

AGAGCGGCCGCCATGAGAGAAGCTGTCATTGTTGCGGGAGCAAGAACACCAATTGGAAAAGCAA
AGAGGGGTTTCATTA AAAACAGTTCGTCTGACGATCTAGGGGCATTAGTAGTAAAGGAAACGTTA
AAGCGTGCAAATTATGAAGGACCAATCGATGATTTAATTTTCGGTTGTGCGATGCCAGAAGCAGA
ACAAGGTTTAAATATGGCTCGTAATATCGGCGGACTAGCAGGACTTTCTTACGATGTTCCAGCTAT
TACAATTAACCGTACTGTTCTTCTGGTTTACAAAGTATCGCTTACGGAGCAGAGCGCATTATGCTT
GGTCACTCTGAAGCTGTATTATCAGGCGGAGCAGAATCAATGAGTTTAGTTCCAATGATGGGACAC
GTTGTTTCGTCCGAATAGTCGCCTTGTAGAAGCGGCTCCGGAATATTATATGGGTATGGGACATACA
GCAGAGCAAGTTGCTGTGAAATATGGAATTTCTCGTGAAGAGCAAGATGCATTTGCAGTAAGAAG
TCATCAACGTGCTGCAAAAGCATTAGCTGCAGGAACTTTGCTGATGAAACAGTACCTGTAGATGT
GACGTTACGCTCGGTTGGATCAAACAATAAACTGCAAGAAGAAACAATCACTTTTCGCACAAGACG
AAGGTGTAAGAGCAGAGACGACGCTAGACATTTTAGGGAAATTACGTCCAGCATTTAACGTTTCGC
GGTCTGTAACAGCTGGTAACTCTTCACAAATGAGTGACGGTGCAGCATCTGTACTATTAATGGAT
CGCGAAAAGCAGTGAGCGATGGCATGAAGCCACTTGCGAAATTCGGTTCATTTGCAGTAGCTGG
CGTACCACCAGAAGTAATGGGAATCGGCCAATCGCTGCCATTCCAAAAGCGCTAAAAGTAGCTG
GCTTAGAGCTATCTGATATTGGCTTATTTGAACTAAATGAAGCATTTCGCTTCTCAATCAATTCAAGT
TATTCGTGAACTTGTTTTAGATGAAGAAAAAGTAAACGTAAACGGTGGTGCAATCGCACTTGGAC
ATCCACTTGGCTGTACAGGAGCAAACTAACACTATCTCTTATTACGAAATGAAACGCCGCAACG
AACAAATTCGGTATCGTAACAATGTGTATCGGCGGCGGAATGGGAGCAGCGGGAGTATTTGAATTA
CTATAAC

Supplementary Figure 1 Sequence data of *phaA* (1186 bp).

AATGGTTCAATTAATGGAAAAGTAGCAATCGTAACAGGTGGGGCAAAGGAATTGGAAAAGCG
ATTACAGTAGCGTTAGCACAAAGAGGGCGCAAAGTTGTTATTA ACTATAACAGCAGTAAAGAAGC
AGCTGAAAAGT TAGTAAATGAACTAGTAAAAGAAGGACATGACGTTTATGCAGTTCAAGCAGATG
TTTCTAAAGTAGAAGATGCAAACCGACTTGTAGAAGAAGCAGTGAATCATTTTGGTAAAGTAGAT
ATTCTTGTTAATAATGCTGGTATTACAAGAGATCGTACATTCAAAAAGTTAAATCGTGAAGATTGG
GAGCGCGTAATTGACGTGAACTTAAGCAGTGTATTTAATACGACAAGCGCTGTACTTCCATACATA
ACGGAAGCAGAAGAAGGAAGAATCATTAGCATTCTTCTATTATTGGTCAAGCGGGTGGATTTGG
ACAAACAAACTACTCAGCAGCAAAAGCAGGTATGCTAGGATTTACAAAATCATTAGCATTAGAGC
TTGCAAAAACAAATGTAACGTAAACGCTATTTGCCAGGATTTATTGATACTGAAATGGTAGCAG
AAGTACCAGAAGAAGTACGTCAAAAATCGTTGCTAAAATCCCAGAAAACGTTTTGGTCAAGCT
GATGAAATTGCAAAAGGTGTAGTATACCTATGCCGTGACGGTGCTTATATCACAGGTCAGCAATTA
AACATTAACGGCGGATTATATATGTAA

Supplementary Figure 2 The sequence data of *phbB* (745 bp).

