

Forward and reverse sequence alignments of 56 CAZY with correct sequences that were transformed into BL21 cells for enzyme purification

cphy0218_1

Query= HR0ADKBY78ZA01_CAZY1C1P16_1.SCF
>Cphy0218 forward

Query: 67 aaagaaggagataggatcATGaagttcagtaatggatgTTggttacaaaagaaaggTact 126
|||
Sbjct: 1 aaagaaggagataggatcatgaagttcagtaatggatgTTggttacaaaagaaaggTact 60

Query: 127 gaatgtttttcaccagTgcaggtttatgattatcaaTcaaagaaaacgaggtTaaagaata 186
|||
Sbjct: 61 gaatgtttttcaccagTgcaggtttatgattatcaaTcaaagaaaacgaggtTaaagaata 120

Query: 187 cttaccacaacacatcaaTcaatcaccgCggtgataccttaggtggCgtgaatcttAcg 246
|||
Sbjct: 121 cttaccacaacacatcaaTcaatcaccgCggtgataccttaggtggCgtgaatcttAcg 180

Query: 247 atatttattacagCaccggCaccggaagttttgCgtgtTaaagacttatCactatatggga 306
|||
Sbjct: 181 atatttattacagCaccggCaccggaagttttgCgtgtTaaagacttatCactatatggga 240

Query: 307 gttagaagaagagTcctgagtttgagTtagacttatCaggggctTgtacactagagTgt 366
|||
Sbjct: 241 gttagaagaagagTcctgagtttgagTtagacttatCaggggctTgtacactagagTgt 300

Query: 367 gaggacacagaggatattttaataattaaaaatggaagTcttcgTttggaagTacaaaaa 426
|||
Sbjct: 301 gaggacacagaggatattttaataattaaaaatggaagTcttcgTttggaagTacaaaaa 360

Query: 427 tcaaacgcagcttttgcttattatcgTgggaatgagaaattaacctccagcggtTggcg 486
|||
Sbjct: 361 tcaaacgcagcttttgcttattatcgTgggaatgagaaattaacctccagcggtTggcg 420

Query: 487 gatctagcctatatgaaaacagattggCaaggGctTgctTacgatgatggtggTgaagag 546
|||
Sbjct: 421 gatctagcctatatgaaaacagattggCaaggGctTgctTacgatgatggtggTgaagag 480

Query: 547 gatacttacatgagagagcaattaacgctttctgtaggtgaactTgTttatggactTggt 606
|||
Sbjct: 481 gatacttacatgagagagcaattaacgctttctgtaggtgaactTgTttatggactTggt 540

Query: 607 gagagatttacaccgTttgtaaaaaatggtcaatctcttgatattctggaaTgaagatggc 666
|||
Sbjct: 541 gagagatttacaccgTttgtaaaaaatggtcaatctcttgatattctggaaTgaagatggc 600

Query: 667 ggtacctctaccgaacaatcttataagaacattcca-tttacataacaacaaaaggcat 725
|||||
Sbjct: 601 ggtacctctaccgaacaatcttataagaacattccattttacataacaacaaaaggctat 660

Query: 726 ggtgtcctttgtaatacatcccgaagggtttcatttgaaaattggctctgaaaagggtgaa 785
|||||
Sbjct: 661 ggtgtcctttgtaatacatccggagaagggtttcatttg-aaattggctctgagatgggtg-a 718

Query: 786 ccaaagtaggcttttcagtacctgggaaaatgcctcga 823
|||||
Sbjct: 719 ccaaagtaggcttttcagtacct-ggagaatgcctcga 755

Query= HR0ADKBY78ZA01_CAZY1C1P17_1.SCF

>Cphy0218 reverse

Query: 67 gtgtaatggatagtgatcTTAatggatggtgatgatgagaaattgcaactatagcaac 126
|||||
Sbjct: 2397 gtgtaatggatagtgatcttaatggatggtgatgatgagaaattgcaactatagcaac 2338

Query: 127 cacagattcctgtgccccaaataatcgatcgtttccatccactttaaatgaaacaccttc 186
|||||
Sbjct: 2337 cacagattcctgtgccccaaataatcgatcgtttccatccactttaaatgaaacaccttc 2278

Query: 187 tacgctatttacgacatagttctttaagacaataacttaccggtacttttgatgtaagatt 246
|||||
Sbjct: 2277 tacgctatttacgacatagttctttaagacaataacttaccggtacttttgatgtaagatt 2218

Query: 247 tattgttatcttaccaccatttaataactgcactcattactaccgccttttctccggtttc 306
|||||
Sbjct: 2217 tattgttatcttaccaccatttaataactgcactcattactaccgccttttctccggtttc 2158

Query: 307 ttgataaacagtagttgctacctctaccccctcttgtaactcatatatttttaactcaag 366
|||||
Sbjct: 2157 ttgataaacagtagttgctacctctaccccctcttgtaactcatatatttttaactcaag 2098

Query: 367 atccttcgtataactcatagactgctccttgacctttcggaccagaggcaatgatgctacc 426
|||||
Sbjct: 2097 atccttcgtataactcatagactgctccttgacctttcggaccagaggcaatgatgctacc 2038

Query: 427 ttgttttacatagagtggatgcttaggtaactatgttcttcttcataccatctcccacc 486
|||||
Sbjct: 2037 ttgttttacatagagtggatgcttaggtaactatgttcttcttcataccatctcccacc 1978

Query: 487 ctcttttacttcaccggtcagataattgggtccatttccccttaggtaagtaataatgagc 546
|||||
Sbjct: 1977 ctcttttacttcaccggtcagataattgggtccatttccccttaggtaagtaataatgagc 1918

Query: 547 catactattctcattaaatatcggagcaactagtaaactgtcgccgagaaaatactgctt 606
|||||
Sbjct: 1917 catactattctcattaaatatcggagcaactagtaaactgtcgccgagaaaatactgctt 1858

Query: 607 atctaggttaagagcaatttggatctttggtatattccatcaccatacttctcatcattgg 666
|||||
Sbjct: 1857 atctaggttaagagcaatttggatctttggtatattccatcaccatacttctcatcattgg 1798

Query: 667 aatacctgattctgaggtctccacagcattacgataaaggatggcataagggAACcttt 726
|||||
Sbjct: 1797 aatacctgattctgaggtctccacagcattacgataaaggatggcataagggAACcttt 1738

Query: 727 taactcagtaaagaaacgaaccacatcgactgcttcttcatcatacgcccaaggaacacg 786
|||||
Sbjct: 1737 taactcagtaaagaaacgaaccacatcgactgcttcttcatcatacgcccaaggaacacg 1678

Query: 787 atacgaagtactacatgaagtctggaatgggtggataat-aaccaaagctgccagcg 845
|||||
Sbjct: 1677 atacgaagtactacatgaagtctggaatgggtggataataaaccaaagctgccagcg 1618

Query: 846 cttatatacatccggtgttgaagtactctcaatccctccgatatcatgaatccaatacc 905
|||||
Sbjct: 1617 cttatatacatccggtgttgaagtactctcaaatccctccgatatcatgactccaatacc 1558

Query: 906 aaaatccagacattgttaaaggataaacctccgcaaga 945
|||||
Sbjct: 1557 -aaatccagacatcgtt-aaggat-aagcctccgcaaga 1521

#####

cphy1071_1

Query= HR0ADKBY78ZD01_CAZY2C1P16_1.SCF

>Cphy1071* forward

Query: 72 agaaggagataggatCATGgagaaatTTTcaacgaaattagaagcagagaatggaaagat 131
|||||
Sbjct: 3 agaaggagataggatcatggagaaatTTTcaacgaaattagaagcagagaatggaaagat 62

Query: 132 gactggtactgtaacggttagccactacaaggccagggtatagtggaaactggatgtcac 191
|||||
Sbjct: 63 gactggtactgtaacggttagccactacaaggccagggtatagtggaaactggatgtcac 122

Query: 192 cggTTTTactcaaaacagcagtaattcctggtcaacttctgtagtgattccgacaactgg 251
|||||
Sbjct: 123 cggTTTTactcaaaacagcagtaattcctggtcaacttctgtagtgattccgacaactgg 182

Query: 252 tcactacacattttacaatccgaagtgctgcagatagttataaagaaaattatctttatat 311
|||||
Sbjct: 183 tcactacacattttacaatccgaagtgctgcagatagttataaagaaaattatctttatat 242

Query: 312 taatggtacacaagctggaattatattatagtagcaggtgatggtaaattggggagatactgt 371
|||||
Sbjct: 243 taatggtacacaagctggaattatattatagtagcaggtgatggtaaattggggagatactgt 302

Query: 372 catcgaaagcgtatacttagaggctggaactatcactttatccgtaaaggaaaattgggg 431
|||||
Sbjct: 303 catcgaaagcgtatacttagaggctggaactatcactttatccgtaaaggaaaattgggg 362

Query: 432 ttggtttgacctaaattacattgcaattgaggcgggaagtgggtgttgataactctgttta 491
|||||
Sbjct: 363 ttggtttgacctagattacattgcaattgaggcgggaagtgggtgttgataactctgttta 422

Query: 492 tcagaaggcaacgtctacttagtaaaccggaatgcaaatgaaaaacaagaatattat 551
|||||
Sbjct: 423 tcagaaggcaacgtctacttagtaaaccggaatgcaaatgaaaaacaagaatattat 482

Query: 552 ggcatatctaaagagtatctacgggaaaaagacttttagcaggtcagtcctgtacgttaaa 611
|||||
Sbjct: 483 ggcatatctaaagagtatctacgggaaaaagacttttagcaggtcagtcctgtacgttaaa 542

Query: 612 cgccagcactgaaatttgaagcacttttataaagcaactggaaaaatcctgcaattcc 671
||| |||||
Sbjct: 543 cgcaagcactgaaa-ttgaagcac-tttataaagcaactgg-aaaatcctgcaattcg 599

Query: 672 tatgcttgatttaactctttgttctccagcaagctactggattccacaggaaaagtga 731
|||||
Sbjct: 600 tatgcttgatttaactctttgttctccagcaagcagactggcattccacaggagaagtga 659

Query: 732 tttggcccttgactgggatnnnnnnnngaggactaacgacatttcaatggccattgggca 791
|||||
Sbjct: 660 tttggcacttgactgggat-aaaaaaggaggactaacgacatttcaatggcattgggca 716

Query: 792 tgctccaaaagggtggtgc 809
|||||
Sbjct: 717 tgctccaaaagggtggtgc 734

Query= HR0ADKBY78ZD01_CAZY2C1P17_1.SCF
>Cphy1071* reverse

Query: 67 gtgtaatggatagtgatCTTAatggtgatggtgatgatgtggctccacacctagtagtaaa 126
|||||
Sbjct: 2109 gtgtaatggatagtgatcttaatggtgatggtgatgatgtggctccacacctagtagtaaa 2050

```

Query: 127  cttaccattatagtacacaacaacttttgactatctccataagaataatcattttcttg 186
           |||
Sbjct: 2049 cttaccattatagtacacaacaacttttgactatctccataagaataatcattttcttg 1990

Query: 187  gttatacaagctccaatcactcttcgtaaactctgatattcactataaaggtagaatccgc 246
           |||
Sbjct: 1989 gttatacaagctccaatcactcttcgtaaactctgatattcactataaaggtagaatccgc 1930

Query: 247  ggataatttatcagttgtgttaaacgatacatcaagatacgaatctgcttttgtttttg 306
           |||
Sbjct: 1929 ggataatttatcagttgtgttaaacgatacatcaagatacgaatctgcttttgtttttg 1870

Query: 307  taccgccattgagttaaaggttccattaactaccgatgtatatggaatgtacatggatc 366
           |||
Sbjct: 1869 taccgccattgagttaaaggttccattaactaccgatgtatatggaatgtacatggatc 1810

Query: 367  tttatttaattgcattgcagcagatcacaaatagaagttctccttcgcagttccctcctt 426
           |||
Sbjct: 1809 tttatttaattgcattgcagcagatcacaaatagaagttctccttcgcagttccctcctt 1750

Query: 427  cgtataataataacgaatcactagcttagataaatctatatcgcttcctttctcatgttt 486
           |||
Sbjct: 1749 cgtataataataacgaatcactagcttagataaatctatatcgcttcctttctcatgttt 1690

Query: 487  aatcttaaaatcagcatttattgtgtttgttgatagattgttattacctgtattggtaa 546
           |||
Sbjct: 1689 aatcttaaaatcagcatttattgtgtttgttgatagattgttattacctgtattggtaa 1630

Query: 547  agaaaagagtaaaaactacctggaattgggtgttactgatggtgtaaccgttggtgtaggtgt 606
           |||
Sbjct: 1629 agaaaagagtaaaaactacctggaattgggtgttactgatggtgtaaccgttggtgtaggtgt 1570

Query: 607  tactgttggcttaactgttgggtgctggtgttgctgctggtgttgctgttggcgttaccgt 666
           |||
Sbjct: 1569 tactgttggcttaactgttgggtgctggtgttgctgctggtgttgctgttggcgttaccgt 1510

Query: 667  tggcttaactgttggcgtcagtggttactgttggcgttactgtaagcttaacctgttggtg 726
           |||
Sbjct: 1509 tggcttaactgttggcgtcagtggttactgttggcgttactgtaggcttaa-ctgttggtg 1451

Query: 727  ttgggtgttgggtgttaccggttgagggtgttccattaaaaattaggtagtttaaccaagt 786
           |||
Sbjct: 1450 ttgggtgttgggtgttaccggttgagggtgttccattaaaa--ttaggtagtttatccaagt 1393

Query: 787  taacacctccttacggttataaaactttttacaccataaaaagcctcagtatatgttccatt 846
           ||

```

Sbjct: 1392 tatcacctcattactgttataaacctttttccacatagaagcctcagtatatgttccatt 1333

Query: 847 taggttgcccgaataaatcgataaagaaaatcccataacatactggacaccaaaccaga 906
|||||

Sbjct: 1332 taggttgcccgaat-aatcgataaggaatctccataccatactgcaaaccataaccaga 1274

Query: 907 agg 909

|||

Sbjct: 1273 agg 1271

#####

Cphy1510_2

Query= HR0ADKBY78ZG04_CAZY11C2P16_1.SCF
>Cphy1510* forward

Query: 68 aaagaaggagataggatcATGaccaataagacctatgattttaattcgatgacttatcaa 127
|||||

Sbjct: 1 aaagaaggagataggatcatgaccaataagacctatgattttaattcgatgacttatcaa 60

Query: 128 tccacatggggagttacatattctatcagtaatggatcaggaacatttaatttcactggt 187
|||||

Sbjct: 61 tccacatggggagttacatattctatcagtaatggatcaggaacatttaatttcactggt 120

Query: 188 caataccgtgaaattaagttcaatcttccgaaacgctagatatgtctcaatgtactagt 247
|||||

Sbjct: 121 caataccgtgaaattaagttcaatcttccgaaacgctagatatgtctcaatgtactagt 180

Query: 248 gtaacattcaatgcttccagtccaaatggacagattgcatttaagctttacgatacttct 307
|||||

Sbjct: 181 gtaacattcaatgcttccagtccaaatggacagattgcatttaagctttacgatacttct 240

Query: 308 ggaaatcaggtggctgtagtgataactttaattccaatacctcagactgtaccttcgca 367
|||||

Sbjct: 241 ggaaatcaggtggctgtagtgataactttaattccaatacctcagactgtaccttcgca 300

Query: 368 ccaaatagtagcgcaaaggtaaacagatttgaataatggcgcaagggacaaataactac 427
|||||

Sbjct: 301 ccaaatagtagcgcaaaggtaaacagatttgaataatggcgcaagggacaaataactac 360

Query: 428 tcagcagttgtgaatcgagttacatttacaatgacaggagggtccttctggcactggttct 487
|||||

Sbjct: 361 tcagcagttgtgaatcgagttacatttacaatgacaggagggtccttctggcactggttct 420

Query: 488 tcaactttattaaacacttatggaaatatattaaaaaactctggaactgctgttaattta 547
|||||

Sbjct: 421 tcaactttattaaacacttatggaaatatattaaaaaactctggaactgctgttaattta 480

Query: 548 agtcagctgcaaaaattcaaatacactaagtgtgattaagacgcaatataatagtatcaca 607
|||||
Sbjct: 481 agtcagctgcaaaaattcaaatacactaagtgtgattaagacgcaatataatagtatcaca 540

Query: 608 ttagagaatgaaatgaagccagatgcagttcttgaagttcatcaacattaatgactggt 667
|||||
Sbjct: 541 ttagagaatgaaatgaagccagatgcagttcttgaagttcatcaacattaatgactggt 600

Query: 668 gctcaagcaaaaatcgaatggttattatattccttctagctacacggaagtacagttcca 727
|||||
Sbjct: 601 gctcaagcaaaaatcgaatggttattatattccttctagctacacggaagtacagttcca 660

Query: 728 actcttaaatttagtaccatcgatgcagttctacagatttgctacaataacgggctaaag 787
|||||
Sbjct: 661 actcttaaatttagtaccatcgatgcagttctacagatttgctacaataacgggctaaag 720

Query: 788 cttagaggacatacattagtagtggcattcccaaacaccgggattggttctttagaacagg 847
|||||
Sbjct: 721 cttagaggacatacattagtagtggcattcccaaacacc-ggattggttctttagaacagg 779

Query: 848 ttaaaggttctagtgatcgatgtagccaagctgttaatggatgcaaaaatggaaaat 907
||| |
Sbjct: 780 ttata-gttctagtgatcgatgtagccaagctgtt-atggatgcaagaatgg-aaat 836

Query: 908 gtttaataagtcttatatga 927
||||| ||
Sbjct: 837 gtttattaggtcttatatga 856

Query= HR0ADKBY78ZG04_CAZY11C2P17_1.SCF
>Cphy1510* reverse

Query: 66 gtgtaatggatagtgatCTTAatggtgatggtgatgatgatatcctgcatctgtaaagtc 125
|||||
Sbjct: 1518 gtgtaatggatagtgatcttaatggtgatggtgatgatgatatcctgcatctgtaaagtc 1459

Query: 126 ttgtaacgctttattataagattcttttgagtagttaaactgaataacaaaggatt 185
|||||
Sbjct: 1458 ttgtaacgctttattataagattcttttgagtagttaaactgaataacaaaggatt 1399

Query: 186 ttgggaggcacgccaagatacgctatcatatagctcccaccatgtaataccagtgatatt 245
|||||
Sbjct: 1398 ttgggaggcacgccaagatacgctatcatatagctcccaccatgtaataccagtgatatt 1339

Query: 246 cccacctgctttctttagagaaagaatagcagtcatacaatcatatacataagtagcttg 305
|||||
Sbjct: 1338 cccacctgctttctttagagaaagaatagcagtcatacaatcatatacataagtagcttg 1279

```
Query: 306 tgtggaagctgatgtattcgtaacatcaagttcagtaacctgtacttcatacctgcatt 365
          |||
Sbjct: 1278 tgtggaagctgatgtattcgtaacatcaagttcagtaacctgtacttcatacctgcatt 1219

Query: 366 caagaacttctgcatagctgttttataatgccgatacagaaggataggaggtatttaagtg 425
          |||
Sbjct: 1218 caagaacttctgcatagctgttttataatgccgatacagaaggataggaggtatttaagtg 1159

Query: 426 agactgcattccaacaccagcgcaaagtttcgtaccagagttaataaaatttactaatga 485
          |||
Sbjct: 1158 agactgcattccaacaccagcgcaaagtttcgtaccagagttaataaaatttactaatga 1099

Query: 486 taggatctgatctgtaacctcatatgtgttgtaatcattataaaacaattttactgaatt 545
          |||
Sbjct: 1098 taggatctgatctgtaacctcatatgtgttgtaatcattataaaacaattttactgaatt 1039

Query: 546 cgттаатссааааctgctaagacaatcacacgcatctggaaagctttctttacataaga 605
          |||
Sbjct: 1038 cgттаатссааааctgctaagacaatcacacgcatctggaaagctttctttacataaga 979

Query: 606 tgggtggtaccaaggttggatccataaacttgagaccatccagaggtagaagcatgcaa 665
          |||
Sbjct: 978 tgggtggtaccaaggttggatccataaacttgagaccatccagaggtagaagcatgcaa 919

Query: 666 atactcatttacaacatccaagcatatactacacttccatagcttccattataaatatg 725
          |||
Sbjct: 918 atactcatttacaacatccaagcatatactacacttccatagcttccattataaatatg 859

Query: 726 actcatataagacctaataaacatttccattcttgcatccataacagcttggctaacata 785
          |||
Sbjct: 858 actcatataagacctaataaacatttccattcttgcatccataacagcttggctaacata 799

Query: 786 cgatccactagaactataacctgttctaagaaccaatccggtgtttgggaatgccatac 845
          |||
Sbjct: 798 cgatccactagaactataacctgttctaagaaccaatccggtgtttgggaatgccatac 739

Query: 846 taatgatatgctcctctaagctttaacccggtatttgtaacaaatctgtagaactgcatcga 905
          |||
Sbjct: 738 taatgatatgctcctctaagcttt-agcccggtatttgtagcaaatctgtagaactgcatcga 680

Query: 906 tggтactaaatttaagagttggaactgtactttcc 940
          |||
Sbjct: 679 tggтactaaatttaagagttggaactgtactttcc 645
```

