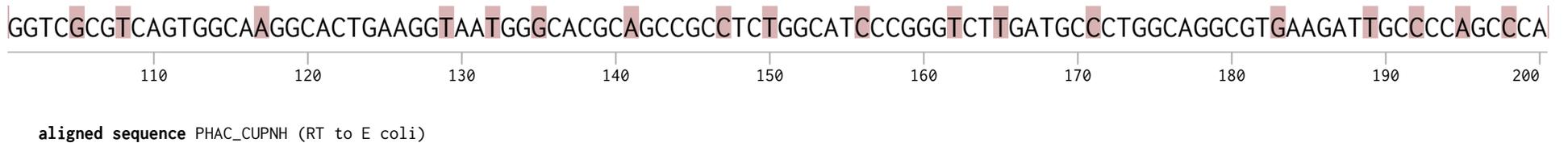
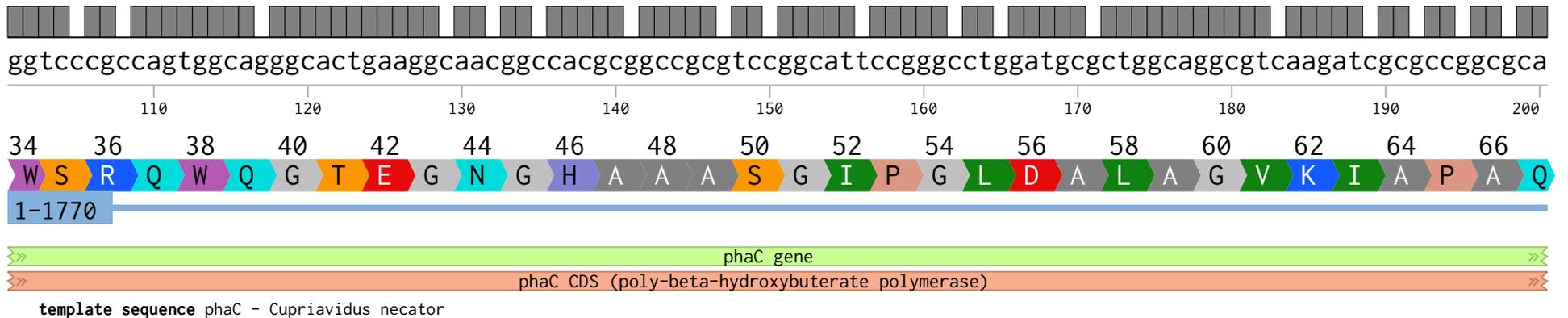
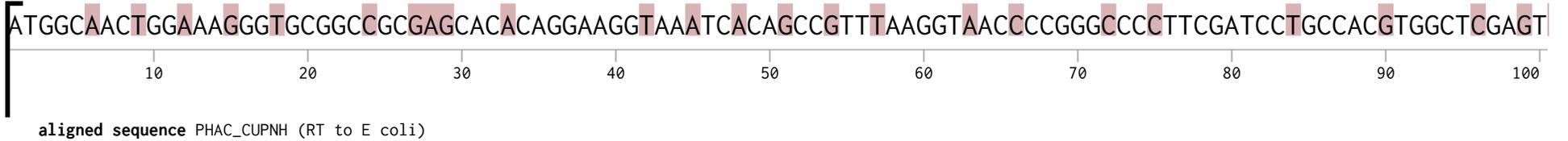
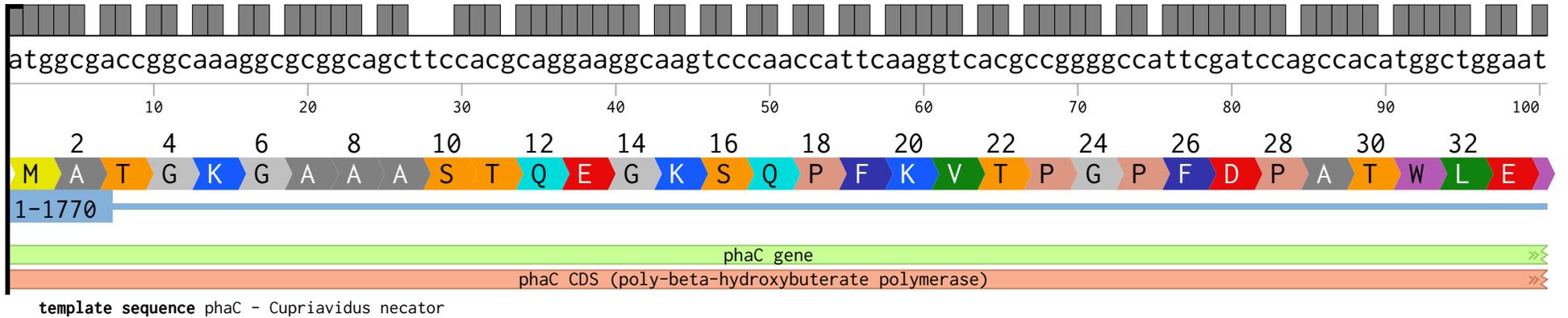