ATGACTACATTCGCAACAGAATGGGAAAAGCAATTAGAGCTATACCCAGAAGAGTACCGAAAAGC
ATATCGCCGAGTGAAAAGGGCGAGTGAAATTTTATTACGTGAACCAGAGCCACAAGTAGGATTAA
CGCCGAAAGAGGTTATTTGGACGAAGAATAAGACGAAGCTTTATCGCTACATTCCAAAACAAGAA
AAAACACAAAGAGTTCCAATTCTATTAATATATGCTCTTATTAATAAACCATATATTATGGATTTA
ACTCCTGGAAATAGTTTAGTGGAAATATCTAGTGGACCGTGGTTTTGATGTGTATATGCTTGATTGG
GGCACATTTGGTTTAGAAGATAGTCATTTGAAATTTGATGATTTTGTGTTTGATTATATTGCAAAAG
CAGTGAAAAAAGTAATGCGAACTGCAAAATCGGACGAGATTTCTTTACTTGGTTATTGCATGGGG
GGAACGCTAACTTCTATTTATGCGGCACTTCATCCACACATGCCAATTCGTAACCTAATCTTTATGA
CAAGTCCTTTTGATTTCTCTGAAACAGGATTATATGGTCCTTTATTAGACGAGAAATACTTCAATCT
AGATAAAGCGGTTGATACATTTGGAACATTCGCCAGAAATGATTGATTTCCGAAACAAAATGT
TAAACCAATTACAACTTTGTTGGTCCATATGTTGCTTTAGTAGATCGTTCAGAGAATGAGCGCT
TCGTCGAAAGCTGGAGATTGGTTCAAAAGTGGGTGGTGTATTCGGTTCAGGTTGAATCAT
ACAGACAGTGGATTCGTGATTTTTATCAAATAATAAATTGGTTAAGGGTGAACCTGTGATTCCGG
GACAAAAGTAGACCTTGCAAATATTAAGGCGAATGTCTTAAATATTTCCGGGAAACGTGATCAT
ATCGCTTTGCCATGTCAAGTAGAAGCATTACTAGACCATATTTCTAGCACAGATAAACAATATGTA
TGTTTACCGACAGGGCATATGTCTATCGTTTACGGTGGAACAGCTGTAAAACAAACATATCCGACG
ATTGGAATTTGGCTTGAAGAGCGTTCTAATTAA

Supplementary Figure 3 The sequence data of *phaC* (1086 bp).

AGTGATTGATCAAAAATTCGATCCACTACAAGCATGGAAAAATGCTTATGAACAAACCGAAACAT
TTTGGGAAAAGCGCTCAATGAAACAATTA AACAGAGAATATTCTGCTTGGATGGGCAGCGTT
CTAGATTTGAATTTGTTTTATCAAAAAGCATTAAATGATACGACAAAAAATTATTTAGAGCAGGTG
AATGTGCCTACGAAAGAGGATATCGCTAGAGTGGCTACGCTTGTTATTAACCTAGAAAATAAAGT
GGATAACATTGAGGAGTTTCTAGAAGAGAAGGTAGAGTCAGTAGGACAAGCTCCTACATTAAGC
GCGATGTTACGAAAGTAAAACAAGATATTCGCACATTAGAAACGAAAGTTGATCAATTTTAGAA
TTGCTAGAAAAGCAAAATGCAGTACTAGCAAACTACAAGAACCTGTAAAAGAAGAAGTAAAAC
CTACGAATAAGCCAGAAAATAAAAAGTGA

Supplementary Figure 4 The sequence data of *phaR* (484 bp).

