLEKLVFLETEKKITEIVVRDLSGLKRVPLSWVREISEHVLVNLNHPGHLEDLPVFDISQFEEVPTWFYPP
GYRLELGSLLTLKPCDERFLGEEALSRRDFMARSTVLVATLIGISLVPIGGYVLAALKLSDHWTTLTVRIDQLPMDEPVSHTFNAMS
SGWMRVPPVRTVWLIHSGAADPMSRSEDVLVLGLDSPLEKKDSSPLLTVLSPICPHLGCSPQWFSKDLKLCICPHHSIYELNGKRIGGPAPR
PMDQLPVRIKKSSEISILYEEFQVGPQKIRLS

3. *petBC* product: Putative cytochrome b/b6 (EAY57191.1)

MKSHSDSRIMQYLDERIRLSRLRFLLEPMPGGARWAYVFGSMVLFLLILQFVTGVMLAFYGGTPDHAWSVNYIDHLHYGTLDVGRLI
RGFHYWGASIMVVLVGAHLLQVFLWGAYKRPREIMWLVGVILLALMTAAFTGYLLPWDERAYWGTIVGTNMIGLVPVVGPLLSAIRGGSG
LGATLTLSHFFAIHTMMLPSLFLFVVFHLVIFRRVGPAGFPFRGSSSTLEAQKEYFYPRQVLM DALAMLA VFLIASLSVLFPPGLEAMANPA
NSSYSPTPAWYFDWIFELLMIRPEILGVLGPAI IALVLLMLPFVDQRPERSPFHRPVAVLSMLLVLSGMLGLSIAAEAGFKKLVLDPAA
VVRKGLVFEHSGCMGCHTVMGKGGHIGPDLSEGLVGHSEHLLIVQFVNSSAHFPGSPMPPTFLLTPEQRHDLAQVYVSSLGRTGWDPDTR