# Template Alignment: PHAC\_CUPNH (RT to E coli)



gctgggtgatatccagcagcgtacatgaaggacttctcagcgtgtggcaggccatggccgagggaaggccgaggccaccggtccgctgcacgaccgg

210 220 230 240 250 260 270 280 290 300

68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100  
 L G D I Q Q R Y M K D F S A L W Q A M A E G K A E A T G P L H D R  
 1-1770

phaC gene  
 phaC CDS (poly-beta-hydroxybuterate polymerase)  
 template sequence phaC - Cupriavidus necator

ATTAGGTGACATTCAGCAACGTTACATGAAAGACTTTAGTGCACTATGGCAGGCCATGGCAGGAAGGTAAGCGGAGGCCACGGGGCCTCTGCATGATCGT

210 220 230 240 250 260 270 280 290 300

aligned sequence PHAC\_CUPNH (RT to E coli)

cgcttcgccggcgacgcatggcgcaccaacctcccatatcgcttcgctgccggttctacctgctcaatgcgcgcgcttgaccgagctggccgatgccg

310 320 330 340 350 360 370 380 390 400

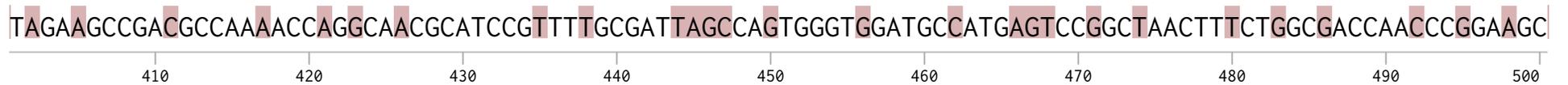
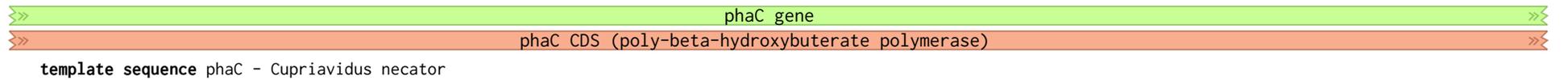
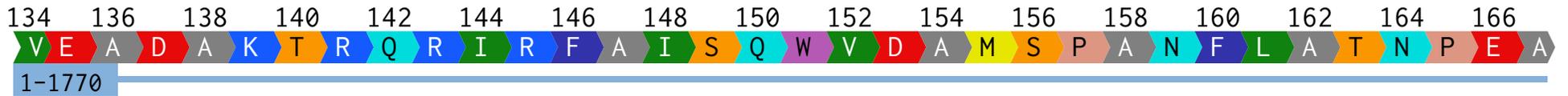
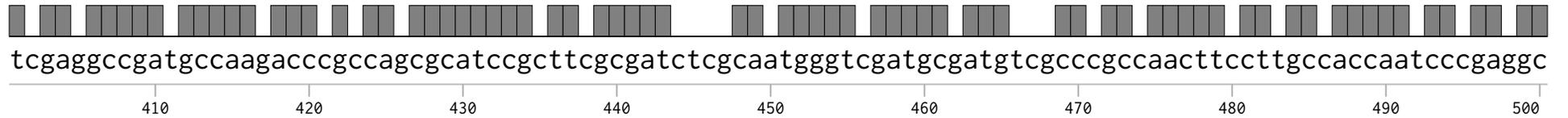
102 104 106 108 110 112 114 116 118 120 122 124 126 128 130 132  
 R F A G D A W R T N L P Y R F A A A F Y L L N A R A L T E L A D A  
 1-1770