GTGAGTAAGTTCTAAACCATTTTTTTTATTGTTGTATTATCTCTAATCTTACTACTCGATGAGTTTTCG
GTATTATCTCTATTTTAACTTGGAGCAGGTTCCATTCATTGTTTTTTTTCATCATAGTGAATAAAATC
AACTGCTTTAACTTGTGCCTGAACACCATATCCATCCGGCRTGATACGTAACCTAATAACGAGGG
GAGATATCGTTCATGAGAGAAGCTGTCATTGTTGCGGGAGCAAGAACACCAATTGGAAAAGCAAA
GAGGGGTTTCAATAAAAACAGTTTCGTCCTGACGATCTAGGGGCATTAGTAGTAAAGGAAACGTTAA
AGCGTGCAAATTATGAAGGACCAATCGATGATTTAATTTTCGGTTGTGCGATGCCAGAAGCAGAA
CAAGGTTTAAATATGGCTCGTAATATCGGCGGACTAGCAGGACTTTCTTACGATGTTCCAGCTATT
ACAATTAACCGTTACTGTTCTTCTGGTTTACAAAGTATCGCTTACGGAGCAGAGCGCATTATGCTT
GGTCACTCTGAAGCTGTATTATCAGGCGGAGCAGAATCAATGAGTTTAGTTCCAATGATGGGACAC