2. DNA sequence of putative Pet II operon of *L. rubarum*

GGAGG GTAGCAGAA TGAAGGGGAAATATAAGCTTCACATACCAGAATATCAATATTACGCCGATCAGGTTGCCTGCCGGAAAGGCTGTCCC
GTTGGAACAGATGCGGGCGGATATGTTACAGGCAATCCGAAGCGGTCTCTACGAAAAGGCCTATGCCATTGCCGGGGGGCCAAATCCGTTTGC pnrA
TTCTGTTTGCGGATGGGTCTGTAATGCGCCTGTGAAGCATCCTGTACACGCGGCAATATTGATTCTCCCGTCACGATTGCGCGCTCTCAAAA
GATTCGTTACCGAAAAATTTGGTGTGAAGCCGTCATGGATCCTGCATCAACCCCTCAGGTACTCGACTGCGCCAGGAGTTCCTACGGGCGC
GCGACAGGGGAAAAGTCCGCGATTATCGGTGGCGGTCCCTGCAGGGTTAACGGCTGCCATGATCTTGCTCGTCTCGGGTATCGTATTACCAT
GTTGAGGGCCAAACAGCGTCTTGAGAGCCTGTTTTATCTTGTTCCGGAATACCGTTTGCCTCGCCCGCTGATCCAGGCTGAGGTAGATGCCA
TTGCAAGTATGGGATTGATATTCTGCTCTGGGGACGAAAGTCGGGAAAGACGTTTCGTTCAAGGAAATTCAGGAGGAGTTCAAGTCTGTTGTC
GTTGCCGTGGGCGCATGGGGCAGTCGACCGGTTCCCTTTCGAAGGAAAGGAGCTTGAGCATGTCTATTCCGCCCTTCCGTTCTTTCAGTCTGT
TTATCTTGATCATTTCTCTGTTCGGTCCGCTCGCGTGTGGCTGTGTGTCGAGCCGGAAATGTCGCGATGGATGTTTGC CGAACAGCCGTTT
GGCTTCCAGGGGTTGAAAAAGTGAGCGTTATTGCCCTGGAGGACTGGAATGAAATGCCGGCTGATGACATGGAATTCAGGATGCGGTGCGC
GAGGGGGTAGAGTTTCTGGTCAGAAAAGGGACCAGAAGGTTGGTTGGCGAAGGAAAGGTGCAGGGGTTGGAGGTCGTAGGGTTCTTTCCGT
ATTCGATGATCAGGACGCTTTTCTCCGACTTATGATGAAACGGAAGAGTGTCGTTCTTTTGACTCCGTTGTGTTTGCATCCGTTCAAA
CGATCGACTCTTCTTTCATCTTCGGAGCATGATTCGGTGATTGGCAGAAACGGGGTGATTCCGGCCCAATATCCACTCGATGGAAACAGGG
ATCCCCGGAGTGTTCGCCGACGTTGATGTTGTGACGGGGCCAAAGATCTTTATGATGCGATCGCAGGAGGGCAGAAAGGCAGCAGCATCTGT
GCATCGTATCTGACAGGAAATCGGAAGAGGTAAGGTTCTACCGGTGTCTACTCCTGTGATCATCGGGGAAACCCGACTCCGATCTGGC
CGGTTGATTTTAACTGCGGATGGATATTATGGGATTTCAGGGCCAATCCATCACTTTTGACACCGGAATTCGAAAAACGAATTTTGAACATT
GCAGAGCTGTCTTTAGCGAAGAAGAAGCAAGGGAGCAAGCGTCCCGTTGCCTGACCTGTGATGCAACCAATCTTTGAGGGTGAAAAAGTG
CATTATGTGCGGGGATGCGTAGACGTTTCCCGGAATATGCCCTTGAAGATGATTCCTTGTCCGATGTGGATCTGGACACGGAATCCACGG
CCAAGGTTGTGAAAGCTTCTTGGGGTAGAAGTGTGAAAAGGGAAGAAGTTGGTGTGATCAGAAATCTTGATCATTGACGGCGATGATT
TGGGAAGGTCGCGGTTCCGCTGTGGGCTTTGTGCGCAAGGCGAACCCTGCAATCTCGATGGAGTTTGTGAAATCAAGCAG GG