phaC gene  
 phaC CDS (poly-beta-hydroxybuterate polymerase)  
 template sequence phaC - Cupriavidus necator

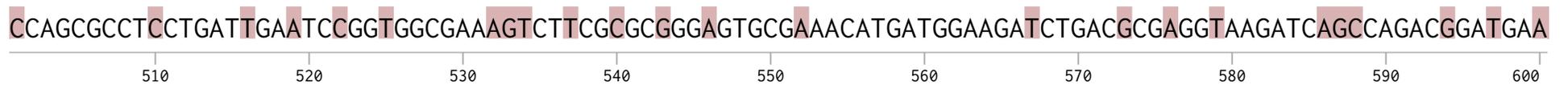
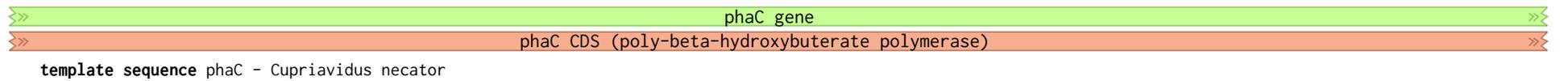
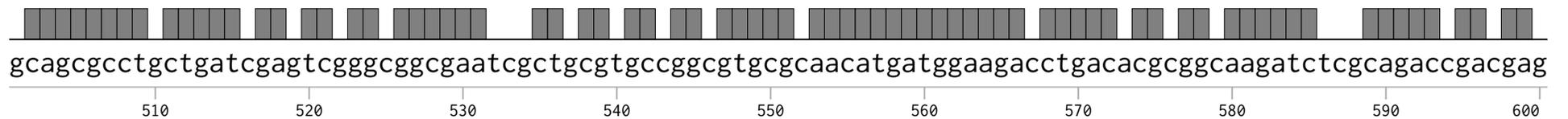
CGCTTCGCCGGCGATGCGTGGCGTACCAACCTGCCGTATCGCTTCGCAGCGGCGTTTTATCTGCTCAACGCGCGTGCACCTACCGAGCTGGCTGACGCAG

310 320 330 340 350 360 370 380 390 400

aligned sequence PHAC\_CUPNH (RT to E coli)



aligned sequence PHAC\_CUPNH (RT to E coli)



aligned sequence PHAC\_CUPNH (RT to E coli)

agcgcgtttgaggctcggccgcaatgtcgcggtgaccgaaggcgccgtggtcttcgagaacgagtacttccagctgttgcagtacaagccgctgaccgaca

610 620 630 640 650 660 670 680 690 700

202 204 206 208 210 212 214 216 218 220 222 224 226 228 230 232

S A F E V G R N V A V T E G A V V F E N E Y F Q L L Q Y K P L T D

1-1770

phaC gene

phaC CDS (poly-beta-hydroxybuterate polymerase)

template sequence phaC - Cupriavidus necator

AGCGCATTTCGAAGTCGGGCGTAATGTTGCCGTTACGGAGGGTGCGGTTGTGTTTGAGAACGAATATTTCCAGTTGTTACAGTATAAGCCGCTGACCGATA

610 620 630 640 650 660 670 680 690 700

aligned sequence PHAC\_CUPNH (RT to E coli)

aggtgcacgcgcgcccgctgctgatggtgcccgctgcatcaacaagtactacatcctggacctgcagccggagagctcgctggtgcgccatgtggtgga