GTTGTTTCGTCCGAATAGTCGCCTTGTAGAAGCGGCTCCGGAATATTATATGGGTATGGGACATACA
GCAGAGCAAGTTGCTGTGAAATATGGAATTTCTCGTGAAGAGCAAGATGCATTTGCAGTAAGAAG
TCATCAACGTGCTGCAAAAGCATTAGCTGCAGGAACTTTGCTGATGAAACAGTACCTGTAGATGT
GACGTTACGCTCGGTTGGATCAAACAATAAACTGCAAGAAGAAACAATCACTTTCGCACAAGACG
AAGGTGTAAGAGCAGAGACGACGCTAGACATTTTAGGGAAATTACGTCCAGCATTAAACGTTTCGC
GGTCTGTAAACAGCTGGTAACTCTTCACAAATGAGTGACGGTGCAGCATCTGTACTATTAATGGAT
CGCGAAAAAGCAGTGAGCGATGGCATGAAGCCACTTGCGAAATTCGGTTCATTTGCAGTAGCTGG
CGTACCACCAGAAGTAATGGGAATCGGCCAATCGCTGCCATTCCAAAAGCGCTAAAAGTAGCTG
GCTTAGAGCTATCTGATATTGGCTTATTTGAACTAAATGAAGCATTTCGCTTCTCAATCAATTCAAGT
TATTCGTGAACTTGGTTTAGATGAAGAAAAAGTAAACGTAAACGGTGGTGCAATCGCACTTGGAC
ATCCACTTGGCTGTACAGGAGCAAACTAACACTATCTCTTATTACGAAATGAAACGCCGCAACG
ACAATTCGGTATCGTAACAATGTGTATCGGCGGCGGAATGGGAGCAGCGGGAGTATTTGAATTA
CTATAACTCGAGTTTTTCAGCAAGATATGAATCAGTTAGATGGAATTTTTGCTTATAAGTGCAATT
TACACCTATCTGTTTTTAAAGTCAATACATTTGTTAGAAAATAGAAAAAATAAAATATAGACTTG
AAGTTTTATTGAGAATATTAGAAAATAGTGAATAGGTTGAATTGTTTCAAAAACGAAAAAGGGAG
TGTAGGTAAAGTGATTGATCAAAAATTCGATCCACTACAAGCATGGAAAAATGCTTATGAACAAA
CCGAAACATTTTGGGGAAAAGCGCTCAATGAAACAATTAAAAACAGAAGAATATTCAGCTTGGATG
GGCAGCGTTCTAGATTTGAATTTGTTTTATCAAAAAGCATTAAATGATACGACAAAAAACTATTTA
GAACAAGTAAATGTGCCGACGAAAGAGGATATCGCAAGAGTGGCTACGCTTGTTATTAAGTTAGA
AAATAAAGTAGATAACATTGAGGAGTTTCTAGAGGAGAAAGTAGATTCTTTAGGACAAGCCCCTA
CATTAAGCGTGATGTGACGAAAGTGAAACAAGATATTCGTACGCTTGAAACAAAAGTAGATCGA
ATTGTAGAATTGCTAGAAAAGCAAAATGCAGTACTAGCTAAACTACAAGTACCTGTAAAAGAAGA
GGTAAAGCCTACGAATAAACAGAAAATAAAAAATGATAAAAGCGCTTGTTTATAACAGGTAAAA
GAGAGCGGGAGAATCTCTTTTCAGTATAAACAGCGAAACATAATTATATAKGGACTCYATAGTA
TGAGTACCAAAATGATTCATAAYARTCGTTCACAAATTCATTTAAGGGGGAAAAGAAATGGTTCA
ATTAATGGAAAAGTAGCAATCGTAACAGGTGGAGCAAAAGGAATTGGAAAAGCAATTACAGTA
GCATTAGCACAAGAGGGAGCGAAAGTAGTTATTAAGTATAATAGCAGTAAAGAAGCAGCTGAAA
ATTTAGTAAATGAATTAGGAAAAGACGGACATGACGTTTATGCAGTGCAAGCGGATGTTTCTAAA
GTAGAAGATGCAAAACCGACTTGTTAGAAGAAGCTGTGAATCATTTTGGTAAAGTTGATATTCTTGT
AATAATGCTGGTATTACAAGAGATCGTACATTCAAAAAATTAATTCGTGAAGATTGGGAGCGCGT
AATTGACGTGAATTTAAGCAGYGTATTTAATACGACAAGCGCGGTGCTTCCATACATAACGGAAG
CGGAAGAAGGAAGAATTATTAGCATTCTTCTATTATTGGTCAAGCAGGTGGATTTGGCCAAACAA
ACTACTCAGCAGCAAAAGCGGGTATGTTAGGATTTACAAAATCATTAGCGTTAGAAGTTGCAAAA
ACAAATGTCCTGTAAACGCTATCTGCCAGGATTTATTGATACTGAAATGGTAGCAGAAGTACCA
GAAGAAGTACGTCAAAAAATTTGTTGCAAAAATCCCGAAAAACGTTTTGGTCAAGCTGATGAAAT
TGCAAAAGGTGTAGTATACCTATGCCGTGAGGGTGCATATATCACAGGTCAACAATTAACATTA
ACGGCGGATTATATATGTAATGAAGTAAGAAAAAAGTGCATATCCATAGCAGGAATGCACTTCTT
TTTTAAGAAGGAATCGACCAAAAAGGAGATAAAAAAATGACTACATTTCGCAACAGAATGGGA
AAAGCAATTAGAGCTATACCCAGAAGAGTACCGAAAAGCGTACCGCCGAGTGAAAAGGGCGAGT
GAAATTTTATTACGTGAACCAGAGCCGCAAGTAGGATTAACGCCGAAAGAGGTTATTTGGACGAA