AGGTCGCCCTTGCCATGAGTACAGCTATGAGCGGAACGGGAAATCAGGATTCCCTGAAAGATGCGGCCAGCCCATCTGATTTGGGTGCAAGA
AAATTTATGCTGGCTGCCGTTGGGGTGTGTGTCGGCGTTACCCTGGCAGGTTGACCTATGCAGCATACAAATTTATGTTTCTCCGATCCT
GTATGAGCCGCCAACCGTATTCAGAGATTGGCCATGTTACAGAATATGGTCTGGGCGTTGATGAGAGATGGAATTTGAAAGGGCGTTTGTGG
TCGTCGGGAACATGCGCGGAATCTATAACATGATTCTGATCTGTCGCACTTTGGGATGTACCCCAACTGGTTTCCGGATCAAAAAAGATT
CGTTGCCCATGTACGGGTGATTTACGACGTACACGGGAATGTTGCTGGCGGTCCGGCTCCGAGAACACTTGGAGAGGCCAGATCACAAA
GGATCCTGTGACGGAGCTCTCGTTGTCAACACGCTGTCCGGTGGACCCGAATCCGGCGCAGACACCGCAGGGTTTGTGGGTCAAGGAAA
AAGTGAAGGAAGTGAACCCCTCTGGATTGAGCATTCCCCCGGCCAGGGGCTTCTGTTGCTCCAATCGACTGCTTTGTCTAAATGCAAGCC
CGAAGATGGAGGAAGATCTTCCGGCTTTTGTGACCGAAAGCGGAAGCTGCCGGAACAGGAATCCTATAAACTATACCTTTTAGATCAA
TAGCCCTCAGGGCCGATGGGCTTGTCTATAGCAAGCCGAAAGACAATGATTCTCAAAATTC AAAGGACCACGAATGCTTGAGAGCTTGAA
GGAGAAATGACCAAGTCGCAAGTCTTTCGATCAATTTTAGGCACGGTTTCCGGATAATGACATGAACCGGGCCTATGTAGTTTTCAGTA
ACGTATTTCTGCATGTCCATCCGTCACAGGTGCGTCGGAGTGCGTTGCGGATGCGTTACACGTTCTGCCTTGGTGAATCACGCTCTTCTGT
TTATCATGCTGGCAGTGACCGGAATCTGGCTCATGTTCTATTACACTCCCTATACAGGTCTGGCCTACAATAATCCAGGATCTGCAGTT
CGTGATCTTCCGTGGAACCTCATGCGGGATCTTACCGATTGCGCGCATGGAATGGTCTTTTTGTGTGGTTGCATATGACGAGAGTTT
TTCTTACCGGCGCTTACAAGGCTCCCGCGAGTTCAACTGGGTGGTCCGGGTCCTGCTGCTGGTGATGACTCTATTCTAAGCTGGACGGGC
TATCTTCTTCCCTGGGACCAGCTGGCCTATTGGGCTGTGACCGTCGGAACAAAAATGGCCTCCTACACTCCCTTTATCGGACAGAATGGTCC
CTGGGGGCGCAATTTGGGCTTCTTCCAAACAAACGACATTATGTTTATGCTTATCGGTGATGCTGCTCGGTCAAATGCGCTCATCCGCT
TTTATGTTCTTCAATTGCGTCTTCTCCGCTTTTTGTGACGATCGCATTGGCCGTCCTACTTCTGGCGCATTCGTAAGGATGGATTCTCCGGC
CCATTGTAAGAGCAGTTTTCAGGGTCAATCTTTAACACTCGGGATCCGAGAGGGGATATCTAATGGAGAACAAGGTGACAAGAGAAATTTT
CCTCGTGATGCGAGGAAAAGTTACGGTTTGGTCAATGATGAAAGGATCGACTCCTATTGTTAAAAAGGAGCCGGAAGTACTGTCTATAC
ATGGGCGGCAACCTCATGATGCTGAACCTCATCTGCGCATTTATGTAACGCGCCGGCTGATCATTCTGGTTCAAGTTTGTCTGTTGAAATG