#####

cphy1713_1

Query= HR0ADKBY78ZG01_CAZY3C1P16_1.SCF
>Cphy1713* forward

```
Query: 75 aaagaaggagataggatcATGtcttccgctgtttctgcaatTTTTGGAGGAGGCCCTTT 134
          |||
Sbjct: 1 aaagaaggagataggatcatgtcttccgctgtttctgcaatTTTTGGAGGAGGCCCTTT 60

Query: 135 gttacaggcggTcaaccagtaatgaatcaattaaagcttctggtTTTaaacagtaatt 194
          |||
Sbjct: 61 gttacaggcggTcaaccagtaatgaatcaattaaagcttctggtTTTaaacagtaatt 120

Query: 195 atctggTcagTacaTcctcatccgaatggagacttatacatcaacgatgaacttgTatgt 254
          |||
Sbjct: 121 atctggTcagTacaTcctcatccgaatggagacttatacatcaacgatgaacttgTatgt 180

Query: 255 caaaacggTaatTAcgtaggagaccctgcatgggTactgcatggcaatcctTaaaaact 314
          |||
Sbjct: 181 caaaacggTaatTAcgtaggagaccctgcatgggTactgcatggcaatcctTaaaaact 240

Query: 315 ggtaccacTctgtcactcgCgTtgagataagcattggagcttggggatgCagtgatTTT 374
          |||
Sbjct: 241 ggtaccacTctgtcactcgCgTtgagataagcattggagcttggggatgCagtgatTTT 300

Query: 375 gagaatattcaggcattaattaatgcaaatggtaccggtTcaaatacaatactataTcgt 434
          |||
Sbjct: 301 gagaatattcaggcattaattaatgcaaatggtaccggtTcaaatacaatactataTcgt 360

Query: 435 aatTTTTtagctctgaaaaatgTactggcgctgatgcggtaaatTtcgatgatgaatcc 494
          |||
Sbjct: 361 aatTTTTtagctctgaaaaatgTactggcgctgatgcggtaaatTtcgatgatgaatcc 420

Query: 495 ttatacaatgTaaatacaacggTacaatTtgGacaaatgtgtgctgctatgggcatgaag 554
          |||
Sbjct: 421 ttatacaatgTaaatacaacggTacaatTtgGacaaatgtgtgctgctatgggcatgaag 480

Query: 555 gtaacattatgtccctacactTcctcaagctTTTggagtagtgTaaaatcccaactTggt 614
          |||
Sbjct: 481 gtaacattatgtccctacactTcctcaagctTTTggagtagtgTaaaatcccaactTggt 540

Query: 615 tccattgttgatcgTgtgtacttgcaatgctacgatggcggagcaggtaatagccctTct 674
          |||
Sbjct: 541 tccattgttgatcgTgtgtacttgcaatgctacgatggcggagcaggtaatagccctTct 600

Query: 675 tcctggaaatccatcatgggcacgaatgtgattcccgactctggtgcttgcataccgga 734
          |||
```

Sbjct: 601 tcctggaatccatcatgggcacgaatgtgattccccggactctggtgcttgcatagcgga 660

Query: 735 agtcaaggagactctgctaactcggttaaatcaaaccttaccattggaagtccctcctcc 794
|||||

Sbjct: 661 agtcaaggagactctgctagctcggttaaatcaaagcttaccattggaagtccctcctcc 720

Query: 795 gaaggtggatttttctggctatatgaagatttaataaattatcaagtcccaatttcaac 854
|||||

Sbjct: 721 gaaggtggatttatctggctatatgacgatttaataaagttatcaagt-ccaaattcaac 779

Query: 855 acccaacatgcgaatgcaattaaattcattatttaccacta 896
| | | |

Sbjct: 780 agccgactatgcgaatgcaatt-aattcagtatttaccacta 820

Query= HR0ADKBY78ZG01_CAZY3C1P17_1.SCF

>Cphy1713* reverse

Query: 73 gtgtaatggatagtgatCTTAatggatggatgatgatataattcaaactcataaat 132
|||||

Sbjct: 1314 gtgtaatggatagtgatcttaatggatggatgatgatataattcaaactcataaat 1255

Query: 133 cctagcaatattggaagtagtttgcggtccggcagtaatgtataagcgaacgtaacgggc 192
|||||

Sbjct: 1254 cctagcaatattggaagtagtttgcggtccggcagtaatgtataagcgaacgtaacgggc 1195

Query: 193 actaaaagttattacagtacgatctgtaatattggaagtgttatttggttacggtatccac 252
|||||

Sbjct: 1194 actaaaagttattacagtacgatctgtaatattggaagtgttatttggttacggtatccac 1135

Query: 253 atcagtccaattgatgccatccgtgcttttttgaacttaaaatccttggattataaga 312
|||||

Sbjct: 1134 atcagtccaattgatgccatccgtgcttttttgaacttaaaatccttggattataaga 1075

Query: 313 ggtgctctcgcccccaacaccggcatggtgtacaacccatcttgatagtattaggtttg 372
|||||

Sbjct: 1074 ggtgctctcgcccccaacaccggcatggtgtacaacccatcttgatagtattaggtttg 1015

Query: 373 acctaagtcgatttttaaccatttaacagcatcagagttatcagagcaccatttactatt 432
|||||

Sbjct: 1014 acctaagtcgatttttaaccatttaacagcatcagagttatcagagcaccatttactatt 955

Query: 433 accatagccatagcctgcaatagaaccgtctactgctttgtccggtgtttcatttgttac 492
|||||

Sbjct: 954 accatagccatagcctgcaatagaaccgtctactgctttgtccggtgtttcatttgttac 895

Query: 493 atactgatttgctgttgctgatttattgagagcaatattatttgaagttggtggtgtttg 552

```

Sbjct: 894  |||
atactgatttgctgttgctgatttattgagagcaatattatttgaagttggtggtggttg 835

Query: 553  tgtaggcgtaggtgtagtggtaaatactgaattaattgcattcgcatagtcggctgttga 612
|||
Sbjct: 834  tgtaggcgtaggtgtagtggtaaatactgaattaattgcattcgcatagtcggctgttga 775

Query: 613  atttggacttgataacttcattaaatcgtcatatagccagataaatccaccttcggagga 672
|||
Sbjct: 774  atttggacttgataacttcattaaatcgtcatatagccagataaatccaccttcggagga 715

Query: 673  ggacttccaattggtgaagctttgatttaaccgagctagcagagctccttgacttccgct 732
|||
Sbjct: 714  ggacttccaattggtgaagctttgatttaaccgagctagcagagctccttgacttccgct 655

Query: 733  atgcaagcaccagagtcgggaatcacattcgtgccatgatggatttccaggaagaagg 792
|||
Sbjct: 654  atgcaagcaccagagtcgggaatcacattcgtgccatgatggatttccaggaagaagg 595

Query: 793  gctattacctgctccgccatcgtagcattgcaagtacacacgatcaacaatgggaacaaa 852
|||
Sbjct: 594  gctattacctgctccgccatcgtagcattgcaagtacacacgatcaacaat-ggaaccaa 536

Query: 853  gttggaatttacactacttccaaaagcttgaggaaagtgtaggacataatggttacct 912
|||
Sbjct: 535  gttgggattttacactac-tccaaaagcttgagg-aagtgtaggacataat-gttacct 479

Query: 913  tcatgccccatagcaccacacatTTTgtccaaattgtaccgTTgtatttacattggataa 972
|||
Sbjct: 478  tcatg-cccatagcagcacaca-tttgtccaaattgtaccgTTgtatttacattgtataa 421

Query: 973  gg 974
||
Sbjct: 420  gg 419

```

#####

cphy2108_1

Query= HR0ADKBY78ZB02_CAZY4C1P16_1.SCF

>Cphy2108* forward

```

Query: 68  aaagaaggagataggatcATGgaaaccaacatctataaagtagattggagcaaattta 127
|||
Sbjct: 1  aaagaaggagataggatcatgaaaccaacatctataaagtagattggagcaaattta 60

```

Query: 128 gaggggtgacaaaatcagcgggtcccatggaggggttaggtagatcaggcggagcagatc 187
|||||
Sbjct: 61 gaggggtgacaaaatcagcgggtcccatggaggggttaggtagatcaggcggagcagatc 120

Query: 188 acggttacgggctcctctaccaaactcattttacatatctaactcgtaaagataactgggat 247
|||||
Sbjct: 121 acggttacgggctcctctaccaaactcattttacatatctaactcgtaaagataactgggat 180

Query: 248 gcacttgatattcagaacgatcttttgaagttagatcgagatgcaacctatgaaatcaca 307
|||||
Sbjct: 181 gcacttgatattcagaacgatcttttgaagttagatcgagatgcaacctatgaaatcaca 240

Query: 308 gttaccggtcatgttgacagcaatgtagataactaagaatgctagtgcaagcttgccggt 367
|||||
Sbjct: 241 gttaccggtcatgttgacagcaatgtagataactaagaatgctagtgcaagcttgccggt 300

Query: 368 gtaacaaggaaaaacgggcgaggatgatggatacccagagttcaaaaagagaaactaca 427
|||||
Sbjct: 301 gtaacaaggaaaaacgggcgaggatgatggatacccagagttcaaaaagagaaactaca 360

Query: 428 tcgggcaagagttttgtactaacctatgaacttaaactttctgatcaaattccggacgct 487
|||||
Sbjct: 361 tcgggcaagagttttgtactaacctatgaacttaaactttctgatcaaattccggacgct 420

Query: 488 tcaagaaatctgtgggtgctccgtgttcagaccgacgaaccaagcggaagtagggccgga 547
|||||
Sbjct: 421 tcaagaaatctgtgggtgctccgtgttcagaccgacgaaccaagcggaagtagggccgga 480

Query: 548 gatcttgtaccggttctatgtggatgatatcgtgattattcaacaaaggcatccactgct 607
|||||
Sbjct: 481 gatcttgtaccggttctatgtggatgatatcgtgattattcaacaaaggcatccactgct 540

Query: 608 cctgtagctgtgactggtgaccttatgtcactttacgaacttaatgcggaacaaaactctc 667
|||||
Sbjct: 541 cctgtagctgtgactggtgaccttatgtcactttacgaacttaatgcggaacaaaactctc 600

Query: 668 aaggttggagaatcattatcaagtccagctctgaaagtttctggaatgctaagatagtt 727
|||||
Sbjct: 601 aaggttggagaatcattatcaagtccagctctgaaagtttctggaatgctaagatagtt 660

Query: 728 gttgtagaaagcaccgatggtaccggtgattacaactgaaagaccgtgttaataattat 787
|||||
Sbjct: 661 gttgtagaaagcaccgatggtaccggtgattacaactgaaagaccgtgttaataattat 720

Query: 788 gacggtggaaaactccctcgtgatgactgaaaataaccgataaatttatgtctggaaca 847
|||||
Sbjct: 721 gacggtgtagacatccctcgtgatgactgaaaataaccgataaatttatgtctggtaca 780

Sbjct: 1905 |||gatccttagcacctgtttttatgaaacgcttgatgctagcttctacagtggaaacctttaa 1846

Query: 606 atctccggtccaataatgtgcctgcattccgattccttcgatgagcaatctgtcaggctc 665

Sbjct: 1845 |||atctccggtccaataatgtgcctgcattccgattccttcgatgagcaatctgtcaggctc 1786

Query: 666 agtggtccgtttatcggctcttccactttgtgtttaattcttccaccatcaaggcgatcgc 725

Sbjct: 1785 |||agtggtccgtttatcggctcttccactttgtgtttaattcttccaccatcaaggcgatcgc 1726

Query: 726 ttcacacttacctgcctctgtctcattgaagtcggtataatacagcactgcatcaagagc 785

Sbjct: 1725 |||ttcacacttacctgcctctgtctcattgaagtcggtataatacagcactgcatcaggagc 1666

Query: 786 ggcaagacgtgtaaacacgaaagcgtcatagatataatcagagccatcctcgcccttgct 845

Sbjct: 1665 |||ggcaagacgtgtaaacacgaaagcgtcatagatataatcagagccatcctcgcccttgct 1606

Query: 846 cttttcagcaccgtttttataggcttgataccaaggaaaaccattttcgttatctttcaa 905

Sbjct: 1605 |||ctttatcagcaccgttttcataggcttgataccaaggagaaccattttccgttatc-ttcaa 1547

Query: 906 ttttgcgtaatacatccctccagccagcaaggaatttcggatacccctgg 955

Sbjct: 1546 |||atttgcgtaatacatccctccagccagc-aggatttcggatacacctgg 1498

#####

Cphy2632_2

Query= HR0ADKBY78ZB05_CAZY12C2P16_1.SCF

>Cphy2632 forward

Query: 69 aaagaaggagataggatcATGtgatagcagatttgaaaatggcaactataggaatcca 128

Sbjct: 1 |||aaagaaggagataggatcatgtgatagcagatttgaaaatggcaactataggaatcca 60

Query: 129 ttactttatgcagattattctgatccagatgcaattagagttggtgacgattatttatg 188

Sbjct: 61 |||ttactttatgcagattattctgatccagatgcaattagagttggtgacgattatttatg 120

Query: 189 gttgcatcaagtttttgcaatgcaccagctttacctttactacattctaaggatcttgtg 248

Sbjct: 121 |||gttgcatcaagtttttgcaatgcaccagctttacctttactacattctaaggatcttgtg 180

Query: 249 aactggaaagtagtgaattatgtcttagataaaaattccagagtttcgatatagaaatcca 308

Sbjct: 181 ||| aactggaaagtagtgaattatgtcttagataaaaattccagagtttcgatatagaaatcca 240

Query: 309 atgcatggatgCGGTGtatgggcaccttctatcagatatcatgaaggaacatattatgtg 368

Sbjct: 241 ||| atgcatggatgCGGTGtatgggcaccttctatcagatatcatgaaggaacatattatgtg 300

Query: 369 tgtttccaatgccagatgagggaaatctacatgactacaaccaagatccatttggaag 428

Sbjct: 301 ||| tgtttccaatgccagatgagggaaatctacatgactacaaccaagatccatttggaag 360

Query: 429 tggagtgagcctgtgaatattagaccgggtgcaggctggattgatccatgtccattctgg 488

Sbjct: 361 ||| tggagtgagcctgtgaatattagaccgggtgcaggctggattgatccatgtccattctgg 420

Query: 489 gatgaagatggaaaagcgtatcttgttgcagggtgtagcaaagagtcgtataggatataaa 548

Sbjct: 421 ||| gatgaagatggaaaagcgtatcttgttgcagggtgtagcaaagagtcgtataggatataaa 480

Query: 549 agtgccttcacatggaggatgcaaccagatggatgggacttatcggggaagatggt 608

Sbjct: 481 ||| agtgccttcacatggaggatgcaaccagatggatgggacttatcggggaagatggt 540

Query: 609 agaatctttgatggcgataccaacggaaatgtaacaacagaaggtcctaagatgcataag 668

Sbjct: 541 ||| agaatctttgatggcgataccaacggaaatgtaacaacagaaggtcctaagatgcataag 600

Query: 669 aagaatggttggtattatgtcttttgaccagcgggtggcgtaaagacaggttggcagtt 728

Sbjct: 601 ||| aagaatggttggtattatgtc-tttgaccagcgggtggcgtaaagacaggttggcagtt 659

Query: 729 atttcttcggttctaagaatgtatttggcccttacgaacaccaagttgtgatgaacaagg 788

Sbjct: 660 ||| agttcttcggttctaagaatgtatttggcccttacgaacacaaagttgtgatgaacaagg 719

Query: 789 ggatactcttgtaacggacctccatcaaggtgcttgggtt 829

Sbjct: 720 ||| ggatactcttgtaacggacct-catcaaggtgcttgggtt 759

Query= HR0ADKBY78ZB05_CAZY12C2P17_1.SCF 1306 0 1306 SCF

>Cphy2632 reverse

Query: 68 gtgtaatggatagtgatCTTAatggatggatggatgctgatatacctagtagtctac 127

Sbjct: 1686 ||| gtgtaatggatagtgatcttaatggatggatggatgctgatatacctagtagtctac 1627

Query: 128 ttctacataacctccaccattcatggtggttatcatggttacagaagacaccattttaac 187
|||||
Sbjct: 1626 ttctacataacctccaccattcatggtggttatcatggttacagaagacaccattttaac 1567

Query: 188 acctaccatcttcctgctttagcattaatcgtaaagcttccttaactcttcaccgtc 247
|||||
Sbjct: 1566 acctaccatcttcctgctttagcattaatcgtaaagcttccttaactcttcaccgtc 1507

Query: 248 aaggctataagacattgtgatagctcctgaggaacatgcttacttgaatgtccatttc 307
|||||
Sbjct: 1506 aaggctataagacattgtgatagctcctgaggaacatgcttacttgaatgtccatttc 1447

Query: 308 catattatctacatatcctacgcactttacttcatatttaaggaatactgtcttttctct 367
|||||
Sbjct: 1446 catattatctacatatcctacgcactttacttcatatttaaggaatactgtcttttctct 1387

Query: 368 atctttaaactcactatctgttaatgaaatgcttactttattctgggccataggaac 427
|||||
Sbjct: 1386 atctttaaactcactatctgttaatgaaatgcttactttattctgggccataggaac 1327

Query: 428 atcacaatcaaagttttgaattcccgtaatcttctcgatcgcgtaagaaccattctttt 487
|||||
Sbjct: 1326 atcacaatcaaagttttgaattcccgtaatcttctcgatcgcgtaagaaccattctttt 1267

Query: 488 gcttactgcatagcactatattccatccctaaggacacaattcctgcagtatctccatc 547
|||||
Sbjct: 1266 gcttactgcatagcactatattccatccctaaggacacaattcctgcagtatctccatc 1207

Query: 548 ctgtaatcctgcaaaaactcatcttagtgatacaagaaaattcaggcgctggccacttctg 607
|||||
Sbjct: 1206 ctgtaatcctgcaaaaactcatcttagtgatacaagaaaattcaggcgctggccacttctg 1147

Query: 608 taaaagaagattacgataatcgctaattggacgttgtggcacagaaggactgattcaa 667
|||||
Sbjct: 1146 taaaagaagattacgataatcgctaattggacgttgtggcacagaaggactgattcaa 1087

Query: 668 tttgatTTTTgaattgcctaattcataccaatcaatgtctggattcggttccactgcca 727
|||||
Sbjct: 1086 tttgatTTTTgaattgcctaattcataccaatcaatgtctggattcggttccactgcca 1027

Query: 728 ctgtaagccaaagctatctccttcaaattcatctgtagtatctggctcaciaaccggata 787
|||||
Sbjct: 1026 ctgtaagccaaagctatctccttcaaattcatctgtagtatctggctcaciaaccggata 967

Query: 788 taatggattattttgaagtctcctctgtcttaccgaccttaggcttctaattccc 847
|||||
Sbjct: 966 taatggattattttgaagtctcctctgtcttaccgaccttaggcttctaattccc 909

Query: 848 attactggttcgccctaatacatttccctctttattcacaccaataattggccattctttt 907
|||||
Sbjct: 908 attactggttcgccgtaatacatttccctctttattcacaccaataattggccattcattt 849

Query: 908 tcccaatggcttggtttaaaagaacgattctccccgcttccaacacatcttgaaaatg 967
|||||
Sbjct: 848 tcccaatgcattggttgaagatgaacgattctccctgctgcatacacatctt-gaaaatg 790

Query: 968 taaaaacc 975
|||||
Sbjct: 789 taaaaacc 782

#####

cphy2919_1

Query= HR0ADKBY78ZE02_CAZY5C1P16_1.SCF

>Cphy2919* forward

Query: 74 aaagaaggagataggatcATGactacatattattatgtttcaactacaggtagcgactcc 133
|||||
Sbjct: 1 aaagaaggagataggatcatgactacatattattatgtttcaactacaggtagcgactcc 60

Query: 134 aataatggcactactaaggaaacagcttttaaaactcttacaaaagctttaactaaagct 193
|||||
Sbjct: 61 aataatggcactactaaggaaacagcttttaaaactcttacaaaagctttaactaaagct 120

Query: 194 agtgcaggaacaacaatttttgttttaaaggaacttacagttattctacgacatttaa 253
|||||
Sbjct: 121 agtgcaggaacaacaatttttgttttaaaggaacttacagttattctacgacatttaa 180

Query: 254 ctaactagtaatggtacggcttctgagccaataaaaatattaaactatagcggacatagc 313
|||||
Sbjct: 181 ctaactagtaatggtacggcttctgagccaataaaaatattaaactatagcggacatagc 240

Query: 314 cctgttattgatttttctagtcaagaatatgcggatagttcaagaggtttcaaataatcg 373
|||||
Sbjct: 241 cctgttattgatttttctagtcaagaatatgcggatagttcaagaggtttcaaataatcg 300

Query: 374 ggaaattattggattatcgctggtttaacgataactggtgctggggataatggtattcac 433
|||||
Sbjct: 301 ggaaattattggattatcgctggtttaacgataactggtgctggggataatggtattcac 360