GAATAAGACAAAGCTTTATCGCTACATTCCAAAACAAGAAAAACACAAAGAGTTCCAATTCTGT
TAATATATGCTCTTATTAATAAACCATATATTATGGATTTAACTCCTGGAAATAGTTTAGTGGAATA
TCTAGTGGATCGTGGTTTTGATGTGTATATGCTTGGATTGGGGCACATTTGGTTTAGAAGATAGTCAT
TTGAAATTTGATGATTTTCGTTTTTGGATTATATTGCAAAAGCAGTAAAAAAGTAATGCGAACTGCA
AAATCGGACGAGATTTCTTTACTTGGTTATTGCATGGGKGGAAACGCTAACTTCTATTTATGCAGCA
CTTCATCCGCACATGCCAATTCGTAATTTGATTTTCATGACAAGTCCTTTTGGATTTCTCTGAAACAG
GATTGTATGGTCCTTTATTAGATGAGAAATATTTCAATTTAGATAAAGCGGTTGATACATTTGGAA
ATATCCGCCAGAAATGATTGATTTTCGGAAACAAAATGTTAAAGCCAATTACGAACTTTGTTGGTC
CATATGTTGCTTTAGTAAATCGTTCAGAGAATGAGCGCTTCGTCGAAAGCTGGAGATTGGTTCAA
AGTGGGTTGGTGATGGTATTCCGTTCCAGGTGAATCATAACAGACAGTGGATTTCGTGATTTTTATC
AAAATAATAAATTGGTTAAGGGTGAACCTCGTTATTCGCGGACAAAAGGTAGACCTTGCAAATATT
AAGGCGAATGTCTTAAATATTTCCGGGAAACGTGATCATATCGCTTTGCCATGTCAAGTAGAAGCA
TTACTAGATCATATTTCTAGCACAGATAAACAATATGTATGTTTACCAACAGGGCATATGTCTATC
GTTTACGGTGGAAACAGCTGTAAAACAAACATATCCGACGATTGGAAATTGGCTTGAAGAGCGTTC
TAATTAATAAATAAAAAATCCAAGTACTAGCCTATGTTAGTTGGATTTTTTTATGGAAAATAACAAAACA
TAGAAAGGAGACATTTATATTTTAGGAGTATAATTATGAACTTATGAATCTTTCTAGAAGATCTC
CTACAATATTCTCAGCTGC

Supplementary Figure 5 The complete sequence data of the of the complete PHA operon (*phaA* and *phaR*, *phaB*, *phaC*) (4279 bp).

1 MREAVIVAGA RTPIGKAKRG SLKTVRPDDL GALVVKETLK RANYEGPIDD
51 LIFGCAMPEA EQGLNMARNI GGLAGLSYDV PAITINRYCS SGLQSIAYGA
101 ERIMLGHSEA VLSGGAESMS LVPMMGHVVR PNSRLVEAAP EYYMGMGHTA
151 EQVAVKYGIS REEQDAFAVR SHQRAAKALA AGNFADETVP VDVTLRSVGS
201 NNKLQEETIT FAQDEGVRAE TTLDILGKLR PAFNVVRSVT AGNSSQMSDG
251 AASVLLMDRE KAVSDGMKPL AKFRSFAVAG VPPEVMGIGP IAAIPKALKL
301 AGLELSDIGL FELNEAFASQ SIQVIRELGL DEEKVNVNGG AIALGHPLGC
351 TGAKLTSLI HEMKRRNEQF GIVTMCIGGG MGAAGVFELL

Supplementary Figure 6 PHAA amino acid sequence (390 amino acids).

1 MVQLNGKVAI VTGGAKGIGK AITVALAQEG AKVVINYNSS KEAAENLVNE
51 LGKDGHDVYA VQADVSKVED ANRLVEEAVN HFGKVDILVN NAGITRDRTF
101 KKLNRDWER VIDVNLXVF NTTSVLPYI TEAEEGRIIS ISSIIGQAGG
151 FGQTNYSAAK AGMLGFTKSL ALELAKTNVT VNAICPGFID TEMVAEVPEE
201 VRQKIVAKIP KKRFGQADEI AKGVVYLCRE GAYITGQQLN INGGLYM

Supplementary Figure 7 PHAB amino acid sequence (247 amino acids).

1 VNRLNCFKNE KGSVGKVIDQ KFDPLQAWKN AYEQTETFWG KALNETIKTE
51 EYSAWMGSVL DLNLFYQKAL NDTTKNYLEQ VNVPTKEDIA RVATLVINLE
101 NKVDNIEEFL EEKVDSLGA PTLKRDVTKV KQDIRTLETK VDRIVELLEK
151 QNAVLAKLQV PVKEEVKPTN KPENKK

Supplementary Figure 8 *PHAB* amino acid sequence (176 amino acids).