GATCTCTGGCGGACCTTCGACAACGCCAAACCCATGCGCGCTCCCTGGTACTTCTGGGATTGCAGGAGCTTCTGGTTTATTTTATGATCCA
TGGTATGACGGCGTGTCTTCCAGGAATGATTATGTTGGATTAAATGACATTCCTTATGTCGATACAAACCCGAAAGGTGTCGGTTACTA
CACTTTTCCGAGAGAAATTTGCTATCTTCAATTACTCTTCCGGTTTGTCTCTGTTGGGTGACCATTTGCTGCGGAACCTATCTGAGAG
GTCTGGACTGGCAATGGTACTGGCCATGGAGTGATCATCTGGTGACATGAATCCGGCACTGGTGACGCTTGTCTCTGATATTTGTTTTT
GTCAATTTGTTGATGTCTCGAAAGATGTTGGAAGAGCATTATGTGACGTTCTCTTTTGTGCTACTTGTGCTGATAGGAATGGCCATTCTCTTA
TTCTTTATGCGGAAATCTACGATTGCTTGGTGGAGCCCGTACTTTGTTTTATGCTCTTTTCTCTCAATGATGGGTGTTGCAATTA
AGATTGTTCTGAGACTTCTCTTCAACATTAATATATTGTCGTTACACGCTGGATTAATGTTTGAAGTTTATTTGGCCCTGTTTCTTGAAATG
AAACAAAAAGAAAGACAGTTCTTTTCAGAAAAGCGTTACTCACTTTCAAGGCTCTATTGTAAGGAGAGTTTATGAGTTTCATTTCACAATCTC
TTGAATGAACCTGGTTCGAACAAATTTTCGGATTCCCTTACCGGATCGGAATTCCTTGACCTCGTGGTTGGAACAGCGTTTTTTTATTA
TCTCTTGATCTGGTTCCAGAAATGGCAGGAACGCTCCTTTTACCAGAGGGGATCCGCTTCGCAAGGATCCCGACGCTATGAATGAA AGG
GGTCGGCGGGCATGAAAACGAAAATCTATGCTCTTTTCTCTCCACGCTTCTGTTGCTGGATCAATCGCTTATGATATGTACAAAA
TTCCCATACATCCTGGATGGTTTATCAAAGGGAATATTATAAGTTGCTGGCAAAGAAAACGAACAAGCCTGCATGGCAAAATTTCCGCTCC
AGATCGTCCAGACCTGGAATGTGATTCTGAATCGTCCGACCGGTGTGACACATGTGATGAGGATCAATATCCGATTTTCAAGGATGCC
CCCGAGCCATTACCGCACATCCGGACCTTTCGGGATTCATGCAACAAATCCTTTTGGAAAGTTTGGCTGCACTGTCTGTGATGATGAAA
CGGACTTGCACAACAGTCCAGTCCGCTCACGGGTTCAATGTAACGTTGGACTATCAGCCGAAATTCGGTCCGTTTGTCTGAAGCCAGCTGCA
CGAAATGTATACCGATCTTTATAACGCGGGCGTGAACCCACCGATGACCCCTTATCTCAATCTGGCAAAGAAGACAATCAATCAGAAAGGT
TGCGGTTCTTGCCATTCTATGGTGCAGTTTAACTGACGCGGGTTTGGCACCGGATCTTCCGGCTTCGGTTCCCGAACAGAACTGGGCTT
CTATAACGTTACCTTTTGAAGTATGTCAATGGGATTCAATCGGAGCGTGAATGGGAGTGGGAACACTTCAAAAACCCGAGACGAATTTCTC
CCGGTGTTCGCGCTTTAAGGTGCTCCGACAAATCATGCCGAATTCATCTGACCGACGAGCAGACGACGCTTTAACAACCTTGGGTGCTG
GGACTTGTGATCCGGCGGTGATCACCATTCCCCAGACTTATCTCCCGTTGAGCGCTCACAGGGACGTCCTGTTCTTATTCGGTCAAAA
AGGCAATATTGGGGCAATTCGGATTGAGCATACAAGAAAGTTGCCTTCAAGCAGTAAATTTGATCTCTCTCTCTC AAAAGGAGCGCTTCG
GGCTCCTTTTTTTTT