Query: 434 ataagtggaaactataatcgagtgcaagattgttttatcactaagtgcggagatactggt 493
|||||
Sbjct: 361 ataagtggaaactataatcgagtgcaagattgttttatcactaagtgcggagatactggt 420

Query: 494 ttacaaatcagtaatggtggttcttataataacaattactcgtggttacttccacttacaat 553
|||||
Sbjct: 421 ttacaaatcagtaatggtggttcttataataacaattactcgtggttacttccacttacaat 480

Query: 554 tatgataagaaaacgaatggtgagaatgcggatggttttgagcaaaattaggtatcgga 613
|||||
Sbjct: 481 tatgataagaaaacgaatggtgagaatgcggatggttttgagcaaaattaggtatcgga 540

Query: 614 cctggaaatgtttttacttcctgtaaagcatacaataattccgacgatggatttgacttt 673
|||||
Sbjct: 541 cctggaaatgtttttacttcctgtaaagcatacaataattccgacgatggatttgacttt 600

Query: 674 tatgatgcgaaaaatgcagtaaaggtatatgactgtgaagcatcctataacggagtaccg 733
|||||
Sbjct: 601 tatgatgcgaaaaatgcagtaaaggtatatgactgtgaagcatcctataacggagttagcg 660

Query: 734 gatggcaatggaaatggttttaaagtaggaggaaataactcagcggaatatcattatcct 793
|||||
Sbjct: 661 gatggcaatggaaatggttttaaagtaggaggaaataactcagcggataatcattatcct 720

Query: 794 gaaaattgtactgccacaggaaatcgttctaaaggatataaccaaaaaataacaataatgg 853
|||||
Sbjct: 721 gaaaattgtactgccacaggaaatcgttctagaggatagacc-aaaataacaataactgg 779

Query: 854 ttatattacactagtaaattggactggt 881
|||||
Sbjct: 780 ttatattacactagtaaattgtactggt 807

Query= HR0ADKBY78ZE02_CAZY5C1P17_1.SCF

>Cphy2919* reverse

Query: 67 gtgtaatggatagtgatcTTAatggtgatggtgatgatgctgataaaatgaacagttcgt 126
|||||
Sbjct: 984 gtgtaatggatagtgatcctaaggtgatggtgatgatgctgataaaatgaacagttcgt 925

Query: 127 aacggtagctcccacaattttatctttgcttgctccgagagatacaaccagtaaa 186
|||||
Sbjct: 924 aacggtagctcccacaattttatctttgcttgctccgagagatacaaccagtaaa 865

Query: 187 cttatgtgttccagaagccggtgcttttgggaaatagaaatttacgttgttttttgtacc 246
|||||
Sbjct: 864 cttatgtgttccagaagccggtgcttttgggaaatagaaatttacgttgttttttgtacc 805

Query: 247 agtacaatttactagtgtaataataaccagtattgttattttggtcatatcctctagaacg 306

Sbjct: 804 ||| agtacaatttactagtgtaataataaccagattgttattttggtcatatcctctagaacg 745

Query: 307 atttcctgtggcagtacaattttcaagataatgattatccgctgagttatttcctcctac 366
|||

Sbjct: 744 atttcctgtggcagtacaattttcaagataatgattatccgctgagttatttcctcctac 685

Query: 367 tttaaaaccatttccattgccatccgctactccggtataggatgcttcacagtcataac 426
|||

Sbjct: 684 tttaaaaccatttccattgccatccgctactccggtataggatgcttcacagtcataac 625

Query: 427 ctttactgcatttttcgcatcataaaagtcaaatccatcgtcggattattgtatgcttt 486
|||

Sbjct: 624 ctttactgcatttttcgcatcataaaagtcaaatccatcgtcggattattgtatgcttt 565

Query: 487 acaggaagtaaaaacatttccaggtccgatacctaattttgctgcaaaaccatccgcatt 546
|||

Sbjct: 564 acaggaagtaaaaacatttccaggtccgatacctaattttgctgcaaaaccatccgcatt 505

Query: 547 ctcaccattcgttttcttatcataattgtaagtggaagtaacacgagtaattgtattata 606
|||

Sbjct: 504 ctcaccattcgttttcttatcataattgtaagtggaagtaacacgagtaattgtattata 445

Query: 607 agaaccaccattactgatttgtaaaccagtatctccgcacttagtgataaaacaatcttg 666
|||

Sbjct: 444 agaaccaccattactgatttgtaaaccagtatctccgcacttagtgataaaacaatcttg 385

Query: 667 cactcgattatagtttccacttatgtgaataccattatccccagcaccagttatcgtaa 726
|||

Sbjct: 384 cactcgattatagtttccacttatgtgaataccattatccccagcaccagttatcgtaa 325

Query: 727 accagcgataatccaataatttcccgatatttgaaaacctcttgaactatccgcatattc 786
|||

Sbjct: 324 accagcgataatccaataatttcccgatatttgaaaacctcttgaactatccgcatattc 265

Query: 787 ttgactagaaaaatcaataacagggctatgtccgctatagtttaataatttttattggctc 846
|||

Sbjct: 264 ttgactagaaaaatcaataacagggctatgtccgctatagtttaataatttttattggctc 205

Query: 847 agaagccgtaccattactagtttagtttaaagtgcgtagaataactgtaagttccatttaa 906
|||

Sbjct: 204 agaagccgtaccattactagtttagtttaaagtgcgtagaataactgtaagttccatttaa 145

Query: 907 aacaaaaattgttgttctgactagcttttagttaaagccttttgtaagagttttaaaa 965
|||

Sbjct: 144 aacaaaaattgttgttctgactagcttttagttaaag-ccttttgtaagagttttaaaa 87

#####

cphy3202_2

Query= HR0ADKBY78ZG03_CAZY8C2P16_1.SCF

>Cphy3202* forward

Query: 66 aaagaaggagataggatcATGacagcagacggtcttacctctcaacagtatgttgaggca 125
|||||
Sbjct: 1 aaagaaggagataggatcatgacagcagacggtcttacctctcaacagtatgttgaggca 60

Query: 126 atgggcgaaggctggaacttaggaaattccttgatggttttgattctgatacttcaaaa 185
|||||
Sbjct: 61 atgggcgaaggctggaacttaggaaattccttgatggttttgattctgatacttcaaaa 120

Query: 186 ccagatcaaggcgagaccgcttggggaaatcctaaggttacaaaagagctaatacatgca 245
|||||
Sbjct: 121 ccagatcaaggcgagaccgcttggggaaatcctaaggttacaaaagagctaatacatgca 180

Query: 246 gtcaaacaaaaaggctatagtagtatccgcataccaatgaccctatatcgtagatatacg 305
|||||
Sbjct: 181 gtcaaacaaaaaggctatagtagtatccgcataccaatgaccctatatcgtagatatacg 240

Query: 306 gagagcaatggtgatgcactatcgatagcgcatggatagcacgttacaagaagtagta 365
|||||
Sbjct: 241 gagagcaatggtgatgcactatcgatagcgcatggatagcacgttacaagaagtagta 300

Query: 366 gattatgcagttgcagaaggtttatacgttatgataaacattcacatgattcctggata 425
|||||
Sbjct: 301 gattatgcagttgcagaaggtttatacgttatgataaacattcacatgattcctggata 360

Query: 426 tggttatcttcatgggatggaaataagagttctgtgcaatatgtaagatttactcagatg 485
|||||
Sbjct: 361 tggttatcttcatgggatggaaataagagttctgtgcaatatgtaagatttactcagatg 420

Query: 486 tgggatcaacttgcaaggcatttaaagattatccggttacaagtatgttttgaaacgata 545
|||||
Sbjct: 421 tgggatcaacttgcaaggcatttaaagattatccggttacaagtatgttttgaaacgata 480

Query: 546 aatgagccgaactttcaaaactctgaaaagtactgcacagaataaattagatatgctt 605
|||||
Sbjct: 481 aatgagccgaactttcaaaactctgaaaagtactgcacagaataaattagatatgctt 540

Query: 606 aaccaagcggcttacaatataaattcgtgcctctggtggatcaaagagaatgatt 665
|||||
Sbjct: 541 aaccaagcggcttacaatataaattcgtgcctctggtggatcaaagagaatgatt 600

Query: 666 gttttaccatcactaaatacgaacatgataatagtgtaccattagctgatttcataact 725
|
Sbjct: 601 gttttaccatcactaaatacgaacatgataatagtgtaccattagctgatttcataact 660

Query: 726 aaatttgaatgattctaataatcattgccaccgttccttaatatagggaaagggatttta 785
|
Sbjct: 661 aaa-ttgaatgattctaataatcattgccaccgttccttaatatagggaaagggatttta 718

Query: 786 gtgctaacccttggtaaaaaacaagcttttgatgaagaattatggggaaaatggatgaatac 845
|
Sbjct: 719 gtgctaa-ccttggg-aagacaagc-tttgatgaagatttatgggg-aaatggatgattac 774

Query: 846 cctccctcgggaagcggtaaaaaaggcgttttgataaccattt 887
|
Sbjct: 775 act-cctcgtgatgcggtaaataaggcg-tttgataaccattt 814

Query= HR0ADKBY78ZG03_CAZY8C2P17_1.SCF

>Cphy3202* reverse

Query: 67 gtgtaatggatagtgatcTTAatggatggatggatgatttgaactaactaaagtaac 126
|
Sbjct: 2193 gtgtaatggatagtgatccttaatggatggatggatgatttgaactaactaaagtaac 2134

Query: 127 atttgatggtggatcaacagacggtgtatcatgtgaagcaataaaaccaaagtgtatact 186
|
Sbjct: 2133 atttgatggtggatcaacagacggtgtatcatgtgaagcaataaaaccaaagtgtatact 2074

Query: 187 ttgccctggatctagattcgtagcccatgctggtcccttcactgtaatggtacccgaatt 246
|
Sbjct: 2073 ttgccctggatctagattcgtagcccatgctggtcccttcactgtaatggtacccgaatt 2014

Query: 247 ttgactaaccaaatctgcactccacatttggctatatataccctttataagtaaatac 306
|
Sbjct: 2013 ttgactaaccaaatctgcactccacatttggctatatataccctttataagtaaatac 1954

Query: 307 aacaaaattccttagtgctgtattagaggatttggttaatgtaataattcgcctgtgtatg 366
|
Sbjct: 1953 aacaaaattccttagtgctgtattagaggatttggttaatgtaataattcgcctgtgtatg 1894

Query: 367 cttatccaagtattcgttacttcgtattttaatgtaactggacctgttcctgggattgg 426
|
Sbjct: 1893 cttatccaagtattcgttacttcgtattttaatgtaactggacctgttcctgggattgg 1834

Query: 427 agtaggagttggtgttactgtcgggtgttat 456
|
Sbjct: 1833 agtaggagttggtgttactgtcgggtgttat 1804

Score = 674 bits (340), Expect = 0.0
Identities = 362/368 (98%), Gaps = 1/368 (0%)
Strand = Plus / Minus

Query: 574 aggggttactgctgctgcagttcctggtatggtaccatttgatttattaagattatattt 633
|||||
Sbjct: 1686 aggggttactgctgctgcagttcctggtatggtaccatttgatttattaagattatattt 1627

Query: 634 taacttttgtccatcataaaactccatctcaaatgatataatttccatcataaacagaacc 693
|||||
Sbjct: 1626 taacttttgtccatcataaaactccatctcaaatgatataatttccatcataaacagaacc 1567

Query: 694 atccttaaagaaatcaggccttaatggttaaaatattgttcgtatagttcgccacaaaagt 753
|||||
Sbjct: 1566 atccttaaagaaatcaggccttaatggttaaaatattgttcgtatagttcgccacaaaagt 1507

Query: 754 tgcaccatactctaaatacatccaccagctttgattcgggccaactcgattagaacctat 813
|||||
Sbjct: 1506 tgcaccatactctaaatacatccaccagctttgattcgggccaactcgattagaacctat 1447

Query: 814 ataagctgtagaacgacggagtttacttccgtttaattgaaactggaatattaattccatt 873
|||||
Sbjct: 1446 ataagctgtagaacgacggagtttacttccgtttaattgaaactggaatattaattccatt 1387

Query: 874 ggaaacagttccatttccattttgaaatactggtgctttgtatttcaacaaaatactcag 933
|||||
Sbjct: 1386 ggaaacagttccattcgcattttgaaatactggtgctttgtatttcaactaaatactcat 1328

Query: 934 gccaatca 941
|||||
Sbjct: 1327 gccaatca 1320

#####

cphy3207_1

Query= HR0ADKBY78ZF05_CAZY14C1P16_1.SCF

>Cphy3207 forward

Query: 68 aaagaaggagataggatcatgaATGgtgcaataaaaagtgggtattaccggaatgtgttt 127
|||||
Sbjct: 1 aaagaaggagataggatcatgaatggtgcaataaaaagtgggtattaccggaatgtgttt 60

Query: 128 accgaattaggctataaagaaggaggacgtaactaagaaagttgaggacagctttcagacc 187
|||||

Sbjct: 61 accgaattaggctataaagaagaggacgtaactaagaaagttgaggacagctttcagacc 120

Query: 188 ttgttctatggctaccagaagaacgcatatattatcctgtgggtgaagatttaggatat 247
|||||
Sbjct: 121 ttgttctatggctaccagaagaacgcatatattatcctgtgggtgaagatttaggatat 180

Query: 248 atcgtggataccggaatcatgatgttcgaacagaaggaatgtcctatggaatgatgatg 307
|||||
Sbjct: 181 atcgtggataccggaatcatgatgttcgaacagaaggaatgtcctatggaatgatgatg 240

Query: 308 tgtttgcaattagataaaaaagaggaatttgatcgcttatggaaatgggctaagacatat 367
|||||
Sbjct: 241 tgtttgcaattagataaaaaagaggaatttgatcgcttatggaaatgggctaagacatat 300

Query: 368 atgtttatggattctgggtgtaacaaaggctattttgcttgggtcatgtaaacagatggt 427
|||||
Sbjct: 301 atgtttatggattctgggtgtaacaaaggctattttgcttgggtcatgtaaacagatggt 360

Query: 428 acgaaaaattcctatggaccagcaccggatgggtgaggagtattttgctttagcattattc 487
|||||
Sbjct: 361 acgaaaaattcctatggaccagcaccggatgggtgaggagtattttgctttagcattattc 420

Query: 488 tttgcttccaaccgctgggtgatggaaatggaattttcgaatatagtaacaagcgaga 547
|||||
Sbjct: 421 tttgcttccaaccgctgggtgatggaaatggaattttcgaatatagtaacaagcgaga 480

Query: 548 gaacttcttcatgaatgtatccataaaggagaagaggatggaatcggagaacctatgtgg 607
|||||
Sbjct: 481 gaacttcttcatgaatgtatccataaaggagaagaggatggaatcggagaacctatgtgg 540

Query: 608 gagccatcgaactacctgataaaaattcataccttattgccaattttacagatccatcgta 667
|||||
Sbjct: 541 gagccatcgaactacctgataaaaattcatacctaattg-caattttacagatccatcgta 599

Query: 668 tcatttaccacacttttaccgggttattttgactttgggcatatgaagaaagatagaaaa 727
|||||
Sbjct: 600 tcatttaccacactttta-cgggttattttgactttgggcatatgaag-aagatagagaa 657

Query: 728 ttctttaaaaaggcaacggaagcaagtcgtttctaactttaaacttgcgatgcatg 783
|||||
Sbjct: 658 ttctttaaaaaggcagcgggaagcgagtcg-ttcgatctaaaacttgcgatgcatg 712

Query= HR0ADKBY78ZF05_CAZY14C1P17_1.SCF

>Cphy3207 reverse

Query: 67 gtgtaatggatagtgatcTTAatggtgatggtgatgatgcatccacatacgatactttcc 126
 |||
 Sbjct: 1200 gtgtaatggatagtgatccttaatggtgatggtgatgatgcatccacatacgatactttcc 1141

Query: 127 acttaaagctaagagtgcaaacatatacaagcaattgtcgtaatatcttctatcgccagt 186
 |||
 Sbjct: 1140 acttaaagctaagagtgcaaacatatacaagcaattgtcgtaatatcttctatcgccagt 1081

Query: 187 ccttaattctgtatgataaaacttgtcgacacattctttcgcaaaggaccatttgctgc 246
 |||
 Sbjct: 1080 ccttaattctgtatgataaaacttgtcgacacattctttcgcaaaggaccatttgctgc 1021

Query: 247 taaagatgcttgcgattggtagcgattattgcaacagggtgtaaagcctcgcccttgat 306
 |||
 Sbjct: 1020 taaagatgcttgcgattggtagcgattattgcaacagggtgtaaagcctcgcccttgat 961

Query: 307 tatcgttccatctacttgataaataccacttgcattgctcttttactgtctcaciaaaagaa 366
 |||
 Sbjct: 960 tatcgttccatctacttgataaataccacttgcattgctcttttactgtctcaciaaaagaa 901

Query: 367 ttgctgtaaagattagcgatggtacttggcattcatcagctgcaaacagagataatc 426
 |||
 Sbjct: 900 ttgctgtaaagattagcgatggtacttggcattcatcagctgcaaacagagataatc 841

Query: 427 aagaccaatgtttgcaatggttcgataagcatcgctgtaataccaatcatggcgtccaaa 486
 |||
 Sbjct: 840 aagaccaatgtttgcaatggttcgataagcatcgctgtaataccaatcatggcgtccaaa 781

Query: 487 tatttcttgatctccactatgagcagttccatcgactctgtgtattctgcaagccc 546
 |||
 Sbjct: 780 tatttcttgatctccactatgagcagttccatcgactctgtgtattctgcaagccc 721

Query: 547 agtcttttcatgacatgcaagttttagatacgaacgactcgcttccgctgcctttttaaa 606
 |||
 Sbjct: 720 agtcttttcatgacatgcaagttttagatacgaacgactcgcttccgctgcctttttaaa 661

Query: 607 gaattctctatcttcttcatatgcccaggatgcaataaccgtaaaagtgtggtaaatg 666
 |||
 Sbjct: 660 gaattctctatcttcttcatatgcccaggatgcaataaccgtaaaagtgtggtaaatg 601

Query: 667 atacgatggatctgtaaaattgcaattaggtatgaattttatcaggtagttcgaaggctc 726
 |||
 Sbjct: 600 atacgatggatctgtaaaattgcaattaggtatgaattttatcaggtagttcgaaggctc 541

Query: 727 ccacataggttctccgattccatccttctcttttattggatacattcatgaagaaattc 786
 |||

Sbjct: 540 ccacataggttctccgattccatcctcttctcctttatggatacattcatgaagaagttc 481

Query: 787 tcccgctggtttaccatattcgaaaattccccttccaccagcggttggaagcaaa 846
||| ||||| ||||||| ||||||| ||||| ||||||| ||||||| |||||||

Sbjct: 480 tctcgcttggtttactatattcgaaaattccatttccatcaccagcggttggaagcaaa 421

Query: 847 aaataatgctaaacaaaaatactcctcaccctcccgggctggtccataagaaatTTTT 906
||||| ||||| | ||||||| ||||| | ||||| ||||||| || |||||||

Sbjct: 420 gaataatgctaaagc-aaaatactcctcaccat-ccggtgctggtccat-aggaatTTTT 364

Query: 907 cgtacca 913
|||||||

Sbjct: 363 cgtacca 357

#####

cphy3581_3

Query= HR0ADKBY78ZC04_CAZY9C3P16_1.SCF

>Cphy3581 forward

Query: 71 aaagaaggagataggatcATGatatttcgacatggcgaagtttttattaatggaaaattt 130
||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

Sbjct: 1 aaagaaggagataggatcatgatatttcgacatggcgaagtttttattaatggaaaattt 60

Query: 131 gaacgaaaagatattcctgttgaagatggatttgtaaagaaatcagagacaatcaca 190
||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

Sbjct: 61 gaacgaaaagatattcctgttgaagatggatttgtaaagaaatcagagacaatcaca 120

Query: 191 ggagatgggaatgaagtagattgtacaggtttacgcattgtacctggtttctttgatatt 250
||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

Sbjct: 121 ggagatgggaatgaagtagattgtacaggtttacgcattgtacctggtttctttgatatt 180

Query: 251 catacgcatggatgtttatcttacgatttctctttatcaaaccagaagaaatcaaagag 310
||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

Sbjct: 181 catacgcatggatgtttatcttacgatttctctttatcaaaccagaagaaatcaaagag 240

Query: 311 atgtgcgagtattatgcaaagcatggtgtaacctcaatacttgctacaccaatgacaaat 370
||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

Sbjct: 241 atgtgcgagtattatgcaaagcatggtgtaacctcaatacttgctacaacaatgacaaat 300

Query: 371 gaggaaaatcagtatcatcgggcaatggtttatataaaagaggtcatggatgatcaaaaa 430
||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

Sbjct: 301 gaggaaaatcagtatcatcgggcaatggtttatataaaagaggtcatggatgatcaaaaa 360

Query: 431 gaacactcagataaaaaagaagctgcaatcgaaggaattaatggaaggacctttcttt 490
||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

Sbjct: 361 gaacactcagataaaaaagaagctgcaatcgaaggaattaatatggaaggacctttcttt 420

Query: 491 ggtatagaaaagaaggggtgcacatgatcctcaatatttaagaagaatttctcaagactta 550
|||||