710 720 730 740 750 760 770 780 790 800

234 236 238 240 242 244 246 248 250 252 254 256 258 260 262 264 266

K V H A R P L L M V P P C I N K Y Y I L D L Q P E S S L V R H V V E

1-1770

phaC gene

phaC CDS (poly-beta-hydroxybuterate polymerase)

template sequence phaC - Cupriavidus necator

AAGTGCATGCCCGCCCACTTCTCATGGTACCTCCGTGCATCAACAAATACTACATTCTGGATCTTCAGCCTGAGAGCTCATTGGTACGCCATGTGGTAGA

710 720 730 740 750 760 770 780 790 800

aligned sequence PHAC\_CUPNH (RT to E coli)

gcaggacatacgggtgtttctggtgtcgtggcgcaatccggacgccagcatggccggcagcacctgggacgactacatcgagcacgcggccatccgcgcc

810 820 830 840 850 860 870 880 890 900

268 270 272 274 276 278 280 282 284 286 288 290 292 294 296 298 300  
 Q G H T V F L V S W R N P D A S M A G S T W D D Y I E H A A I R A  
 1-1770

phaC gene  
 phaC CDS (poly-beta-hydroxybuterate polymerase)  
 template sequence phaC - Cupriavidus necator

GCAAGGCCACACAGTGTTCCTAGTCTCATGGCGCAATCCGGACGCATCCATGGCCGGCTCGACGTGGGACGATTATATCGAACACGCGGCAATAAGAGCG

810 820 830 840 850 860 870 880 890 900

aligned sequence PHAC\_CUPNH (RT to E coli)

atcgaagtcgcgcgacatcagcggccaggacaagatcaacgtgctcggcttctgcgtgggcggcaccattgtctcgaccgcgctggcggtgctggccg

910 920 930 940 950 960 970 980 990 1,000

302 304 306 308 310 312 314 316 318 320 322 324 326 328 330 332  
 I E V A R D I S G Q D K I N V L G F C V G G T I V S T A L A V L A  
 1-1770

phaC gene  
 phaC CDS (poly-beta-hydroxybuterate polymerase)  
 template sequence phaC - Cupriavidus necator

ATTGAGGTCGCGCGTGATATCAGCGGTCAGGACAAAATTAATGTGTTAGGTTTCTGCGTAGGCGGTAATCGTGAGTACCGCCCTGGCGGTTTTGGCAG

910 920 930 940 950 960 970 980 990 1,000

aligned sequence PHAC\_CUPNH (RT to E coli)

cgcgcgggcgagcaccggccgcccagcgtcacgctgctgaccacgctgctggactttgccgacacgggcatcctcgacgtctttgtcgacgaggccatgt

1,010 1,020 1,030 1,040 1,050 1,060 1,070 1,080 1,090 1,100

334 336 338 340 342 344 346 348 350 352 354 356 358 360 362 364 366  
 A R G E H P A A S V T L L T T L L D F A D T G I L D V F V D E G H V  
 1-1770

phaC gene  
 phaC CDS (poly-beta-hydroxybuterate polymerase)  
 template sequence phaC - Cupriavidus necator

CTCGCGGCGAACATCCGGCCGCTTCAGTTACTCTTCTGACTACCCTGCTGGATTTTGGGACACCGGCATTCTGGATGTCTTCGTAGATGAAGGACATGT

1,010 1,020 1,030 1,040 1,050 1,060 1,070 1,080 1,090 1,100

aligned sequence PHAC\_CUPNH (RT to E coli)

gcagttgcgcgaggccacgctgggcgggcgccggcgcgccgtgcgcgctgctgcgcgcccttgagctggccaataccttctcgttcttgcgcccgaac