1. *pnrA* product: Pyridine nucleotide-disulphide oxidoreductase(EAY56756.1)

MKGKYKLHIPEYQYYADQVACRKGCPVGTDAAGGYVQAIRSGLYEKAYAIARGPNPFASVCGWVCNAPCEASCTRGNIDSPVTIRALKRFVTE
KFGVEAVMDPASTLRYSTAPGVVYGRATGEKVAIIGGGPAGLTAHDLARLGYRITMFEANKRLGGLFYLVPYRLRPLRIQAEVDIAISM
FDIRLGTQVKGKDVFSKEIQEEFKSVVAVGAWGSRPVPFEGKELEHVYSALPFLQSVYLDHSPVPVGRRAVAVGAGNVAMDVCRATAVRLPGV

EKVSVIALEDWNEPADDMEIEDAVAEGVEFLVRKGTRRVVGEKGVQGLEVVRLSVFDDQGRFSPTYDETEKSVVPFDSVVFAIGQTIDSS
FIPSEHDSVIGRNGVIRANIHSMETGIPGVFAAGDVVTGPRIFIDAIAGGQKAAASVHRYLTGKSEEVKVYAVSTPVDHRGNPTPIWPVDFN
VDGYYGISRANPSLLTPEFRKTNFELAELSFSEEEAREQASRCLTCHVNPIFEGEKCMCGGCVDVCPEYALKMIPLSDVDLDQESTAKVVE
SFLGVELSKREEVGVDQNLHDSTAMIWEGSRCIRCGLCAKRCPTGAISMEFLEIKQEVALP

2. *petA* product: Putative Rieske iron-sulfur family protein (EAY56757.1)

MSTAMSGTGNQDSLKDAASPSDLGRRKFMLAAGWGVVGTLAGSTYAAVKFMFPPILYEPPTVFKIGHVTEYGLGVDERWKLKGRFVVRNM
RGIYNMISICRHLGCTPNWFPDQKRFRCPCHGSIYDVHGNVRGGPAPRTLWRGQITKDPVDGALVVNTVVRLLDPNPAQTPQGLWVKEKVKEV
KPFWIEHSPPPGASCSSNRLLC

3. *petB* product: Putative cytochrome b/b₆ (EAY56758.1)

MLESLKEKLTQSQVRSIFRHGFPDNDMNRAYVVFVSNVFLHVHPVKVRSALRMRYTFCLGGITLFLFIMLAVTGIWLMFYYPYTGGLAYNN
IQDLQFVIFGGNLMRDLHRFAAHGMVLFVWLHMTRVFLTGAYKAPREFNWVGVLLLVMTLILSWTGYLLPWLQLAYWAVTVGTMASYPF
IQNGPWGAQLGFLPTNDIMFMLIGGTIVGQNALIRFYVLHCVLPLFVTIALAVHFWIRKDGFSGPL

4. *petD* product: Putative Subunit IV of b₆f complex (EAY56759.1)

MENKVTREIFPRDARKSYGLVELMKGSTPIVKKEPEDTVYTWPNLIMIELICALLITAGLIILVQFVHAPLRSLADPSTTPNPMRAPWYFLG
LQELLVYFDPWYAGVVLPGMIIVGLMTFPYVDTNPKGVGYTFSERKFAIFNYSFGFALWWVTIVIGTYLRGLDWQWYWPWSDHLVHMNPAL
VTLVPLHIVFVNLHVSVDVKGALCDVLFAYFAVGMAIPYFFMRKFYDSLGGARYFVFMFLFLLSMMGVALKIVLRLLFNKYIVVTPWINV

5. *petG* product: Putative PetG (EAY56760.1)

MSSFHNLNLPWVEQYFGFPYRIGISLTLVVGTAFYYLLIWFQKWQERSFYPEGHPLRKDPDAMNERGRRRA

6. *cycC3* product: Probable cytochromec₃ (EAY56761.1)

MKTKIYVLFLLSTLLVAGSIAYDMYKNSHTSWMVYQREYYKLLAKKTNKPALANSPLQIVQTNVILNRADRCQTCHMGINIPIFKDAPEPF
TAHPDLSGFMHKKHPFGKFGCTVCHDGNGLATTVQSAHGPNVTLDYQPKFGPFAEASCTKCHTDLYNAGVNPMPPTYNLAKKTINQKCGSC
HSMVQFNLHGVLAPDLSGFGSRTELGFYNVHLFEYVNGIHSEREWEEHFKNPRRISPGVPAFKVPPTIMPNFHLTDEQTTALTWVLGLVD
PAVITIPQTYLPEVSQGRPVPIPVTKGNIGAIIPDSAYKKVAFKQPETI

Notes: Gene sequences are indicated in red. Start and stop codons are underlining. Grey box indicates sequence of Rho-independent terminator predicted by using the mfold RNA secondary structure program (bioinfo-.math.rpi.edu/_mfold/rna/.)