Sbjct: 421 ggtatagaaaagaaggggtgcacatgatcctcaatatttaagaagaatttctcaagactta 480

Query: 551 tttgacgaatataatgagttatcccgggaatgcaattcgcttagtagatattgatccaac 610
|||||

Sbjct: 481 tttgacgaatataatgagttat-ccgggaatgcaattcgcttagtagatattgatccaac 539

Query: 611 cttaaaggagcattggagtttattcaaggaacaaagagttctttacgaatataccttag 670
|||||

Sbjct: 540 cttagatggagcattggagtttattcaaggaacaaagagttctttacg-ataccttag 598

Query: 671 ctcatacaatgagtacctttgaccaacca-aaactgtcacgaaagcgggggtgcaactcag 729
|||||

Sbjct: 599 ctcatacaatgagtacctttgatcaagcagaagctgcagcgaagc-gggtgcaactcat 657

Query: 730 gttactcctttatttatgcgatggaacccattggtaccatcggaaccagggtttagtt 789
|||||

Sbjct: 658 gttactcatttatttaaatgcgat-gagaccattggtta-catcggaacca-gggttagtt 714

Query: 790 ggtccaattagtgatttggattaattgcaaaaatta 827
|||

Sbjct: 715 -ggtgcagtagtgagtttggttaaatgcagaaatta 751

Query= HR0ADKBY78ZC04_CAZY9C3P17_1.SCF

>Cphy3581 reverse

Query: 68 gtgtaatggatagtgatCTAatggtgatggtgatgatgaatttcatttcctcttacata 127
|||||

Sbjct: 1188 gtgtaatggatagtgatcttaatggtgatggtgatgatgaatttcatttcctcttacata 1129

Query: 128 aactgttttaaaataaaatcattatccacaagtagtaaatctgcttttctccaagacc 187
|||||

Sbjct: 1128 aactgttttaaaataaaatcattatccacaagtagtaaatctgcttttctccaagacc 1069

Query: 188 aatgcttcctactgtatcctctaatttaagagattttgcaggatagtaactagcgcttag 247
|||||

Sbjct: 1068 aatgcttcctactgtatcctctaatttaagagattttgcaggatagtaactagcgcttag 1009

Query: 248 aatcgcttcctcaattggaatgccaaatgatattgcattctttactgcatcaaatagagt 307
|||||

Sbjct: 1008 aatcgcttcctcaattggaatgccaaatgatattgcattctttactgcatcaaatagagt 949

Query: 308 tatcgtagaaccagcaagagtaccatcttttaagaatgccttatgatcctttactgtgat 367

Sbjct: 948 |||tatcgtagaaccagcaagagtacatcttttaagaatgccttatgatcctttactgtgat 889

Query: 368 |tgtaatcctcctgctacatattcacatctggtaaaccagtaggattgattgagtcaga 427

Sbjct: 888 |tgtaatcctcctgctacatattcacatctggtaaaccagtaggattgattgagtcaga 829

Query: 428 |gattaaaatcatctgatctggtactgctttaaacatcagctttactacagctggatgaat 487

Sbjct: 828 |gattaaaatcatctgatctggtactgctttaaacatcagctttactacagctggatgaat 769

Query: 488 |atgaattccgtcacagataatttctgcatttaaaccaaactcactaactgcaccaactaa 547

Sbjct: 768 |atgaattccgtcacagataatttctgcatttaaaccaaactcactaactgcaccaactaa 709

Query: 548 |acctggttcacgatgtaacaatgggtctcatcgattaaataaatgagtaacatgagttgc 607

Sbjct: 708 |acctggttcacgatgtaacaatgggtctcatcgattaaataaatgagtaacatgagttgc 649

Query: 608 |acccgctttcgctgcagcttctgcttgatcaaaggactcattgtatgagctaaggatat 667

Sbjct: 648 |acccgctttcgctgcagcttctgcttgatcaaaggactcattgtatgagctaaggatat 589

Query: 668 |cgtaaagaactctttgttcctttgaataaaactccaatgctccatctaaagttggatcaat 727

Sbjct: 588 |cgtaaagaactctttgttcctttgaataaaactccaatgctccatctaaagttggatcaat 529

Query: 728 |atctactaaacaaattgccattccccgataactcattatatttcgttcaaataattcttg 787

Sbjct: 528 |atctactaaagcgaattg-cattccccgataactcattata-ttcg-tcaaataagtcttg 472

Query: 788 |aaaaatttcttcttaaaaaattggaggatcatggtgcacccttctttt 835

Sbjct: 471 |agaaa-ttcttcttaata--ttgaggatcat-gtgcacccttctttt 428

#####

cphy3586_1

Query= HR0ADKBY78ZA06_CAZY15C1P16_1.SCF

>Cphy3586* forward

Query: 69 |aaagaaggagataggatcATGactagttttgcttatggtgctgatgtgggttggttaagc 128

Sbjct: 1 |aaagaaggagataggatcatgactagttttgcttatggtgctgatgtgggttggttaagc 60

Query: 129 |cagttagaaaaatcaggtgtaacttgggttgatgactatggttatacaaaggatgcacta 188

Sbjct: 61 |||cagttagaaaaatcaggtgtaacttgggttgatgactatggttatacaaaggatgcacta 120

Query: 189 cagatactaaaggatcatggaattgattcgattcgattacgcttgtttgtaaactcctcca 248
|||

Sbjct: 121 cagatactaaaggatcatggaattgattcgattcgattacgcttgtttgtaaactcctcca 180

Query: 249 tccaatttcacttggacgaaaaaggatggatcaacatgtatgctgggtatactgatgcg 308
|||

Sbjct: 181 tccaatttcacttggacgaaaaaggatggatcaacatgtatgctgggtatactgatgcg 240

Query: 309 gctggcttaatatatatggcagaacgatcaaatcaatgggatttcgaattatggttgat 368
|||

Sbjct: 241 gctggcttaatatatatggcagaacgatcaaatcaatgggatttcgaattatggttgat 300

Query: 369 tttcattatagtgatcattttgctgaccctgcctatcaggacataccatctgcttgggtca 428
|||

Sbjct: 301 tttcattatagtgatcattttgctgaccctgcctatcaggacataccatctgcttgggtca 360

Query: 429 tcacatacctttactcagctgaaaaaagatgtttatgatcatacttattctgttatgtct 488
|||

Sbjct: 361 tcacatacctttactcagctgaaaaaagatgtttatgatcatacttattctgttatgtct 420

Query: 489 cagctagctacaaaggaatctatccggagtgggttcaggttgggaacgagattaacagc 548
|||

Sbjct: 421 cagctagctacaaaggaatctatccggagtgggttcaggttgggaacgagattaacagc 480

Query: 549 ggtatggtattaccttatggacagagcagtaataactttagccagctgacagagtactg 608
|||

Sbjct: 481 ggtatggtattaccttatggacagagcagtaataactttagccagctgacagagtactg 540

Query: 609 aatagtggatatgatgcggtaaaaagcggtaaagcaaactcgactaaagttgtaactcatc 668
|||

Sbjct: 541 aatagtggatatgatgcggt-aaaagcgg-taaagcaaactcgactaaagttgtaactcatc 598

Query: 669 ttgcagatggtaataacaatacaacgttttcaatggttctttgataattttattactaaa 728
|||

Sbjct: 599 ttgcagatggtaataacaatacaacg-tttcgatggttctttgataattttattact-aa 656

Query: 729 atatggtggaaaaaacaatgtaattggtatgtcctactatccctaattggaaggaagt 788
|||

Sbjct: 657 atatggtgg-aaaaacagatgtaattggtatgtcctactatccgt-attggataggaagt 714

Query: 789 gactatacaccagccgattttcttacttggc 819
|||

Sbjct: 715 gactataca-cagtcga-tttcttacttggc 743

Query= HR0ADKBY78ZA06_CAZY15C1P17_1.SCF

>Cphy3586* reverse

Query: 66 gtgtaatggatagtgatcTTAatggtgatggtgatgatggtttacaatttcaagtctcca 125
|
Sbjct: 1509 gtgtaatggatagtgatcctaaggtgatggtgatgatggtttacaatttcaagtctcca 1450

Query: 126 catctggcttaacgcattggtgtctgtttgttgaccaaggccacgccttcctctgttga 185
|
Sbjct: 1449 catctggcttaacgcattggtgtctgtttgttgaccaaggccacgccttcctctgttga 1390

Query: 186 agcattctgtacagctaagagtttaccgcttcctcgattgatcagcttataatacccatc 245
|
Sbjct: 1389 agcattctgtacagctaagagtttaccgcttcctcgattgatcagcttataatacccatc 1330

Query: 246 tcctgtggaacccaaactccattggttggttattaccattattagagggtatactgtattac 305
|
Sbjct: 1329 tcctgtggaacccaaactccattggttggttattaccattattagagggtatactgtattac 1270

Query: 306 actagctccttcactgggtggaagctcctgatacatccattaccttactgcttaatacact 365
|
Sbjct: 1269 actagctccttcactgggtggaagctcctgatacatccattaccttactgcttaatacact 1210

Query: 366 ttttatggtataataaccgctactatttagcgagaaagtccatttttgactactccatgc 425
|
Sbjct: 1209 ttttatggtataataaccgctactatttagcgagaaagtccatttttgactactccatgc 1150

Query: 426 cccataactatattgctcaaggacagcattatcgcttggtgagccacctttacattaat 485
|
Sbjct: 1149 cccataactatattgctcaaggacagcattatcgcttggtgagccacctttacattaat 1090

Query: 486 tgctttcccactaagtcgattggttagtatatatgttttgctgggatcaaaagatgagct 545
|
Sbjct: 1089 tgctttcccactaagtcgattggttagtatatatgttttgctgggatcaaaagatgagct 1030

Query: 546 attatagcgacaatcataaaaagcatcaatagctgtggtgaaccttaatttttccaga 605
|
Sbjct: 1029 attatagcgacaatcataaaaagcatcaatagctgtggtgaaccttaatttttccaga 970

Query: 606 aacaacgctggttgctccaagcttataacgatccggaagtaccgaggaattagcctctgg 665
|
Sbjct: 969 aacaacgctggttgctccaagcttataacgatccggaagtaccgaggaattagcctctgg 910

Query: 666 ttcccagtaaaaatacacctaaaccttttccggttcggaacagccttcaccttctcaatggt 725
|
Sbjct: 909 ttcccagtaaaaatacacctaaaccttttccggttcggaacagccttcaccttctcaatggt 850

Sbjct: 241 ||| gcttccactcaggagatagagggtgtaacataaacggtagtagtattgtagaacagggaaat 300

Query: 367 ccttcaccaagtaaaggagatattcctactacgggatctggttgtaaaggttactccagaa 426

Sbjct: 301 ||| ccttcaccaagtaaaggagatattcctactacgggatctggttgtaaaggttactccagaa 360

Query: 427 gacaatggtaaatttacaattgtatttaaattaaatgctgggaaaatttattattttgta 486

Sbjct: 361 ||| gacaatggtaaatttacaattgtatttaaattaaatgctgggaaaatttattattttgta 420

Query: 487 gatagtaataagataaatattgatagctacaaagcagggtgtacaaatgaatttattggt 546

Sbjct: 421 ||| gatagtaataagataaatattgatagctacaaagcagggtgtacaaatgaatttattggt 480

Query: 547 aaaacttatgaagtagaagcaggaaaatcctattacttctatggagatggaactaaaatt 606

Sbjct: 481 ||| aaaacttatgaagtagaagcaggaaaatcctattacttctatggagatggaactaaaatt 540

Query: 607 cctatgtacggtttatctatcgtctatggtgataattccgtatcttgggaagatataaaa 666

Sbjct: 541 ||| cctatgtacggtttatctatcgtctatggtgataattccgtatcttgggaagatataaaa 600

Query: 667 tcgccttcatttagcaaagttgcagcaaatgataatgcgatcgcggtagattttctcgg 726

Sbjct: 601 ||| tcgccttcaatttagcaaagttgcagcaaatgataatgcgatcgcggtagattttctcgg 660

Query: 727 aaagtttgtaatggctatgcagattctataactattgagatgtacaaaggtgatactct 786

Sbjct: 661 ||| aaag-ttgtaatggctatgcagattctataactattgagatgtacgaaggtgatactct 719

Query: 787 t 787

Sbjct: 720 | t 720

Query= HR0ADKBY78ZE04_CAZY10C2P17_1.SCF 1342 0 1342 SCF

>Cphy3869* reverse

Length = 4248

Score = 1568 bits (791), Expect = 0.0
Identities = 864/879 (98%), Gaps = 7/879 (0%)
Strand = Plus / Minus

Query: 68 gtgtaatggatagtgatcTTAatgggtgatgggtgatgatgctcttcaataataactttaat 127

Sbjct: 4248 ||| gtgtaatggatagtgatcTTAatgggtgatgggtgatgatgctcttcaataataactttaat 4189

Query: 128 tgacttcttcacaccatctacgattacataaatccaatctgtttccgcagaaaactgcttt 187
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 4188 tgacttcttcacaccatctacgattacataaatccaatctgtttccgcagaaaactgcttt 4129

Query: 188 taccgttgcagttgtacttcctggattcttctttacaactgcaccatcttttttacttga 247
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 4128 taccgttgcagttgtacttcctggattcttctttacaactgcaccatcttttttacttga 4069

Query: 248 catccagatgatgctatcttcatccaaaccgttaactttgatttcaaatactgcttcttc 307
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 4068 catccagatgatgctatcttcatccaaaccgttaactttgatttcaaatactgcttcttc 4009

Query: 308 tcccactttcattcgtacagtactttccacaaattctacggttgccTTTTtaatagataa 367
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 4008 tcccactttcattcgtacagtactttccacaaattctacggttgccTTTTtaatagataa 3949

Query: 368 ttttctagtataaaacttctctgtgtaccatcctgcattggttacagtagctgtaatgattgc 427
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 3948 ttttctagtataaaacttctctgtgtaccatcctgcattggttacagtagctgtaatgattgc 3889

Query: 428 aacaccagattcttttgcaatcagacgtccattttgTTTTacctctacaatgcctggatt 487
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 3888 aacaccagattcttttgcaatcagacgtccattttgTTTTacctctacaatgcctggatt 3829

Query: 488 atttgacttghtaagtaatcgtgattggtacaattccctctgccaacttacttaatgTTTT 547
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 3828 atttgacttghtaagtaatcgtgattggtacaattccctctgccaacttacttaatgTTTT 3769

Query: 548 ttcatcaaagtttagctactttaacaacgtagtcggaagTTTTaaccCAAaccatcctaa 607
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 3768 ttcatcaaagtttagctactttaacaacgtagtcggaagTTTTaaccCAAaccatcctaa 3709

Query: 608 gttagaactatcaccaccaacataaagagtaccagtagcgtttggagttaaatgTTcaaa 667
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 3708 gttagaactatcaccaccaacataaagagtaccagtagcgtttggagttaaatgTTcaaa 3649

Query: 668 aatctccctcttttgTTaattctggtgctggagttgggtagatgTTgggcccggtag 727
 ||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 3648 aatct-cctcttttgTTaattctggtgctggagttgggtagatgTTgggcccggtag 3590

Query: 728 atgttgacactggcacttctggcgattgtgTTggtggtgTTacagTTTTcaccAAct 787
 ||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 3589 atgttgagctggcacttctggcgattgtgTTggtggtgTTacag-tttcagcAAct 3531

Query: 788 tcagggccgattgTTggttCAAatgatggagtcctcctactcttgCACccgatacctgct 847

Sbjct: 3530 |||tcagggccgattggttgggttcaaatgatggagttcctcctactcttgcaccgatacctgct 3471

Query: 848 ggaacatttctctgttaataacaaggaatccattcatgtttattgttccctcctactttc 907

Sbjct: 3470 |||ggagca-ttctctgttaataacaaggaatccattcatgtttattgttccat-ctacatttc 3413

Query: 908 ttggaaatcccattgaaaagttaagcttttcaaaccaat 946

Sbjct: 3412 |||tt-gtaattccattg-aagttaagc-tttcaaaccaat 3377

#####

Cphy0220

Query= HR0ADKBY80ZA01_CAZYA1C1P16_1.SCF 1314 0 1314 SCF
(1314 letters)

>Cphy0220 forward
Length = 2220

Score = 1564 bits (789), Expect = 0.0
Identities = 831/841 (98%), Gaps = 3/841 (0%)
Strand = Plus / Plus

Query: 70 aaagaaggagataggatcATGaagaaggtaaataaatcagtaatcgaagaattattaagt 129

Sbjct: 1 |||aaagaaggagataggatcatgaagaaggtaaataaatcagtaatcgaagaattattaagt 60

Query: 130 cagatgaccttagaagaaaagataggcttaattcatggtaatggcatctttcgtagtgg 189

Sbjct: 61 |||cagatgaccttagaagaaaagataggcttaattcatggtaatggcatctttcgtagtgg 120

Query: 190 ggggtggaacgccttggcataccttccttgaagatgtcggatggcccaatgggtgttcgt 249

Sbjct: 121 |||gggtggaacgccttggcataccttccttgaagatgtcggatggcccaatgggtgttcgt 180

Query: 250 agagagtttgaagacaatagggtggtttccttgcgtgcaaacggacgattacgtatcttat 309

Sbjct: 181 |||agagagtttgaagacaatagggtggtttccttgcgtgcaaacggacgattacgtatcttat 240

Query: 310 cttccgagcaatagtgcaatagcagctacatggaataaagatcttgcctatacttcaggt 369

Sbjct: 241 |||cttccgagcaatagtgcaatagcagctacatggaataaagatcttgcctatacttcaggt 300

Query: 370 caagttcttggtagtgaagcaaggggaagaggaaaagatgttatcttagcgccaggtatt 429

Sbjct: 301 |||caagttcttggtagtgaagcaaggggaagaggaaaagatgttatcttagcgccaggtatt 360

```

Query: 430 aatattaaaagaagccctctctgtggttaggaatTTTgaatacatgagcggaggatccaaag 489
          |||
Sbjct: 361 aatattaaaagaagccctctctgtggttaggaatTTTgaatacatgagcggaggatccaaag 420

Query: 490 ctaattgaagaattagcaagTTTcatgattcaagggatacaggagaatgatgtagcagct 549
          |||
Sbjct: 421 ctaattgaagaattagcaagTTTcatgattcaagggatacaggagaatgatgtagcagct 480

Query: 550 tgtgtaaagcattTTTgctgtaaataatcaagagactgaccgTTTggcagtggatacagat 609
          |||
Sbjct: 481 tgtgtaaagcattTTTgctgtaaataatcaagagactgaccgTTTggcagtggatacagat 540

Query: 610 ttagaggatagagcattatttgaataataTTTgcctggTTTTaaggccgcaattaagaat 669
          |||
Sbjct: 541 ttagaggatagagcattatttgaataataTTTgcctggTTTTaaggccgcaattaagaat 600

Query: 670 ggcgaaagtTattccatcatgggagcatacaataagTTccgaggtgctcagtgttgtaa 729
          |||
Sbjct: 601 ggcgaaagtTattccatcatgggagcatacaataagTTccgaggtgctcagtgttgtaa 660

Query: 730 aattcttatctgcttgggactatcttaaggaaagaatgggaatatgatggaacctttata 789
          |||
Sbjct: 661 aattcttatctgcttgggactatcttaaggaaagaatgggaatatgatggaaccattata 720

Query: 790 tcggattggggtggtgtccatgatacaaaggcagcagcgaattcaccactccatattgag 849
          |||
Sbjct: 721 tcggattggggtggtgtccatgatacaaaggcagcagcgaattcaccactccatattgag 780

Query: 850 atggatgtgaaaaccaaattTTTgatgaataataactgggcaaatcccccttcttgaggcg 909
          |||
Sbjct: 781 atggatgtg-aaacctaattTTTgatgaat-ataacatggcaaat-ccgcttcttgaggcg 837

Query: 910 g 910
          |
Sbjct: 838 g 838

```

Cphy0220 reverse sequence

```

Query= HR0ADKBY80ZA01_CAZYA1C1P17_1.SCF 1333 0 1333 SCF
      (1333 letters)

```

```

>Cphy0220 reverse
      Length = 2220

```

```

Score = 1683 bits (849), Expect = 0.0
Identities = 866/874 (99%)
Strand = Plus / Minus

```

Query: 66 gtgtaatggatagtgatcTTAatggtgatggtgatgatgctcaattcttaccatcttgct 125
|||||
Sbjct: 2220 gtgtaatggatagtgatcctaaggtgatggtgatgatgctcaattcttaccatcttgct 2161

Query: 126 caacctgatatccctagaagagctaccaacttcaatgatgaactctccgccctctaatac 185
|||||
Sbjct: 2160 caacctgatatccctagaagagctaccaacttcaatgatgaactctccgccctctaatac 2101

Query: 186 aaatttcttactctcggtagaataataggtaaaggcagatggctttaattccatcatcaa 245
|||||
Sbjct: 2100 aaatttcttactctcggtagaataataggtaaaggcagatggctttaattccatcatcaa 2041

Query: 246 ttctttttcctctcccggctgtnnnnnnctttggtgaacccttttaattcatgaatagg 305
|||||
Sbjct: 2040 ttctttttcctctcccggctgtaaaaaaactttggtgaacccttttaattcatgaatagg 1981