1,110 1,120 1,130 1,140 1,150 1,160 1,170 1,180 1,190 1,200

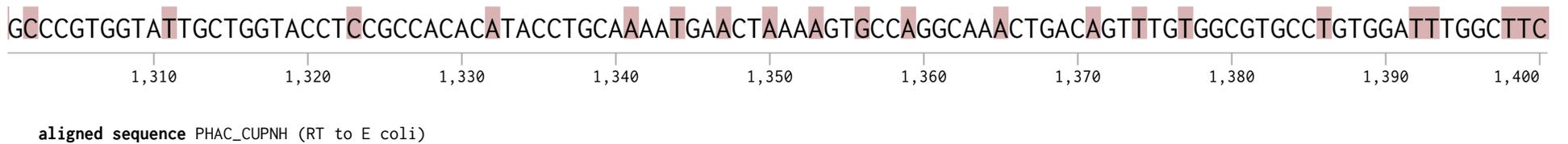
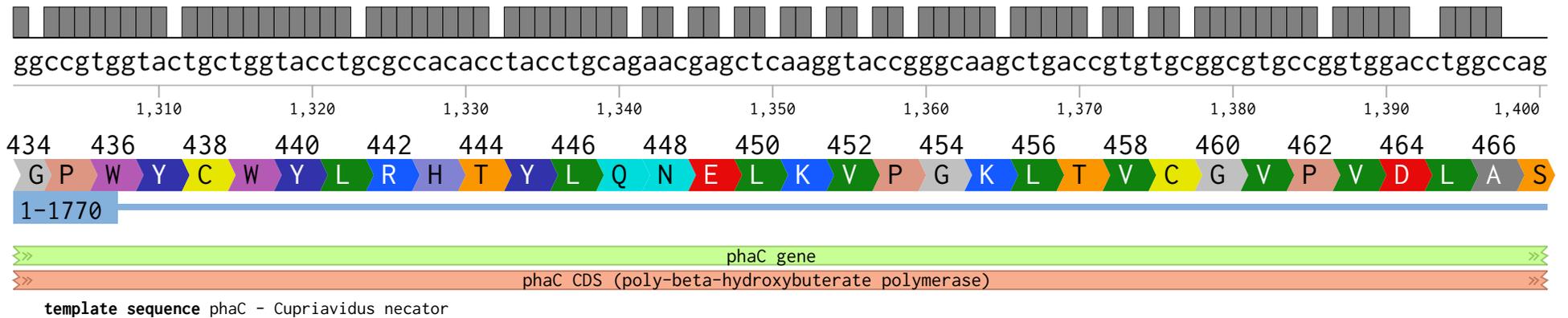
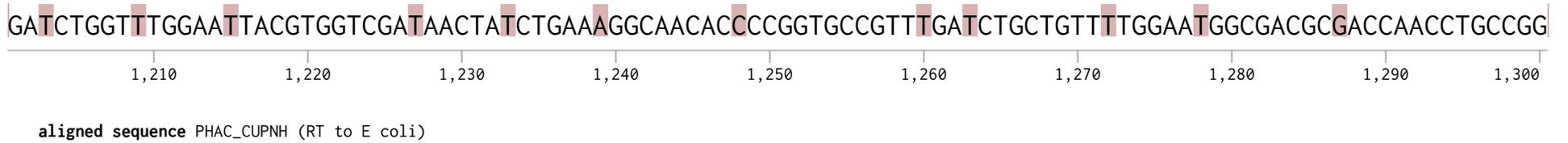
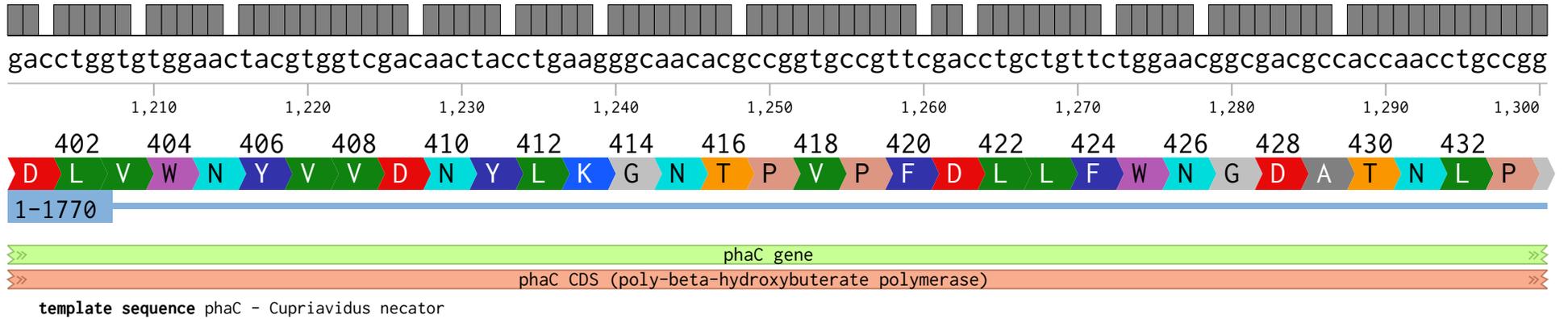
368 370 372 374 376 378 380 382 384 386 388 390 392 394 396 398 400  
 Q L R E A T L G G G A G A P C A L L R G L E L A N T F S F L R P N  
 1-1770