Query: 306 gcgctttactgcaaaactggatcagaaacataaaacttgaattgtctcagctccagctgt 365
|||||
Sbjct: 1980 gcgctttactgcaaaactggatcagaaacataaaacttgaattgtctcagctccagctgt 1921

Query: 366 cttccctgattttcttataactaaaacttaggaatgcgcttttcccttatttgctcttac 425
|||||
Sbjct: 1920 cttccctgattttcttataactaaaacttaggaatgcgcttttcccttatttgctcttac 1861

Query: 426 tgttaaatttttataagtgaattttgtataagaaagtccatgacaaaacaaaattctgg 485
|||||
Sbjct: 1860 tgttaaatttttataagtgaattttgtataagaaagtccatgacaaaacaaaattctgg 1801

Query: 486 tgtgatattttccgtatcataataacgatatcctaccataatgccttcggtataataaac 545
|||||
Sbjct: 1800 tgtgatattttccgtatcataataacgatatcctaccataatgccttcggtataataaac 1741

Query: 546 acttcctttgtaccaaattcccaaatttatgtgctgggcaatcatttagctcctttgg 605
|||||
Sbjct: 1740 acttcctttgtaccaaattcccaaatttatgtgctgggcaatcatttagctcctttgg 1681

Query: 606 catcgattcaggtaattttccagatggatttacaattccaacaatacatctgctaaagc 665
|||||
Sbjct: 1680 catcgattcaggtaattttccagatggatttacaattccaacaatacatctgctaaagc 1621

Query: 666 tttaccaccttgattccattataatagctccaaacgattgtttttagctttattggagaa 725
|||||
Sbjct: 1620 tttaccaccttgattccattataatagctccaaacgattgtttttagctttattggagaa 1561

Query: 726 tttctgcatagaaaccgggtgatcctgcacaaacaaccaagattgtattaggattcgcac 785

Sbjct: 1560 |||
tttctgcatagaaaccggtgatcctgcacaaacaaccaagattgtattaggattcgcatc 1501

Query: 786 gagcacttcttcaattagtttttctgagcataaggttaattcatatcttttacgatcag 845

Sbjct: 1500 |||
gagcacttcttcaattagtttttctgagcataaggttaattcatatcttttacgatcag 1441

Query: 846 accttccatatcttgatgatgatctaatacctacaacaagaataacatcctccgtttctct 905

Sbjct: 1440 |||
accttccatatcttgatgatgatctaatacctacaacaagaataacatcctccgtttctct 1381

Query: 906 tggaaagtaaaccgcttcttcccgaagacgtttc 939

Sbjct: 1380 |||
tgcaagtaaaccgcttcttcccgaagacgtttc 1347

#####

Cphy0430 forward sequence

Query= HR0ADKBY80ZE01_CAZYB2C1P16_1.SCF 1380 0 1380 SCF

>Cphy0430 forward
Length = 2550

Score = 1334 bits (673), Expect = 0.0
Identities = 698/705 (99%), Gaps = 1/705 (0%)
Strand = Plus / Plus

Query: 69 aaagaaggagataggatcATGaaatttggattctttgatgatttaacaagaatacgtt 128

Sbjct: 1 |||
aaagaaggagataggatcatgaaatttggattttttgatgatttaacaagaatacgtt 60

Query: 129 atcacaactcctgaaacgccgtatccttggattaactatcttggatcgcaagcgttcttt 188

Sbjct: 61 |||
atcacaactcctgaaacgccgtatccttggattaactatcttggatcgcaagcgttcttt 120

Query: 189 tccttgatatcaaatactgctggaggttacagtttctataaagatgcaaaactacgtagg 248

Sbjct: 121 |||
tccttgatatcaaatactgctggaggttacagtttctataaagatgcaaaactacgtagg 180

Query: 249 attacaagatttcggtataataatgtaccattagatctcggtggtggtcgttattactac 308

Sbjct: 181 |||
attacaagatttcggtataataatgtaccattagatctcggtggtggtcgttattactac 240

Query: 309 ttgtacgataatggtgatttttggctctccgggttttggcccctgcaaaaaaggaactagaa 368

Sbjct: 241 |||
ttgtacgataatggtgatttttggctctccgggttttggcccctgcaaaaaaggaactagaa 300

Query: 369 tattatgagtgtcgtcatggcatgggttataactaaaataacaggaagaagaatggaatt 428

Sbjct: 301 |tattatgagtgctcgatggcatgggttataactaaaataacaggaagaagaatggaatt 360

Query: 429 gaaacaaagataaccttctttgtaccattagactataatggtgaagtacataaagtgtca 488

Sbjct: 361 |gaaacaaagataaccttctttgtaccattagactataatggtgaagtacataaagtgtca 420

Query: 489 attgtaataacaagtaatcaagtgaagaatgtgaaattgttttctttcctcgagtgggtg 548

Sbjct: 421 |attgtaataacaagtaatcaagtgaagaatgtgaaattgttttctttcctcgagtgggtg 480

Query: 549 ctgtggaatgcacaagaagattctacaaatcttcaacgaaatctcgacaggtgaagta 608

Sbjct: 481 |ctgtggaatgcacaagaagattctacaaatcttcaacgaaatctcgacaggtgaagta 540

Query: 609 gaagttaaagggctgtaatctatcataagacagagtataaagaaagacgggatcattat 668

Sbjct: 541 |gaagttaaagggctgtaatctatcataagacagagtataaagaaagacgggatcattat 600

Query: 669 gcatttttctctgtaaatgcaccgattaacggattcaattctgatcgcgagagttttctt 728

Sbjct: 601 |gcatttttctctgtaaatgcaccgattagcggattcgattctgatcgcgagagttttctt 660

Query: 729 ggaacctatcatggttttgaaaaaccgcaggtagttgccagggg 773

Sbjct: 661 |ggtaacctatcatggttttg-ataaccgcaggtagttgccagggg 704

Cphy0430 reverse sequence

Query= HR0ADKBY80ZE01_CAZYB2C1P17_1.SCF 1294 0 1294 SCF

>Cphy0430 reverse
Length = 2550

Score = 1768 bits (892), Expect = 0.0
Identities = 935/944 (99%), Gaps = 4/944 (0%)
Strand = Plus / Minus

Query: 66 |gtgtaatggatagtgatCTTAatggtgatggtgatgatgacctaagatgacttttacttt 125

Sbjct: 2550 |gtgtaatggatagtgatcttaatggtgatggtgatgatgacctaagatgacttttacttt 2491

Query: 126 |atgttctaataccgtcaccaaataaccggaatgatattaccctccacctctttcgcatcaac 185

Sbjct: 2490 |atgttctaataccgtcaccaaataaccggaatgatattaccctccacctctttcgcatcaac 2431

Query: 186 |aactagtttcttaacacctttcgaaacatgatatggggttactattgtaatatcatacct 245

Sbjct: 2430 |aactagtttcttaacacctttcgaaacatgatatggggttactattgtaatatcatacct 2371

Query: 246 atcaccacggaattcacgtgttatttgatatacctcccaatcagttgggattgcagggtc 305
 |||||
 Sbjct: 2370 atcaccacggaattcacgtgttatttgatatacctcccaatcagttgggattgcagggtc 2311

Query: 306 aatcattaaaccatcatattctggtttaattccaagtatatattgtgatatcgctacaaa 365
 |||||
 Sbjct: 2310 aatcattaaaccatcatattctggtttaattccaagtatatattgtgatatcgctacaaa 2251

Query: 366 attccaagatgcagttccggttaaccaagaatTTTTTgcttcacaaaacgtctggcatc 425
 |||||
 Sbjct: 2250 attccaagatgcagttccggttaaccaagaatTTTTTgcttcacaaaacgtctggcatc 2191

Query: 426 cttacctgcaaccatctgagcgtagacatatggctccaaacgatgaatttcagagtattc 485
 |||||
 Sbjct: 2190 cttacctgcaaccatctgagcgtagacatatggctccaaacgatgaatttcagagtattc 2131

Query: 486 ttctgtatacgtggtgcaatTTTTgtatagtaatcaaaggctttatccccacggcctat 545
 |||||
 Sbjct: 2130 ttctgtatacgtggtgcaatTTTTgtatagtaatcaaaggctttatccccacggcctat 2071

Query: 546 cactgcttccgcacacataatccaggcattggtatgacagaagatacctgcattttcttt 605
 |||||
 Sbjct: 2070 cactgcttccgcacacataatccaggcattggtatgacagaagatacctgcattttcttt 2011

Query: 606 atatccagctggataggtagaaatctcgccatattccacataatatcgtgtaaagtctgg 665
 |||||
 Sbjct: 2010 atatccagctggataggtagaaatctcgccatattccacataatatcgtgtaaagtctgg 1951

Query: 666 attatttagaactaatccgaatTTTTgtacccaaacgtTTTTctacagaatctaaagcttt 725
 |||||
 Sbjct: 1950 attatttagaactaatccgaatTTTTgtacccaaacgtTTTTctacagaatctaaagcttt 1891

Query: 726 ttgtgctttcccatcgtaagaccgcattttcccataacgcagaagccttgcgattcgat 785
 |||||
 Sbjct: 1890 ttgtgctttcccatcgtaagaccgcattttcccataacgcagaagccttgcgattcgat 1831

Query: 786 aatatTTTTccttcttcacactcatcactaccaatTTTTcctcctcaaaatcatcgtaggc 845
 |||||
 Sbjct: 1830 aatatTTTTccttcttcacactcatcactaccaatTTTTcctcctcaaaatcatcgtaggc 1771

Query: 846 acgtaaaaaccaagatccatcatagccatgcttcataaatacatctcgcaaattctctac 905
 |||||
 Sbjct: 1770 acgtaaaaaccaagatccatcatagccatgcttcataaatacatctcgcatattctctac 1711

Query: 906 ttctttcatggcggaatagactcttcgtaattttctaccttaaccataagaatagcat 965

Query: 489 aatgcaaaggctctatgtcgaacacagaatataagagttcaccatcaagtcaagatctctta 548
|||||
Sbjct: 421 aatgcaaaggctctatgtcgaacacagaatataagagttcaccatcaagtcaagatctctta 480

Query: 549 gacttttacattgatgatttcactgcaacgccagcaactttaccacagattcaaaaagat 608
|||||
Sbjct: 481 gacttttacattgatgatttcactgcaacgccagcaactttaccacagattcaaaaagat 540

Query: 609 attcctagtttaaaggatgtattttcaagttacttctttgttggtggagcggcaactgca 668
|||||
Sbjct: 541 attcctagtttaaaggatgtattttcaagttacttctttgttggtggagcggcaactgca 600

Query: 669 ggtgagattgcaccagctccggcaaaagatttagtagcgaacattacaataggttaact 728
|||||
Sbjct: 601 ggtgagattgcaccagctccggcaaaagatttagtagcgaacattacaataggttaact 660

Query: 729 cctggtaatgagttaaaaccagactctgtattagattactctgcaaccataacctatag 788
|||||
Sbjct: 661 cctggtaatgagttaaaaccagactctgtattagattactctgcaaccatagcctatag 720

Query: 789 gatgcaaatggtggtaatcaagtgaatcctcaggtgaatcttagagctgcgaaaacttta 848
|||||
Sbjct: 721 gatgcaaatggtggtaatcaagtgaatcctcaggtgaatcttagagctgcgaaaacttta 780

Query: 849 ctggaatatgcaagaacaataatataaccaatggcgtggacataccttaatatgg 903
|||||
Sbjct: 781 ctggaatatgcaagagacaataatataaccagt-gcgtggacataccttagtatgg 834

Cphy0624 reverse sequence

Query= HR0ADKBY80ZH01_CAZYC2C4P17_1.SCF 1299 0 1299 SCF

>Cphy0624* reverse

Length = 2238

Score = 1709 bits (862), Expect = 0.0
Identities = 900/912 (98%), Gaps = 2/912 (0%)
Strand = Plus / Minus

Query: 65 gtgtaatggatagtgatTTAatggtgatggtgatgatggtgaactttgactccattata 124
|||||
Sbjct: 2238 gtgtaatggatagtgatcttaatggtgatggtgatgatggtgaactttgactccattata 2179

Query: 125 gtaaacctttaacacttcattggatatacgtacaaaatccgtccaatccttcttagcaaa 184
|||||
Sbjct: 2178 gtaaacctttaacacttcattggatatacgtacaaaatccgtccaatccttcttagcaaa 2119

Query: 185 tcgtaaatcaagaacaagctttcctgttccttctgacagcatcgactcttactgatgct 244
|||
Sbjct: 2118 tcgtaaatcaagaacaagctttcctgttccttctgacagcatcgactcttactgatgct 2059

Query: 245 aaccacaagtttttgattcgtcaactgccagaaacataaccatttaacggtgtgtaata 304
|||
Sbjct: 2058 aaccacaagtttttgattcgtcaactgccagaaacataaccatttaacggtgtgtaata 1999

Query: 305 tggttcaactgtaattgcaacgcagcgttatctaccaaacattatgctcttgattgat 364
|||
Sbjct: 1998 tggttcaactgtaattgcaacgcagcgttatctaccaaacattatgctcttgattgat 1939

Query: 365 gattccatcggcagtaaacctcaatagatacctttgacaaatcaatcgttccaccaagtgc 424
|||
Sbjct: 1938 gattccatcggcagtaaacctcaatagatacctttgacaaatcaatcgttccaccaagtgc 1879

Query: 425 atttattgtgattgctggcttatcgtgttccattgtttttcgtagttactactaccac 484
|||
Sbjct: 1878 atttattgtgattgctggcttatcgtgttccattgtttttcgtagttactactaccac 1819

Query: 485 cggttttgctccctccactggtagtaggagttgggtgctcggagctattgttggttt 544
|||
Sbjct: 1818 cggttttgctccctccactggtagtaggagttgggtgctcggagctattgttggttt 1759

Query: 545 tggcgttactgttgggtttatggtaggagttattggttgctttgggtttacagttgggt 604
|||
Sbjct: 1758 tggcgttactgttgggtttatggtaggagttattggttgctttgggtttacagttgggt 1699

Query: 605 tactgtaggtgttatcgttggttttggcgttacagttgggtttactgtaggtgttatcgt 664
|||
Sbjct: 1698 tactgtaggtgttatcgttggttttggcgttacagttgggtttactgtaggtgttatcgt 1639

Query: 665 tggttttgggtttacagttggagttattgatggcgttactgttggggtaatcccatcaat 724
|||
Sbjct: 1638 tggttttgggtttacagttggagttattgatggcgttactgttggggtaatcccatcaat 1579

Query: 725 gatagaatagtatgctgactttgcttgataatttccatcaaataataatggatatccacc 784
|||
Sbjct: 1578 gatagaatagtatgctgactttgcttgataatttccatcaaataataatggatatccacc 1519

Query: 785 taaccaactagtcttatccgttacaccccagaagataactcctgtaatgttcagtcctc 844
|||
Sbjct: 1518 taaccaactagtcttatccgttacaccccagaagataactcctgtaatgttcagtcctc 1459

Query: 845 nnnnnncaaactaatgaccttatttatcaaaagtttataatctggctgcctgagcagcta 904
|||
Sbjct: 1458 -ttttttcaaactaatgaccttatttatcaaaagtttataatctgtctgcctgagcagcta 1400

Sbjct: 361 ||| acaaacagtggaattcagatgtattctacggaacaacagcgcaacgatggattttttaa 420

Query: 487 gactacagttcaacttccaatattccagaggatgggtgtaaaaggtaaattaacaaataaa 546

Sbjct: 421 ||| gactacagttcaacttccaatattccagaggatgggtgtaaaaggtaaattaacaaataaa 480

Query: 547 gttgcagcagatgcaatcgtagttcctgctccaaacagcgatgtttcaagcattggtgcc 606

Sbjct: 481 ||| gttgcagcagatgcaatcgtagttcctgctccaaacagcgatgtttcaagcattggtgcc 540

Query: 607 acgatgccatattgtacgttatgattccgaatatgcagtattagggtggcgcaaggctt 666

Sbjct: 541 ||| acgatgccatattgtacgttatgattccgaatatgcagtattagggtggcgcaaggctt 600

Query: 667 gcaacctcaacgaattgggatttaacgaatattgctagccaggcatccaatcaatcttat 726

Sbjct: 601 ||| gcaacctcaacgaattgggatttaacgaatattgctagccaggcatccaatcaatcttat 660

Query: 727 gtcgttcttccatcgagcggttcttatgcggaatggagagtaaattcttctggtaatggt 786

Sbjct: 661 ||| gtcgttcttccatcgagcggttcttatgcggaatggagagtaaattcttctggtaatggt 720

Query: 787 gttgttatgagatttaccttaccggatactccgaacggaatgggacaaaatggttcctta 846

Sbjct: 721 ||| gttgttatgagatttaccttaccggatactccgaacggaatgggacaaaatggttcctta 780

Query: 847 aacgtatatgtgaatggctccaaagtaaaaaacagttaatttaacttcgtattatatgtg 906

Sbjct: 781 ||| aacgtatatgtgaatggctccaaagt-aaaaacagttaatttaacttcgtattatatgtg 839

Query: 907 gcaatatttaaaatgggggtgcaaatgaaaaccccaggtgggtggcactgc 957

Sbjct: 840 ||| gcaatattt-aaatgggtggtgcaagtg-ataccccaggt-ggtggcactgc 887

Cphy1308 reverse sequence

Query= HR0ADKBY80ZC02_CAZYD2C3P17_1.SCF 1337 0 1337 SCF

>Cphy1308* reverse

Length = 3225

Score = 1614 bits (814), Expect = 0.0
Identities = 861/870 (98%), Gaps = 5/870 (0%)
Strand = Plus / Minus

Query: 67 gtgtaatggatagtgatcTTAatgggtgatgggtgatgatgacgtactgtcatcgttttcgt 126

Sbjct: 3225 |gtgtaatggatagtgatcttaatggtgatggtgatgatgacgtactgtcatcgttttcgt 3166

Query: 127 |caaagtgttattatctgtattggattctggataaccgattaatatcattgaccaagccat 186
|

Sbjct: 3165 |caaagtgttattatctgtattggattctggataaccgattaatatcattgaccaagccat 3106

Query: 187 |aacattaaaggtagcctgccgtagcagtataggttgactgccagctggaccactatttgc 246
|

Sbjct: 3105 |aacattaaaggtagcctgccgtagcagtataggttgactgccagctggaccactatttgc 3046

Query: 247 |tgttaccgtcactgactgtcctggcattatctgagttgtattgttatcggaccaagaaac 306
|

Sbjct: 3045 |tgttaccgtcactgactgtcctggcattatctgagttgtattgttatcggaccaagaaac 2986

Query: 307 |acaggtaccattcacttggattgtaatccggtgattgcccctactggagctactccggt 366
|

Sbjct: 2985 |acaggtaccattcacttggattgtaatccggtgattgcccctactggagctactccggt 2926

Query: 367 |tccttgattcttaataactgcactaaatgtgatcttattcccgttactgggcttgctgg 426
|

Sbjct: 2925 |tccttgattcttaataactgcactaaatgtgatcttattcccgttactgggcttgctgg 2866

Query: 427 |agaccaagtaatatccgttacaaccatatctggattaccataagggtgccccgttgggggt 486
|

Sbjct: 2865 |agaccaagtaatatccgttacaaccatatctggattaccataagggtgccccgttgggggt 2806

Query: 487 |agggtgctggtgtaaccggttggtgtaccgctccttctgttacagtaagtggttttgttaa 546
|

Sbjct: 2805 |agggtgctggtgtaaccggttggtgtaccgctccttctgttacagtaagtggttttgttaa 2746

Query: 547 |catattattattggtattagactcaggataacgattaacatcgtttaccatgcagtaat 606
|

Sbjct: 2745 |catattattattggtattagactcaggataacgattaacatcgtttaccatgcagtaat 2686

Query: 607 |ggtataggtagctgtcttcgctgcccattgttgagagccagaaggcccacttacggctgt 666
|

Sbjct: 2685 |ggtataggtagctgtcttcgctgcccattgttgagagccagaaggcccacttacggctgt 2626

Query: 667 |tactgtaatggattgacctggttgaatctgagttttgtcattatctgaccaagaaacact 726
|

Sbjct: 2625 |tactgtaatggattgacctggttgaatctgagttttgtcattatctgaccaagaaacact 2566

Query: 727 |agtaccatttacttgaaattgaactccattaattgatccaagtggcgctacccccagttc 786
|

Sbjct: 2565 |agtaccatttacttgaaattgaactccattaattgatccaagtggcgcta-ccccagttc 2507

Query: 787 ctatatttttaataactgcactaaaagtaactttgattgccatttggttgatttgctgg 846
|||||
Sbjct: 2506 ctatatttttaataactgcactaaaagtaac-ttgattgcca-ttggttgatttgctgg 2449

Query: 847 tgaccacgtaatatctgtaacaatcatatctggattaccatatggaacagaaagggtttg 906
|||||
Sbjct: 2448 tgaccacgtaatatctgtaacaatcatatctggattaccatatggaacag-aaggtggtg 2390