phaC gene  
 phaC CDS (poly-beta-hydroxybuterate polymerase)  
 template sequence phaC - Cupriavidus necator

TCAGTTGCGCGAAGCAACCTTAGGCGGGGGGCGGGTGCCCGTGTGCCTTACTGCGGGGCTGGAACCTCGCTAACACCTTTTCGTTCTGCGCCCAAC

1,110 1,120 1,130 1,140 1,150 1,160 1,170 1,180 1,190 1,200

aligned sequence PHAC\_CUPNH (RT to E coli)



catcgacgtgccgacctatatctacggctcgcgcaagaccatatcgtgccgtggaccgcggcctatgcctcgaccgctgctggcgaacaagctgcgc

1,410 1,420 1,430 1,440 1,450 1,460 1,470 1,480 1,490 1,500

468 470 472 474 476 478 480 482 484 486 488 490 492 494 496 498 500  
 I D V P T Y I Y G S R E D H I V P W T A A Y A S T A L L A N K L R  
 1-1770

phaC gene  
 phaC CDS (poly-beta-hydroxybuterate polymerase)  
 template sequence phaC - Cupriavidus necator

CATTGACGTGCCGACGTACATTACGGTTTCGCGCAAGATCACATCGTCCCCTGGACCGCTGCCTACGCTTCTACGGCGTTGTTAGCAAATAAACTTCGG

1,410 1,420 1,430 1,440 1,450 1,460 1,470 1,480 1,490 1,500

aligned sequence PHAC\_CUPNH (RT to E coli)

ttcgtgctgggtgcgtcgggccatatacgccggtgtgatcaaccgccgccaagaacaagcgcagccactggactaacgatgcgctgccggagtcgccgc

1,510 1,520 1,530 1,540 1,550 1,560 1,570 1,580 1,590 1,600

502 504 506 508 510 512 514 516 518 520 522 524 526 528 530 532  
 F V L G A S G H I A G V I N P P A K N K R S H W T N D A L P E S P  
 1-1770

phaC gene  
 phaC CDS (poly-beta-hydroxybuterate polymerase)  
 template sequence phaC - Cupriavidus necator

TTCGTTTTAGGCGCATCTGGCCATATTGCGGGAGTTAATTAATCCACCCGCGAAAAATAAGCGTAGCCATTGGACCAATGACGCGTTGCCTGAAAGCCCC

1,510 1,520 1,530 1,540 1,550 1,560 1,570 1,580 1,590 1,600

aligned sequence PHAC\_CUPNH (RT to E coli)