Query: 907 gctttactgttggtgaatgggtagctggt 936
||
Sbjct: 2389 gcgttactgttggtg-atggtgtagctggt 2361

#####

Cphy1888 forward sequence

Query= HR0ADKBY80ZE02_CAZYE1C1P16_1.SCF 1343 0 1343 SCF

>Cphy1888* forward

Length = 1803

Score = 1542 bits (778), Expect = 0.0
Identities = 818/826 (99%), Gaps = 4/826 (0%)
Strand = Plus / Plus

Query: 69 aaagaaggagataggatcATGacgacgacaacacatgaattaaatgtatcaaattcaatg 128
|||||
Sbjct: 1 aaagaaggagataggatcatgacgacgacaacacatgaattaaatgtatcaaattcaatg 60

Query: 129 acagtaggacaataactcatcagatcttactttaaatggatttacatttattacaggagga 188
|||||
Sbjct: 61 acagtaggacaataactcatcagatcttactttaaatggatttacatttattacaggagga 120

Query: 189 tctatatgggaagtagatagctctagccggtcttacggtggtgtaaactttacgcagaga 248
|||||
Sbjct: 121 tctatatgggaagtagatagctctagccggtcttacggtggtgtaaactttacgcagaga 180

Query: 249 gttaaactcgggcgaaaggtaccattagtaaaagagcaatctcatttacagcttctgga 308
|||||
Sbjct: 181 gttaaactcgggcgaaaggtaccattagtaaaagagcaatctcatttacagcttctgga 240

Query: 309 gcaggtcaattaacagtttatgcaatgagttctggaagtacttcaagaaatgtaacgctt 368
|||||
Sbjct: 241 gcaggtcaattaacagtttatgcaatgagttctggaagtacttcaagaaatgtaacgctt 300

Query: 369 tatgggaacggtaaggatctagaaagctttactgcaagatgtcattactgctatg 428
|||||
Sbjct: 301 tatgggaacggtaaggatctagaaagctttactgcaagatgtcattactgctatg 360

Query: 429 aatTTTAcgattccAAattccggtactTatgTtattTatccaccagacgatggTattagc 488
|||||
Sbjct: 361 aatTTTAcgattccAAattccggtactTatgTtattTatccaccagacgatggTattagc 420

Query: 489 tactactattTaaaggtagTtaaAACcgactcaacacctacaccaactccaacagTaaaa 548
|||||
Sbjct: 421 tactactattTaaaggtagTtaaAACcgactcaacacctacaccaactccaacagTaaaa 480

Query: 549 ccgaccCAAacacctacaccaactccaactacatCAAatgaagTttacgtctCAAaCaat 608
|||||
Sbjct: 481 ccgaccCAAacacctacaccaactccaactacatCAAatgaagTttacgtctCAAaCaat 540

Query: 609 ggTtctgcaagTgcaagTggtacatattccAAatccAAaAtccttagagggagcgattagT 668
|||||
Sbjct: 541 ggTtctgcaagTgcaagTggtacatattccAAatccAAaAtccttagagggagcgattagT 600

Query: 669 tcggcgAAagctggacAAaccattttTatgTtaccaggtactTattctTatagTAcAcAA 728
|||||
Sbjct: 601 tcggcgAAagctggacAAaccattttTatgTtaccaggtactTattctTatagTAcAc-a 659

Query: 729 aataacAAttccagcaggaacCAatggtacatccagTgcacgaattAAattaatgCcata 788
|||||
Sbjct: 660 aataacAAttccagcaggaacCAatggtacatccagTgcacgaattAAattaatgCcata 719

Query: 789 caaataatggtagTgTaaactctTaaTTTctcatctcaccatacggTaatccggatact 848
| |||||
Sbjct: 720 c-aataatggtagTgTaaactctTaaTTT-ctcatctcagccatacggTaatcctgatact 777

Query: 849 aatTTTAcgagTattcAAactggatgCAAatTTTgggcatatctat 894
|||||
Sbjct: 778 aatTTTAcgagTattcAAactggatgCAAatTatt-ggcatatctat 822

Cphy1888 reverse sequence
Query= HR0ADKBY80ZE02_CAZYE1C1P17_1.SCF 1345 0 1345 SCF

>Cphy1888* reverse

Length = 1803

Score = 1556 bits (785), Expect = 0.0
Identities = 839/849 (98%), Gaps = 6/849 (0%)
Strand = Plus / Minus

Query: 66 gtgTaatggatagTgatcTTAatggTgatggTgatgatgattTcctagattagctcccat 125
|||||
Sbjct: 1803 gtgTaatggatagTgatcTtaatggTgatggTgatgatgattTcctagattagctcccat 1744

Query: 126 tgtcttgatgcagaagaactacttaactttaagaaattacctaagttaatagaaccgtc 185
 |||
 Sbjct: 1743 tgtcttgatgcagaagaactacttaactttaagaaattacctaagttaatagaaccgtc 1684

Query: 186 ggaatcttctaatgtttgatgtaagtttgaactactagctggagctgataaggacacaaa 245
 |||
 Sbjct: 1683 ggaatcttctaatgtttgatgtaagtttgaactactagctggagctgataaggacacaaa 1624

Query: 246 gtctgaggcttaacacctggtgaatttaatgttccataaattccacctcttgatttac 305
 |||
 Sbjct: 1623 gtctgaggcttaacacctggtgaatttaatgttccataaattccacctcttgatttac 1564

Query: 306 acttgtagccgttggtataagataaacttagaactattataaaaactacagttcgtagc 365
 |||
 Sbjct: 1563 acttgtagccgttggtataagataaacttagaactattataaaaactacagttcgtagc 1504

Query: 366 tgttcccttataatgttgcacttgaaacaggctttgtactgaatgtaataatattggtaaa 425
 |||
 Sbjct: 1503 tgttcccttataatgttgcacttgaaacaggctttgtactgaatgtaataatattggtaaa 1444

Query: 426 ataattggtgatgatccgctcttgcaaaaatcaaaaattagacttatttccatccgctaa 485
 |||
 Sbjct: 1443 ataattggtgatgatccgctcttgcaaaaatcaaaaattagacttatttccatccgctaa 1384

Query: 486 actattataaaagaagtacaatttttttagtgtaataggacctggattagaattatcggt 545
 |||
 Sbjct: 1383 actattataaaagaagtacaatttttttagtgtaataggacctggattagaattatcggt 1324

Query: 546 aaagccatggtttttatcttcaaatgcgatacaatcttctacggtgtgagctactgcgat 605
 |||
 Sbjct: 1323 aaagccatggtttttatcttcaaatgcgatacaatcttctacggtgtgagctactgcgat 1264

Query: 606 acttgagccaccgagcttaaaccattaccgtcactatttgagtgaaaacacctgtact 665
 |||
 Sbjct: 1263 acttgagccaccgagcttaaaccattaccgtcactatttgagtgaaaacacctgtact 1204

Query: 666 tgttgaccgttacggaatgaaacacagtttctcaaagttatactaccaatcgctccggt 725
 |||
 Sbjct: 1203 tgttgaccgttacggaatgaaacacagtttctcaaagttatactaccaatcgctccggt 1144

Query: 726 atctgttttcgatataaaatccaaccatcatctacgttattgtatgccatacatccatc 785
 |||
 Sbjct: 1143 atctgttttcgatataaaatccaaccatcatctacgttattgtatgccatacatccatc 1084

Query: 786 aaacacatttccctcctcccaagtttaattttgcagcaaaaatccatctgcattctcacca 845
 |||
 Sbjct: 1083 aaacacatttccctcctcccaag-ttaattttgcagc-aaatccatctgcattctcacca 1026

Sbjct: 361 attcattccgaagctttatattatgttcctttaacaagacacatgaagtttgggaagttg 420

Query: 489 tctgtaaccaataaccgacaataaagaacgaaaaatttccaccttcggcttcattgaattt 548
|||||

Sbjct: 421 tctgtaaccaataaccgacaataaagaacgaaaaatttccaccttcggcttcattgaattt 480

Query: 549 acgaatgaggactattatgaaaatgatcaagttaatctccagtatacactctttattacc 608
|||||

Sbjct: 481 acgaatgaggactattatgaaaatgatcaagttaatctccagtatacactctttattacc 540

Query: 609 aaaacttattttaagagaataagatcctacaacaattaacgaaaatactggcaagaat 668
|||||

Sbjct: 541 aaaacttattttaagagaataagatcctacaacaattaacgaaaatactggcaagaat 600

Query: 669 gcagaaggtacgaattaccgtgaacgtttctttggtagttaggtcaacctattgtttcc 728
|||||

Sbjct: 601 gcagaaggtacgaattaccgtgaacgtttctttggtagttaggtcaacctattgtttcc 660

Query: 729 tataatggtgacaaggcatcctttattgggcttatcatagttatggaaatccagttgcc 788
|||||

Sbjct: 661 tataatggtgacaaggcatcctttattgggcttatcatagttatggaaatccagttgcc 720

Query: 789 ggtatcaatggatgctgcgataaactttaaaattataattctaacgcatgcggtgccct 848
| |||||

Sbjct: 721 gttatcaatggatgctgcgataaacttt-aaattataattctaacgcatgcggtgccct 779

Query: 849 tcactcccata-taactcttgcccctggtgaaacaaaaggaattataaaacatattaggt 907
||||| ||||| |||||

Sbjct: 780 tcact-ccatattaactcttgccacctggtgaaac-aaaggaattagtatacatattaggt 837

Cphy1929 reverse sequence

Query= HR0ADKBY80ZH02_CAZYF1C4P17_1.SCF 1333 0 1333 SCF

>Cphy1929 reverse

Length = 2448

Score = 1606 bits (810), Expect = 0.0
Identities = 836/842 (99%), Gaps = 2/842 (0%)
Strand = Plus / Minus

Query: 68 gtgtaatggatagtgatcTTAatggtgatggtgatgatgcattactaataataacttcatt 127
|||||

Sbjct: 2448 gtgtaatggatagtgatccttaatggtgatggtgatgatgcattactaataataacttcatt 2389

Query: 128 ttctacagatagtgattccgcaggaatgtaatttgaagaaagtattgttccatttaagta 187

Sbjct: 2388 |||ttctacagatagtgattccgcaggaatgtaatttgaagaaagtattgttccatttaagta 2329

Query: 188 acattcgcggtaccaccttctgcaccatcaaagttttgtatcgtaatatttaacttctt 247
|||

Sbjct: 2328 acattcgcggtaccaccttctgcaccatcaaagttttgtatcgtaatatttaacttctt 2269

Query: 248 attgcggaacatcttagtaattttaacttctttccaattggatggatggaaggggagag 307
|||

Sbjct: 2268 attgcggaacatcttagtaattttaacttctttccaattggatggatggaaggggagag 2209

Query: 308 taatagaccatcgaagtaggacgtatacctaagataccttcgacgcagccaaccatcac 367
|||

Sbjct: 2208 taatagaccatcgaagtaggacgtatacctaagataccttcgacgcagccaaccatcac 2149

Query: 368 agttgatgcagttcctgtcaaccagtgatcatgggatcggccttcaaatgggctatcaac 427
|||

Sbjct: 2148 agttgatgcagttcctgtcaaccagtgatcatgggatcggccttcaaatgggctatcaac 2089

Query: 428 cgattctgtaaattgcccatgaacatatggttcaagaacacggacatctgcattatcatt 487
|||

Sbjct: 2088 cgattctgtaaattgcccatgaacatatggttcaagaacacggacatctgcattatcatt 2029

Query: 488 ctgagaagatggagagctctccttaaaatactgataggcgcaatccatgaccattaa 547
|||

Sbjct: 2028 ctgagaagatggagagctctccttaaaatactgataggcgcaatccatgaccattaa 1969

Query: 548 ggattctgcaaggatgatccaacctgtggctgcgagaagataccaccattctctttgg 607
|||

Sbjct: 1968 ggattctgcaaggatgatccaacctgtggctgcgagaagataccaccattctctttgg 1909

Query: 608 tgatttattaaataagatagcaagagcaccgtcaaatgcatggtcaacgtaggatggagc 667
|||

Sbjct: 1908 tgatttattaaataagatagcaagagcaccgtcaaatgcatggtcaacgtaggatggagc 1849

Query: 668 cattaagcggcatccatagctgtatttaattcgcgatgaacactctctaatgctttttc 727
|||

Sbjct: 1848 cattaagcggcatccatagctgtatttaattcgcgatgaacactctctaatgctttttc 1789

Query: 728 agcttggctccttagtagcaagaccactaatcactgacatgactgtggatttagccacat 787
|||

Sbjct: 1788 agcttggctccttagtagcaagaccactaatcactgacatgactgtggatttagccacat 1729

Query: 788 atttgcttctggatctttcttagaaccgattacttgaccatcttctttaagccacggat 847
|||

Sbjct: 1728 atttgcttctggatctttcttagaaccgattacttgaccatcttctttaagccacggat 1669

Query: 848 aaaacgaatcttcttccaaacaatatttctgggagggttccaccaagttctggttgact 907
 ||||||| ||||||| ||||||| ||||||| |||| |||| ||||||| |||||||
 Sbjct: 1668 aaaacg-atcttcttccaaacaatatttct-ggatggtttcaccaagttctggttgact 1611

#####

Cphy2128 forward sequence

Query= HR0ADKBY80ZD03_CAZYG2C4P16_1.SCF 1311 0 1311 SCF
 (1311 letters)

>Cphy2128* forward

Length = 2544

Score = 1532 bits (773), Expect = 0.0
 Identities = 793/797 (99%), Gaps = 2/797 (0%)
 Strand = Plus / Plus

Query: 66 aaagaaggagataggatcATGactgCGTTgttcGTTatCGaaagCGaaaatacGCGacta 125
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Sbjct: 1 aaagaaggagataggatcatgactgCGTTgttcGTTatCGaaagCGaaaatacGCGacta 60

Query: 126 tcatctgagttacaagttgtgacggcaatatatggacaaccaaagcctggatactcgga 185
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Sbjct: 61 tcatctgagttacaagttgtgacggcaatatatggacaaccaaagcctggatactcgga 120

Query: 186 gcaggattgtttggatgcagaactcaggtacattaactttcgatgtcactgttcagag 245
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Sbjct: 121 gcaggattgtttggatgcagaactcaggtacattaactttcgatgtcactgttcagag 180

Query: 246 acaggtatgtatacgatatctactcgttatatgcaagagttaagtacggatggcagactc 305
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Sbjct: 181 acaggtatgtatacgatatctactcgttatatgcaagagttaagtacggatggcagactc 240

Query: 306 caataacttaagcgtaaatggatcaataaaggttcctttatgttgccatatactacagt 365
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Sbjct: 241 caataacttaagcgtaaatggatcaataaaggttcctttatgttgccatatactacagt 300

Query: 366 tggtcagattttaattttggtatttataaattgaccaaaggtagcaacacgatacaaatt 425
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Sbjct: 301 tggtcagattttaattttggtatttataaattgaccaaaggtagcaacacgatacaaatt 360

Query: 426 aaggctggttggggattcgcttattttgatacattcaccgtggattatgctaaactagat 485
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
 Sbjct: 361 aaggctggttggggattcgcttattttgatacattcaccgtggattatgctaaactagat 420

Query: 486 agtttaaatgtagcgccaacccttaccgatagccaggcaacatcagaaacaaaacttcta 545
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

Sbjct: 421 agtttaaatgtagcgccaacccttaccgatagccaggcaacatcagaacaaaacttcta 480

Query: 546 atgaaatacttaacggaggtttacggtaaacadatcatctctggccaacaagagatctat 605
|||

Sbjct: 481 atgaaatacttaacggaggtttacggtaaacadatcatctctggccaacaagagatctat 540

Query: 606 ggtggtggaaataacggtaattcagaattagagtttgattggattcacaatttaacaggt 665
|||

Sbjct: 541 ggtggtggaaataacggtaattcagaattagagtttgattggattcacaatttaacaggt 600

Query: 666 aagtatccagcgattagagggtttgattttatgaactataatccattatacggttggaa 725
|||

Sbjct: 601 aagtatccagcgattagagggtttgattttatgaactataatccattatacggttggaa 660

Query: 726 gatggtacaacaaatcgtattatagattgggttaataataaaaaatggtattgcaacggga 785
|||

Sbjct: 661 gatggtacaacaaatcgtattatagattgggttaataataaaaaatggtattgcaacggga 720

Query: 786 tgctggcatattactgttccaaaagattttaattcctataagcctgggtgattttgtggg 845
|||

Sbjct: 721 tgctggcatattactgttccaaaagattttaattcctataag-cttgggtgattttgt-gg 778

Query: 846 atgggcaaaagacaacc 862
|||

Sbjct: 779 attggcaaaagacaacc 795

Cphy2128 reverse sequence

Query= HR0ADKBY80ZD03_CAZYG2C4P17_1.SCF 1319 0 1319 SCF

>Cphy2128* reverse

Length = 2544

Score = 1542 bits (778), Expect = 0.0
Identities = 825/834 (98%), Gaps = 5/834 (0%)
Strand = Plus / Minus

Query: 65 gtgtaatggatagtgatCTTAatggtgatggtgatgatgtggctcgattccccatacaag 124
|||

Sbjct: 2544 gtgtaatggatagtgatcttaatggtgatggtgatgatgtggctcgattccccatacaag 2485

Query: 125 cttattgcttaaatatcccgttaactttgtcagaattaacgtattggctactggatgcatt 184
|||

Sbjct: 2484 cttattgcttaaatatcccgttaactttgtcagaattaacgtattggctactggatgcatt 2425

Query: 185 aaatgagtaatcatctgcttggttgtaatttgaccaattcgacttagcaaactcttgcttg 244

Sbjct: 2424 ||| aaatgagtaatcatctgcttggttgtaatttgaccaattcgacttagcaaatcttgcttg 2365

Query: 245 aatttctgcattttgccagcttttaacgttccagcagaagcagtaaaggaaatctccaa 304
|||

Sbjct: 2364 aatttctgcattttgccagcttttaacgttccagcagaagcagtaaaggaaatctccaa 2305

Query: 305 gtaataatcagctccgctaactggtttagcaagcttaacaaattcaccttttacgttttc 364
|||

Sbjct: 2304 gtaataatcagctccgctaactggtttagcaagcttaacaaattcaccttttacgttttc 2245

Query: 365 actaccaacacttgcccaatcacaccagaagttctgtgatatttctccatcaatcgata 424
|||

Sbjct: 2244 actaccaacacttgcccaatcacaccagaagttctgtgatatttctccatcaatcgata 2185

Query: 425 gtaataacgaagttttatatcacttagattgatatctgtgtttccagtgttaatcagctt 484
|||

Sbjct: 2184 gtaataacgaagttttatatcacttagattgatatctgtgtttccagtgttaatcagctt 2125

Query: 485 aaatttagtgatattccattggtggatgcgctcgtatttccgtaaaggcttgaattac 544
|||

Sbjct: 2124 aaatttagtgatattccattggtggatgcgctcgtatttccgtaaaggcttgaattac 2065

Query: 545 taaatttcctgtaattacgggagcagtggtatctatgacattcaatgtaatacagggtt 604
|||

Sbjct: 2064 taaatttcctgtaattacgggagcagtggtatctatgacattcaatgtaatacagggtt 2005

Query: 605 gtttccagcactaaattggaatgtaatttgctttccccaagtgatagtgtagatagata 664
|||

Sbjct: 2004 gtttccagcactaaattggaatgtaatttgctttccccaagtgatagtgtagatagata 1945

Query: 665 ggatttttgtaaaacaattgtattgcccgataaccgtataatctttatttagtaaaaagtt 724
|||

Sbjct: 1944 ggatttttgtaaaacaattgtattgcccgataaccgtataatctttatttagt-aaaagtt 1886

Query: 725 tattactattatttagaacacttacaagcgaagccatttaagtttgaccgttacgttg 784
|||

Sbjct: 1885 tattactattatttagaacacttacaagcgaagccatttaag-ttgaccgttacgttg 1827

Query: 785 atattttgctgcttatcaactgctttatcaaaggttgatttaaccgagtaattgtaagc 844
|||

Sbjct: 1826 atattttgctgcttatcaactgctttatcaaaggttgatttaaccgagtaattgt-agc 1768

Query: 845 actttggcgttgaatctacaacattaacttttaaaaccaggatctttccctttg 898
|||

Sbjct: 1767 ac-ttggcgttgaatctacgacattaacttttaaaa-caggatctttccctttg 1716

#####

Cphy3009 forward sequence

Query= HR0ADKBY80ZG03_CAZYH2C3P16_1.SCF 1252 0 1252 SCF

>Cphy3009

Length = 2208

Score = 1741 bits (878), Expect = 0.0

Identities = 934/953 (98%), Gaps = 2/953 (0%)

Strand = Plus / Plus

Query: 68 aaagaaggagataggatcATGacagcagagaagacacaacaagaatttcaacaacgagca 127

|||||

Sbjct: 1 aaagaaggagataggatcatgacagcagagaagacacaacaagaatttcaacaacgagca 60

Query: 128 acagaacttgtaaagaaaatgacactagaagaaaagtttttcaaaccttacattccgca 187

|||||

Sbjct: 61 acagaacttgtaaagaaaatgacactagaagaaaagtttttcaaaccttacattccgca 120

Query: 188 ccttccataccaagattggacattaaagcgtacaattattggaacgaagcattgcatgga 247

|||||

Sbjct: 121 ccttccataccaagattggacattaaagcgtacaattattggaacgaagcattgcatgga 180

Query: 248 gtagcaagagctggcgtagccaccgtttttccgcaggcgattggtttagcggcaacattt 307

|||||

Sbjct: 181 gtagcaagagctggcgtagccaccgtttttccgcaggcgattggtttagcggcaacattt 240

Query: 308 gatgaagatttaatcgaagagattgcagataactatttctaccgaaggaagaggttaagttt 367

|||||

Sbjct: 241 gatgaagatttaatcgaagagattgcagataactatttctaccgaaggaagaggttaagttt 300

Query: 368 aatgcacaacaaaaatatggagatcacgatatctacaaaggtttgaccttctggtcaccg 427

|||||

Sbjct: 301 aatgcacaacaaaaatatggagatcacgatatctacaaaggtttgaccttctggtcaccg 360

Query: 428 aatgtgaatatcttccgtgatccacgttggggtcgtggacatgagaccttcggagaagac 487

|||||

Sbjct: 361 aatgtgaatatcttccgtgatccacgttggggtcgtggacatgagaccttcggagaagac 420

Query: 488 ccattcttaagtgggtaccttaggaggacgtttgttgacggtatccaagggcatgatgaa 547

|||||

Sbjct: 421 ccattcttaagtgggtaccttaggaggacgtttgttgacggtatccaagggcatgatgaa 480

Query: 548 acctacttaaaagcagcagcttgtgcaaagcatttcgcagttcactctggaccagaagat 607

|||||

Sbjct: 481 acctacttaaaagcagcagcttgtgcaaagcatttcgcagttcactctggaccagaagat 540

Query: 608 attcgccatagtttcaatgccgaagtttcggagcaggatttgcgtgaaacttatctacca 667
 |||
 Sbjct: 541 attcgccatagtttcaatgccgaagtttcggagcaggatttgcgtgaaacttatctacca 600

Query: 668 gcttttaagaaacttgtaaaagagcataaggtggaagcagtaatgggagcttacaatcgt 727
 |||
 Sbjct: 601 gcttttaagaaacttgtaaaagagcataaggtggaagcagtaatgggagcttacaatcgt 660

Query: 728 acaaatggagaacctgctgtggtagtaagacacttttagaagatattttacgtggagaa 787
 |||
 Sbjct: 661 acaaatggagaacctgctgtggtagtaagacacttttagaagatattttacgtggagaa 720

Query: 788 tgggaatttgttggatcatgtgacctcagattgttgggcaatcaaagatttccatgagcac 847
 |||
 Sbjct: 721 tgggaatttgttggatcatgtgacctcagattgttgggcaatcaaagatttccatgagcac 780

Query: 848 catatggttacttcaaatgcagtagagtccagtgcccttggcaatgaatcgtggttgcga 907
 ||| |
 Sbjct: 781 catatggttacttcaaatgcagtagagt-cagttgccttggcaatgaatcgtggttgcga 839

Query: 908 cttaaactgtggaaatctttatgttaaattactacaagcagtacgggatggtttaatggg 967
 ||| |
 Sbjct: 840 cttaaactgtggaaatctttatgttaaattactacaagcagtacgggatggtttagt-gg 898

Query: 968 nnnnnnnncaattgatactgctcctaaacgtctctttacaacaaaaatgaaa 1020
 |||
 Sbjct: 899 aagaagagacaattgatactgctcttatacgtctctttacaacaagaatgaaa 951

Cphy3009 reverse sequence

Query= HR0ADKBY80ZG03_CAZYH2C3P17_1.SCF 1301 0 1301 SCF

>Cphy3009

Length = 2208

Score = 1764 bits (890), Expect = 0.0
 Identities = 924/933 (99%), Gaps = 3/933 (0%)
 Strand = Plus / Minus

Query: 65 gtgtaatggatagtgatCTTAatggtgatggtgatgatgctcaccaagtaaaactgtttc 124
 |||
 Sbjct: 2208 gtgtaatggatagtgatcttaatggtgatggtgatgatgctcaccaagtaaaactgtttc 2149

Query: 125 aggtgcatggaactgtattttaattggattcctaccagtttaactgaatacttctagatc 184
 |||
 Sbjct: 2148 aggtgcatggaactgtattttaattggattcctaccagtttaactgaatacttctagatc 2089

Query: 185 tggttgtgaatcacttagatatagctcatactccccttgatttaagataaattcaccttc 244

Sbjct: 2088 |||tggttggaatcacttagatatagctcatactccccttgatttaagataaattcaccttc 2029

Query: 245 ct cattatataaaaccaaaggctctgtcatctaactcaatcatgatatactttttcttctcc 304
|||

Sbjct: 2028 ct cattatataaaaccaaaggctctgtcatctaactcaatcatgatatactttttcttctcc 1969

Query: 305 tgggagtaagctcacttttttaaggccttttagctgacagtttgagcatcttctcctac 364
|||

Sbjct: 1968 tgggagtaagctcacttttttaaggccttttagctgacagtttgagcatcttctcctac 1909

Query: 365 atatttaacatatgcttggtgtgcaccgaaccttcataatcaccggtattctttactct 424
|||

Sbjct: 1908 atatttaacatatgcttggtgtgcaccgaaccttcataatcaccggtattctttactct 1849

Query: 425 taccatacactctacgttggaaaccttttctaaagtatctgtatttacataaagtaatgt 484
|||

Sbjct: 1848 taccatacactctacgttggaaaccttttctaaagtatctgtatttacataaagtaatgt 1789

Query: 485 gtgctcaaaggtagtataacttaagccatatccaaatggataaagagcctcattcttcat 544
|||

Sbjct: 1788 gtgctcaaaggtagtataacttaagccatatccaaatggataaagagcctcattcttcat 1729

Query: 545 ataacgatacgtacggttcttcatagcataatctgtaaactcaggaattcctcagtcgt 604
|||

Sbjct: 1728 ataacgatacgtacggttcttcatagcataatctgtaaactcaggaattcctcagtcgt 1669

Query: 605 acgatagaatgttacaggaagctttccttctgggtttccatctccaaaaatcaattctgc 664
|||

Sbjct: 1668 acgatagaatgttacaggaagctttccttctgggtttccatctccaaaaatcaattctgc 1609

Query: 665 aatcgctctaccacctgtgctccaggataccagccttgtaatatagcaggaatatgctc 724
|||

Sbjct: 1608 aatcgctctaccacctgtgctccaggataccagccttgtaatatagcaggaatatgctc 1549

Query: 725 atctgccatggcactgcaaagcactaccggagagaaggattaaaataacaggttttcc 784
|||

Sbjct: 1548 atctgccatggcactgcaaagcactaccggagagaaggattaaaataacaggttttcc 1489

Query: 785 acattcataaatagtttttaatacatcttctttgattccaggaagcgctaattgtcttctt 844
|||

Sbjct: 1488 acattcataaatagtttttaatacatcttcttgaattccaggaagcgctaattgtcttctt 1429

Query: 845 atctccactagcaaattgattttccctggctgccttcttctccttctaactcctggatcaa 904
|||

Sbjct: 1428 atctccactagcaaattga-tttccctggctgccttcttctccttctaactcctggatcaa 1370

Query: 905 gacccaggcatgctattacaacatcccctatgttcacaaactgcacgtacctcaccaatac 964
|||||
Sbjct: 1369 gacccaggcatgctattacgacatcactatgttcacaaactgcacgtacctcagcaatac 1310

Query: 965 ggtcattttccttggacttaaattaaagagttt 997
|||||
Sbjct: 1309 ggtcattttcctt-gacttaaattagagagttt 1279

#####

Cphy3158 forward sequence

Query= HR0ADKBY80ZA04_CAZYI1C1P16_1.SCF 1304 0 1304 SCF
(1304 letters)

>Cphy3158
Length = 2109

Score = 1639 bits (827), Expect = 0.0
Identities = 863/876 (98%), Gaps = 1/876 (0%)
Strand = Plus / Plus

Query: 69 aaagaaggagataggatcATGgaagaagaagtagtattaacttttaatatnnnnnnngga 128
|||||
Sbjct: 1 aaagaaggagataggatcatggaagaagaagtagtattaacttttaataataaaaaaagga 60

Query: 129 gatggaacaatggggtttgaaaagcttggttaaataactataagagtgataatcttgcg 188
|||||
Sbjct: 61 gatggaacaatggggtttgaaaagcttggttaaataactataagagtgataatcttgcg 120

Query: 189 atgcgagattattttacagtcgttacatacaataaagacgactctattgtaaaaagtgcg 248
|||||
Sbjct: 121 atgcgagattattttacagtcgttacatacaataaagacgactctattgtaaaaagtgcg 180

Query: 249 gtcttagaattaacaacagcagcaaaaagagctattttcaatcgatatcgaaagcagcctt 308
|||||
Sbjct: 181 gtcttagaattaacaacagcagcaaaaagagctattttcaatcgatatcgaaagcagcctt 240

Query: 309 tgtgatatgaaatcagatggtgataaaacgagaaaaggattcattttcagattggtgat 368
|||||
Sbjct: 241 tgtgatatgaaatcagatggtgataaaacgagaaaaggattcattttcagattggtgat 300

Query: 369 aataaagatctagaaaatgagggatatcgatatttcgtagcagacgagatgctattgata 428
|||||
Sbjct: 301 aataaagatctagaaaatgagggatatcgatatttcgtagcagacgagatgctattgata 360

Query: 429 gaggcttacacctcaaatggtatttctctatggaacttttgatttgattcgtagaccatt 488
|||||

Sbjct: 361 gaggccttacacctcaaatggtattctctatggaacttttgatttgattcgtagcaccatt 420

Query: 489 cttggagcagatgtgcattccttcaatagaactatctttccaagaatcctcttcgaatg 548
|||||

Sbjct: 421 cttggagcagatgtgcattccttcaatagaactatctttccaagaatcctcttcgaatg 480

Query: 549 ttaaatcattgggataaatatggacggtagtattgaaagaggttattctggaattccttc 608
|||||

Sbjct: 481 ttaaatcattgggataaatatggacggtagtattgaaagaggttattctggaattccttc 540

Query: 609 ttttttgaacatggtgaagtattgtaaatgaacgtactaaggcctatgcaagacttggt 668
|||||

Sbjct: 541 ttttttgaacatggtgaagtattgtaaatgaacgtactaaggcctatgcaagacttggt 600

Query: 669 tcctccgttggataaaacgcagttgtgataaacaatgtaaatgtccgtggtacagcaact 728
|||||

Sbjct: 601 tcctccgttggataaaacgcagttgtgataaacaatgtaaatgtccgtggtacagcaact 660

Query: 729 aatttaataacaaatcgctacatagataaattaaaacaaatcggtgaaatTTTTgcttct 788
|||||

Sbjct: 661 aatttaataacaaatcgctacatagataaattaaaacaaatcggtgaaatTTTTgcttct 720

Query: 789 tatggaattaagctttatctttcttttaattttgcggtccaatggaacttggtggttta 848
|||||

Sbjct: 721 tatggaattaagctttatctttcttttaattttgcggtccaatggaacttggtggttta 780

Query: 849 acttctgctgaccactcgacgaggaaatacgtctttgggggaagaaagaagtgcaatta 908
|||||

Sbjct: 781 acttctgctgaccactcgacgaggaaatacgtctttggtggaagaaagaagtgcaatta 840

Query: 909 ttattttaaagaaataacctccctttggcggatTTTT 944
|||||

Sbjct: 841 ttattt-aaagaaataccatcctttggcggatTTTT 875

Cphy3158 reverse sequence

Query= HR0ADKBY80ZA04_CAZYI1C1P17_1.SCF 1308 0 1308 SCF
(1308 letters)

>Cphy3158

Length = 2109

Score = 1509 bits (761), Expect = 0.0
Identities = 819/833 (98%), Gaps = 4/833 (0%)
Strand = Plus / Minus

Query: 66 gtgtaatggatagtgatCTTAatggtgatggtgatgatgatataactccctcccctTTTT 125

Sbjct: 2109 |gtgtaatggatagtgatcttaatggtgatggtgatgatgataactccctcccctttt 2050

Query: 126 atcccctatcgctgtcttccataaaaaataagaacaaatcacgtctctccattccttcga 185
|
Sbjct: 2049 atcccctatcgctgtcttccataaaaaataagaacaaatcacgtctctccattccttcga 1990

Query: 186 atgttccagctgttcctgtaatctatgcaataccctgtgatatggtacttcttccaactt 245
|
Sbjct: 1989 atgttccagctgttcctgtaatctatgcaataccctgtgatatggtacttcttccaactt 1930

Query: 246 tccttttagttcttcccataacttaaccatctcttccacatccttactccctcaaaatg 305
|
Sbjct: 1929 tccttttagttcttcccataacttaaccatctcttccacatccttactccctcaaaatg 1870

Query: 306 agaatcatagatatgttggattaaggctttacctgtctttaactgataggtatatggaat 365
|
Sbjct: 1869 agaatcatagatatgttggattaaggctttacctgtctttaactgataggtatatggaat 1810

Query: 366 gcgatggaagaataaaaagcaactcttctgggcatgtttcaggtgttccatagagctcttg 425
|
Sbjct: 1809 gcgatggaagaataaaaagcaactcttctgggcatgtttcaggtgttccatagagctcttg 1750

Query: 426 gtttggctgatgatactgtgttggtatcctgttccattcttgggtcggcttacaccaat 485
|
Sbjct: 1749 gtttggctgatgatactgtgttggtatcctgttccattcttgggtcggcttacaccaat 1690

Query: 486 tgctgtatggtctgctttatgataggttccccaacggtcgtattcatacccgtaacatt 545
|
Sbjct: 1689 tgctgtatggtctgctttatgataggttccccaacggtcgtattcatacccgtaacatt 1630

Query: 546 aggtccgtaatgatgagaaggatttaccatccatccaataccaagcggagaagtatattt 605
|
Sbjct: 1629 aggtccgtaatgatgagaaggatttaccatccatccaataccaagcggagaagtatattt 1570

Query: 606 ctcatatgctggcaggacatcattaggattttggatatataatctataacatgctcctt 665
|
Sbjct: 1569 ctcatatgctggcaggacatcattaggattttggatatataatctataacatgctcctt 1510

Query: 666 catgccaatgttaaggatccattcttttgctatctcctctgaatgtaaatcaggatc 725
|
Sbjct: 1509 catgccaatgttaaggatccattcttttgctatctcctctgaatgtaaatcaggatc 1450

Query: 726 aaaactcagttctaccaatatccatagagattcgctgctgccaagtcagaccagtcag 785
|
Sbjct: 1449 aaaactcag-tctacc-atatccatagagattcgctgctgccaagtcagaccagtcag 1392

Query: 786 ttatcatcattccccctgtatttgcaactgccgcatccagcgtttttattgccaaaagt 845
|||||
Sbjct: 1391 ttatcatcatt-ccctgtatttgcaactgctgccatccagcgtttttattgccataagt 1333

Query: 846 gttgccactaacgaaatcaaatacccgatcatttttcttctttacaaaagt 898
|||||
Sbjct: 1332 gttgccactaacgatatcgaataccgatca-ttttcttctttacaataagt 1281

#####

Cphy3160 forward sequence

Query= HR0ADKBY80ZD04_CAZYJ1C4P16_1.SCF 1352 0 1352 SCF

>Cphy3160

Length = 3612

Score = 1542 bits (778), Expect = 0.0
Identities = 815/822 (99%), Gaps = 4/822 (0%)
Strand = Plus / Plus

Query: 68 aaagaaggagataggatcATGagcagtcaagtacataacaatcgaagattaatgaatgat 127
|||||
Sbjct: 1 aaagaaggagataggatcatgagcagtcaagtacataacaatcgaagattaatgaatgat 60

Query: 128 ggctggagtttttccaacatcagctaggcgctaccttacaacaagtgttagatgcaaaa 187
|||||
Sbjct: 61 ggctggagtttttccaacatcagctaggcgctaccttacaacaagtgttagatgcaaaa 120

Query: 188 acagaatggcatcccgttgatttgccccacgactggtaatttataataccacgatttg 247
|||||
Sbjct: 121 acagaatggcatcccgttgatttgccccacgactggtaatttataataccacgatttg 180

Query: 248 tatgaaacaggagaaggttggtacagacgtacgttatccatggaacacctgaaaaataag 307
|||||
Sbjct: 181 tatgaaacaggagaaggttggtacagacgtacgttatccatggaacacctgaaaaataag 240

Query: 308 gagcgatatatattacgtttcgagggcgtgtatatgaactcgaccctctatgtcaatgga 367
|||||
Sbjct: 241 gagcgatatatattacgtttcgagggcgtgtatatgaactcgaccctctatgtcaatgga 300

Query: 368 aggttgctggagagtggaaatacggttactcaacatttgaattcgatataaccgagttt 427
|||||
Sbjct: 301 aggttgctggagagtggaaatacggttactcaacatttgaattcgatataaccgagttt 360

Query: 428 ttaacagaaggtggcaatgaaattgtgatgcaagttatctacgagtcaccgaactcgaga 487
|||||
Sbjct: 361 ttaacagaaggtggcaatgaaattgtgatgcaagttatctacgagtcaccgaactcgaga 420

Query: 488 tggattccggtgcaggatatttatcgtaatgtctggtccatacctatcctgaagtacat 547
|||||
Sbjct: 421 tggattccggtgcaggatatttatcgtaatgtctggtccatacctatcctgaagtacat 480

Query: 548 attaaccagatggaatttatatttcaacagaaaaagtggatgaggatttttacgttttc 607
|||||
Sbjct: 481 attaaccagatggaatttatatttcaacagaaaaagtggatgaggatttttacgttttc 540

Query: 608 ctatcaaccgaagtttcctctttaccgatcagtatggaacctgagcttacaataccagag 667
|||||
Sbjct: 541 ctatcaaccgaagtttcctctttaccgatcagtatggaacctgagcttacaataccagag 600

Query: 668 gattttcatggattagacaaggattccacatctacactcgaacttcgccatactgtatgg 727
|||||
Sbjct: 601 gattttcatggattagacaaggattccacatctacactcgaacttcgccatactgtatgg 660

Query: 728 tcgccaagtcataaattagtttgacccatactgtcgatggtacaagtgaggtataaag 787
|||||
Sbjct: 661 tcgccaagtcataaattagtttgacccatactgtcgatggtacaagtgaggtataaag 720

Query: 788 aatgccttttatgtacaaaatagtaaactacatattatttcacctcttctttgggagc 847
|||||
Sbjct: 721 aatgccttttatgtacaaatagtaaactacatatta-tttcacctctt-ctttgggagc 778

Query: 848 tttcgtcaccaatttatatccaagtgcaacttgatattat 889
|||||
Sbjct: 779 tttcgtcaccaatttatat-caagtgcaaac-tgatattat 818

Cphy3160 reverse sequence

Query= HR0ADKBY80ZD04_CAZYJ1C4P17_1.SCF 1324 0 1324 SCF

>Cphy3160

Length = 3612

Score = 1635 bits (825), Expect = 0.0
Identities = 875/888 (98%), Gaps = 4/888 (0%)
Strand = Plus / Minus

Query: 67 gtgtaatggatagtgatTTAatggtgatggtgatgatgttcaaacttaaaccactcaaa 126
|||||
Sbjct: 3612 gtgtaatggatagtgatcttaatggtgatggtgatgatgttcaaacttaaaccactcaaa 3553

Query: 127 gtcaaaaattactgcccggtaggaatataaaaggtaacagtatatttacctgtcttcttaga 186
|||||
Sbjct: 3552 gtcaaaaattactgcccggtaggaatataaaaggtaacagtatatttacctgtcttcttaga 3493

Query: 187 gaattcaaaactcttttacttctgactcattcgtaaaagtaaattctgcaagttcttcaat 246
|||||
Sbjct: 3492 gaattcaaaactcttttacttctgactcattcgtaaaagtaaattctgcaagttcttcaat 3433

Query: 247 gctattatagagcatactaccttcttctgaaataaacctttacatgaatgggtgttcttctc 306
|||||
Sbjct: 3432 gctattatagagcatactaccttcttctgaaataaacctttacatgaatgggtgttcttctc 3373

Query: 307 aatcggagaatgaccacagatagagagtttcgtaatgccctgttctccgaaatccatctc 366
|||||
Sbjct: 3372 aatcggagaatgaccacagatagagagtttcgtaatgccctgttctccgaaatccatctc 3313

Query: 367 tgaaaattccaaggatacgttattcccgattccttcaatgcgaggagctttctttgtaa 426
|||||
Sbjct: 3312 tgaaaattccaaggatacgttattcccgattccttcaatgcgaggagctttctttgtaa 3253

Query: 427 ggtatctccatatatgaggtcacaatcagtagcgaataatcttgcaaatcctttttgtgg 486
|||||
Sbjct: 3252 ggtatctccatatatgaggtcacaatcagtagcgaataatcttgcaaatcctttttgtgg 3193

Query: 487 attggtaaactgaaatccttgaacgcttaatcgtttaaatacaacgaaggaaattgttac 546
|||||
Sbjct: 3192 attggtaaactgaaatccttgaacgcttaatcgtttaaatacaacgaaggaaattgttac 3133

Query: 547 gataccttttactctacgctttaatcgataggtttccggttgatgggtgattccatattgg 606
|||||
Sbjct: 3132 gataccttttactctacgctttaatcgataggtttccggttgatgggtgattccatattgg 3073

Query: 607 ctttttactaaatgaacagctctgctagtaattcacttccttcttcatgtgggataccttc 666
|||||
Sbjct: 3072 ctttttactaaatgaacagctctgctagtaattcacttccttcttcatgtgggataccttc 3013

Query: 667 ccaaactctcaaaagtgggaagctcagtatcaagacagtagattggaacagtaatctcgtc 726
|||||
Sbjct: 3012 ccaaactctcaaaagtgggaagctcagtatcaagacagtagattggaacagtaatctcgtc 2953

Query: 727 agatccataggagccaaagtctacatttttaaaacaaatgtaagtatccattggtagcag 786
|||||
Sbjct: 2952 agatccataggagccaaagtctacatttttaaaacaaatgtaagtatccattggtagcag 2893

Query: 787 agaggagaaaccgcgctcaattccggttgtaaggtttgtattggaccaagagtataaacc 846
|||||
Sbjct: 2892 agaggagataaccgcgctcaattccggttgtaaggtttgtattggaccaagagtataaacc 2833

Query: 847 accatatataaaattcctacggattcatggaagcttctccaaggtcatggaagtttagcct 906
|||||
Sbjct: 2832 accatatataaaattcctacggattcatggaagcttctccaaggtcatggaagtttagcct 2775

Query: 609 tcaccagnnnnnntggtgcagggtatccaggacatcaggaggtagagattggattaatc 668
||||||| ||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 541 tcaccagaaaaaatggtgcagggtatccaggacatcaggaggtagagattggattaatc 600

Query: 669 aaattatatgaagtcacaggaagaagaagtacattgagcaagcaagattatTTTTtagaa 728
||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 601 aaattatatgaagtcacaggaagaagaagtacattgagcaagcaagattatTTTTtagaa 660

Query: 729 agaagaggaacttccccaaactatTTTcttgaggaagnnnnnnccccaaagtTTaagcct 788
||||||||||||||||||||||||||||||||||||||||||| |||||||||||||
Sbjct: 661 agaagaggaacttccccaaactatTTTcttgaggaagaaaaaacccccaaagtTTaagcct 720

Query: 789 atatttcctgagtttatgcattatgataccgcctatttctcaatcccacaaaccaatccgt 848
||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 721 atatttcctgagtttatgcattatgataccgcctatttctcaatcccacaaaccaatccgt 780

Query: 849 gaacaaacgacagccgaaagtctgCGGTacgggCGGTatataTgtattctgcaatggct 908
||||||||||||||| ||| ||| |||||||||||||||||||||||||||||||||
Sbjct: 781 gaacaaacgacagcagaaggtcatgCGGTacgggCGGTatataTgtattctgcaatggct 840

Query: 909 gactttgcaccacctataatgaccaagaacctgttaaggtgtttgtgaaaccctatgga 968
||| ||||| || ||||||||||||| ||||| ||||||| |||||||||||||||||
Sbjct: 841 gacattgcagcagcctataatgacaaagaa-ctgttaa-gtgtttgtgaaaccctatgga 898

Query: 969 agaatattggaaggaaagcgtatgtatctaaacgggtgggattggtagttccggaatat 1028
||||||| | ||||||||||||||||||| ||||||||| ||| |||||||||||||
Sbjct: 899 agaatatt-gtaggaaagcgtatgtatct-aacgggtggcatt-ggtagttccggaatat 955

Query: 1029 tagaa 1033
|||||
Sbjct: 956 tagaa 960

#####

Cphy0591-4 reverse sequence

Query= HR0ADKBY82ZA04_0591C4P17_1.SCF 1375 0 1375 SCF

>cphy0591

Query: 66 gtgtaatggatagtgatCTTAatggtgatggtgatgatgtacaaattctttatccaaac 125
|||||||||||||||||||||||||||||||||||||||||||
Sbjct: 1995 gtgtaatggatagtgatcttaatggtgatggtgatgatgtacaaattctttatccaaac 1936

Query: 126 aatcatctctcctgtTTTTcgatttgcccaatatggatattggataaaacttaannnnnn 185
|||||||||||||||||||||||||||||||||||||||
Sbjct: 1935 aatcatctctcctgtTTTTcgatttgcccaatatggatattggataaaacttaattTTTT 1876

Query: 186 ctctgcaaatttcacgggatgttccgaatataaaagtttcattctcccattcctcttgat 245
|||
Sbjct: 1875 ctctgcaaatttcacgggatgttccgaatataaaagtttcattctcccattcctcttgat 1816

Query: 246 cattttctttccatcacattgaatcaccatcgttccctttagtagcgatcatcataaaa 305
|||
Sbjct: 1815 cattttctttccatcacattgaatcaccatcgttccctttagtagcgatcatcataaaa 1756

Query: 306 ctcttctaattcagtatctgaatctatataatagctggaaggtttgattcgttatccac 365
|||
Sbjct: 1755 ctcttctaattcagtatctgaatctatataatagctggaaggtttgattcgttatccac 1696

Query: 366 ctcttccatacaataaaactagcgggcccttcatgattgccactttccaatatcttcttt 425
|||
Sbjct: 1695 ctcttccatacaataaaactagcgggcccttcatgattgccactttccaatatcttcttt 1636

Query: 426 cactagcggattcgctctaatcatccgtggcttcaacgtaaactccatatcaatcgtttt 485
|||
Sbjct: 1635 cactagcggattcgctctaatcatccgtggcttcaacgtaaactccatatcaatcgtttt 1576

Query: 486 ctttgaagaagttatctctatttcaagataaccgttcgttatttctttttgggtcaattc 545
|||
Sbjct: 1575 ctttgaagaagttatctctatttcaagataaccgttcgttatttctttttgggtcaattc 1516

Query: 546 taaaccatttacaaatacacataactccttagcatattcaggaattcgtatataaaagttt 605
|||
Sbjct: 1515 taaaccatttacaaatacacataactccttagcatattcaggaattcgtatataaaagttt 1456

Query: 606 tccacaaaacccttctctccatccacctccatatgaactttgcatcatcacggaacct 665
|||
Sbjct: 1455 tccacaaaacccttctctccatccacctccatatgaactttgcatcatcacggaacct 1396

Query: 666 tgttgccaaccgcagtgtagcttccctgttttgcaattttacagtagtctgatttgaat 725
|||
Sbjct: 1395 tgttgccaaccgcagtgtagcttccctgttttgcaattttacagtagtctgatttgaat 1336

Query: 726 aaataagttaaccatatacgagttctcatcgtaaaagtagatatactaccaagtgaagc 785
|||
Sbjct: 1335 aaataagttaaccatatacgagttctcatcgtaaaagtagatatactaccaagtgaagc 1276

Query: 786 caatgttctcgctacatttgggtgggcaacaagcaacaccaaacctggctgacgtatcgg 845
|||
Sbjct: 1275 caatgttctcgctacatttgggtgggcaacaagcaacaccaaacctggctgacgtatcgg 1216

Query: 846 ttttacatgttctttaaaagttctcttaatgcaattgccaggccaaacttctaccgggtt 905
|||
Sbjct: 1215 ttttacatgttctttagaagttctcttaatgcaattgccaggccaaacttctaacgggtt 1156

Query: 548 actactgcaggtgaaataacgcagagataagtgatcaatactcaagcatggctggctgat 607
|||||
Sbjct: 481 actactgcaggtgaaataacgcagagataagtgatcaatactcaagcatggctggctgat 540

Query: 608 aaatacaaaaatgacgatactattctggcatttgatataaaaaatgaacctcatggacag 667
|||||
Sbjct: 541 aaatacaaaaatgacgatactattctggcatttgatataaaaaatgaacctcatggacag 600

Query: 668 aggggatatagtactacaacacctaataatacctcaaaaatgggataattcccaaatgag 727
|||||
Sbjct: 601 aggggatatagtactacaacacctaataatacctcaaaaatgggataattccacagatgag 660

Query: 728 aataactggaattatgcgcggaagatgtgcaagctatacttgctaaaaacccta 787
|||||
Sbjct: 661 aataactggaagtatgcgcggaagatgtgcaagctatacttgctaaaa-cccta 718

Query: 788 aattattaattatgattgaatgtgttgaacaataaccctaaaaccgaaaaagggttatact 847
|||||
Sbjct: 719 aattattaattatgattgaagggtgttgaacaat-accctaaaactgaaaaagggttataac 777

Query: 848 tattataccccggatgtatgggga 871
|||
Sbjct: 778 tataatacaccggatgtatgggga 801

#####

Cphy1163-1 reverse sequence

Query= HR0ADKBY82ZA06_1163C1P17_1.SCF 1378 0 1378 SCF

>cphy1163

Query: 66 gtgtaatggatagtgatCTAatggtgatggtgatgatggtttccataatattgccctaa 125
|||||
Sbjct: 1368 gtgtaatggatagtgatcttaatggtgatggtgatgatggtttccataatattgccctaa 1309

Query: 126 tgatataccatttacaccaagaggtgtctgatggtctagaccaataaattaccatttga 185
|||||
Sbjct: 1308 tgatataccatttacaccaagaggtgtctgatggtctagaccaataaattaccatttga 1249

Query: 186 ctgccataatgcaggttttaataaagcgtattttgcttcatccaagtttgccaatcata 245
|||||
Sbjct: 1248 ctgccataatgcaggttttaataaagcgtattttgcttcatccaagtttgccaatcata 1189

Query: 246 tcctagtaaacctccagtatcccctgagttcggattgatacaccagaatgtatggtggat 305
|||||
Sbjct: 1188 tcctagtaaacctccagtatcccctgagttcggattgatacaccagaatgtatggtggat 1129

Query: 306 acgattatttactatataatctcttaataatgtcatccatttctggttctttccaccatc 365
|||
Sbjct: 1128 acgattatttactatataatctcttaataatgtcatccatttctggttctttccaccatc 1069

Query: 366 cataaaacctccccactcacctatcaaaagtggtgcaatacctttatctttaatatatgc 425
|||
Sbjct: 1068 cataaaacctccccactcacctatcaaaagtggtgcaatacctttatctttaatatatgc 1009

Query: 426 ccaagtattataccaataatcatctaataggtctgagttgtaaaatccttatcaaacca 485
|||
Sbjct: 1008 ccaagtattataccaataatcatctaataggtctgagttgtaaaatccttatcaaacca 949

Query: 486 tggttggttgatatacgaaggaccatagtcaggggaatagacgatctgactattgag 545
|||
Sbjct: 948 tggttggttgatatacgaaggaccatagtcaggggaatagacgatctgactattgag 889

Query: 546 agtgcctatattaattggataatcctttactcctcttaaatttccaccccaccaagcact 605
|||
Sbjct: 888 agtgcctatattaattggataatcctttactcctcttaaatttccaccccaccaagcact 829

Query: 606 ataccatggagactgatcaccagtagctcccatacatccggtgtattatagttataacc 665
|||
Sbjct: 828 ataccatggagactgatcaccagtagctcccatacatccggtgtattatagttataacc 769

Query: 666 tttttcagtttttaggtattgttcaacaccttcaatcataattaataatttagggttttt 725
|||
Sbjct: 768 tttttcagtttttaggtattgttcaacaccttcaatcataattaataatttagggttttt 709

Query: 726 agcaagtatagctttcgcacatctttccgccgcatacttccagttattctcatcttggtg 785
|||
Sbjct: 708 agcaagtatagctttcgcacatctttccgccgcatacttccagttattctcatc-tgtgg 650

Query: 786 aattatcccattttgctatattagtaggtgttgaagtactatatccccctctgtccctga 845
|||
Sbjct: 649 aattatcccattttgctatattagtaggtgttgaagtactatat-ccccctctgtccatga 591

Query: 846 ggttcattttttatatcaaagccagattagtatcgcttttttgtattttatcaccag 905
|||
Sbjct: 590 ggttcattttttatatcaaagccagaatagtatcgctatttttga-tttatcagccag 532

Query: 906 ccatgcttgagtattgaatcccttatctgtccttatttcccctgcagtaattcgaattaa 965
|||
Sbjct: 531 ccatgcttgagtattgatccacttatctgtcgttatttccactgcagt-agtcgtagtta 473

Query: 966 accctaccataacggaaagttaatgacctgaattatttgcctccggattataaaaactc 1025
|||

Sbjct: 472 acccataccataacggatagtt-atgacctgaattattttgcat-ccggactatgaacatc 415

Query: 1026 taccattaactttgatccccaattgtttgagaatccccataaggataaaaaatatttcc 1085
||||||| ||||||||||||||||||||||||| || ||||||| ||||| |||||||||||

Sbjct: 414 taccatt-actttgatccccaattgtttgagat-cccataatgatatacaatatttcc 357

Query: 1086 ataccattttt 1096

|||| ||||||

Sbjct: 356 atactattttt 346

#####

Cphy1687-1 forward sequence

Query= HR0ADKBY82ZB01_1687C1P16_1.SCF 1377 0 1377 SCF

>Cphy1687

Query: 67 aaagaaggagataggatcATGcatcatcacccatcaccatactaccagatatgaatgtgag 126
|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Sbjct: 1 aaagaaggagataggatcatgcatcatcacccatcaccatactaccagatatgaatgtgag 60

Query: 127 aatatgacccttggcggtcagtagccggaaaaattagttcgccggttactggagtcgct 186
|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Sbjct: 61 aatatgacccttggcggtcagtagccggaaaaattagttcgccggttactggagtcgct 120

Query: 187 ttatacgctaataatgattactgccaaccggtaatattacctggaacaataccagaag 246
|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Sbjct: 121 ttatacgctaataatgattactgccaaccggtaatattacctggaacaataccagaag 180

Query: 247 actattagtatcagggggagttcaagtaattcgaataaccgctacagtggttgtgaagatg 306
|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Sbjct: 181 actattagtatcagggggagttcaagtaattcgaataaccgctacagtggttgtgaagatg 240

Query: 307 aacggaaatgaaatgggtaaggtaatttcaccggtactactcctacggtacagtccttt 366
|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Sbjct: 241 aacggaaatgaaatgggtaaggtaatttcaccggtactactcctacggtacagtccttt 300

Query: 367 acctgcaccccgaatccggttcctaccggtccagcttattgtgaccaacgataatggg 426
|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Sbjct: 301 acctgcaccccgaatccggttcctaccggtccagcttattgtgaccaacgataatggg 360

Query: 427 acttgggatgtctacgtggattacttggagatcagcgataaccagtagtggtggaggcggc 486
|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Sbjct: 361 acttgggatgtctacgtggattacttggagatcagcgataaccagtagtggtggaggcggc 420

Query: 487 accagcgtaatgtttatccttacctttgatgacggaccacttaatggaaactaccaacc 546

```

Sbjct: 421  ||| accagcggtaatgtttatcttacctttgatgacggaccacttaatggaaactcaccaacc 480
Query: 547  ctgattaataacctaataaaagtgcaggatgcagccaggccactttattcgtctggggtaac 606
Sbjct: 481  ||| ctgattaataacctaataaaagtgcaggatgcagccaggccactttattcgtctggggtaac 540
Query: 607  aggatcagcagcaaccagactggctggaatgcctacttaaattccggatttagcctccag 666
Sbjct: 541  ||| aggatcagcagcaaccagactggctggaatgcctacttaaattccggatttagcctccag 600
Query: 667  aatcatagctggacgcactcgcatatgaccagctggagctatcaacaggtctataacgac 726
Sbjct: 601  ||| aatcatagctggacgcactcgcatatgaccagctggagctatcaacaggtctataacgac 660
Query: 727  ctccaacaatgtaaccaagctatccaaaacgccgggaaaccaaagcctacgaagataagg 786
Sbjct: 661  ||| ctccaacaatgtaaccaagctatccaaaacgccgggaaaccaaagcctacgaagataagg 720
Query: 787  cttccttatctcgagagcaactcaacgatacagcaagcttggtcagcactgggcctgtcg 846
Sbjct: 721  ||| cttccttatctcgagagcaactcaacgatacagcaagcttggtcagcactgggcctgtcg 780
Query: 847  atcgtcagtcctaatggtgacactcaggactggaacggcgcccgcacacagtccatcggt 906
Sbjct: 781  ||| atcgtcagtcctaatggtgacactcaggactggaacggcgcccgcacacagtcaatcggt 840
Query: 907  aatgcttgccacaacttgaggcccggtgtaaccggttgatgcatgagggatatcagaa 966
Sbjct: 841  ||| aatgcttgcaacaacttgaggcccggtgtaaccggttgatgcatgagggatatcagac 899
Query: 967  cactaaactcggctataacccccatcgtttcgaaatctaaggaaccg 1012
Sbjct: 900  ||| gactaaactcggctatagccaccatcgtttcg-aatctaaggaaccg 944

```

#####

Cphy1687-1 reverse sequence

Query= HR0ADKBY82ZB01_1687C1P17_1.SCF 1399 0 1399 SCF

>Cphy1687

```

Query: 65  gtgtaatggatagtgatcTTAgtattgtgcaaaaccgagaccacggttccttagattcga 124
Sbjct: 987  ||| gtgtaatggatagtgatccttagtattgtgcaaaaccgagaccacggttccttagattcga 928
Query: 125  aacgatgggtggctatagccgagttagtcgtctgatatccatcatgcatcaacgggttacc 184

```


Sbjct: 927 aacgatggtggctatagccgagttagtcgtctgatatccatcatgcatcaacgggttacc 868

 Query: 185 accggcctgcaagttgttgcaagcattaacgattgactgtgtgctggcgccgttccagtc 244
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 867 accggcctgcaagttgttgcaagcattaacgattgactgtgtgctggcgccgttccagtc 808

 Query: 245 ctgagtgtcaacattaggactgacgatcgacaggcccagtgctgaacaagcttgctgtat 304
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 807 ctgagtgtcaacattaggactgacgatcgacaggcccagtgctgaacaagcttgctgtat 748

 Query: 305 cgttgagttgctctcgagataaggaagccttatcttcgtaggctttggtttcccggcgtt 364
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 747 cgttgagttgctctcgagataaggaagccttatcttcgtaggctttggtttcccggcgtt 688

 Query: 365 ttggatagcttggttacattggttgaggctgttatagacctggtgatagctccagctggt 424
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 687 ttggatagcttggttacattggttgaggctgttatagacctggtgatagctccagctggt 628

 Query: 425 catatgcgagtgcgccagctatgattctggaggctaaatccggaatttaagtaggcatt 484
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 627 catatgcgagtgcgccagctatgattctggaggctaaatccggaatttaagtaggcatt 568

 Query: 485 ccagccagtctggttgctgctgatcctgttaccagacgaataaagtggcctggctgca 544
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 567 ccagccagtctggttgctgctgatcctgttaccagacgaataaagtggcctggctgca 508

 Query: 545 tcctgcactttttaggttattaatcagggttggtgagtttccattaagtggcctcctc 604
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 507 tcctgcactttttaggttattaatcagggttggtgagtttccattaagtggcctcctc 448

 Query: 605 aaaggtaagataaacattaccgctggtgccgcctccaccactactggtatcgctgatctc 664
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 447 aaaggtaagataaacattaccgctggtgccgcctccaccactactggtatcgctgatctc 388

 Query: 665 caagtaatccacgtagacatcccaagtccattatcgttggtcacaataagctggaccgg 724
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 387 caagtaatccacgtagacatcccaagtccattatcgttggtcacaataagctggaccgg 328

 Query: 725 gtaggaaccggattgcggggtgcaggtaaaggactgtaccgtaggagtagtaccggtgaa 784
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 327 gtaggaaccggattgcggggtgcaggtaaaggactgtaccgtaggagtagtaccggtgaa 268

 Query: 785 attcaccttaccattttcatttccgttcatcttcacaaccactgtagcggatattcgaatt 844
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 267 attcaccttaccattttcatttccgttcatcttcacaaccactgtagcggatattcgaatt 208

Sbjct: 421 |||cagatggaaaaataatatttttaccttataacaggaatggtgcttctgctttccaagaaaaatc 480
 Query: 563 aatgagaaaatagcgatcttaagcagaccgagtgatacgggacatactgcttttggtgat 622
 Sbjct: 481 |||aatgggaaaatagcgatcttaagcagaccgagtgatacgggacatactgcttttggtgat 540
 Query: 623 atttttatagtgagtcaccggatttgatccattggggaagacatcgtcacgtaatggca 682
 Sbjct: 541 |||atttttatagtgagtcaccggatttgatccattggggaagacatcgtcacgtaatggca 600
 Query: 683 cctagaggttggtggcaatccacaaaaattggagccggacctgtaccgattgaaacaaaa 742
 Sbjct: 601 |||cctagaggttggtggcaatccacaaaaattggagccggacctgtaccgattgaaacaaaa 660
 Query: 743 gagggttggctactgttttatcatggtgtactgacctcctgtaatgggtatgtgtatagt 802
 Sbjct: 661 |||gagggttggctactgttttatcatggtgtactgacctcctgtaatgggtatgtgtatagc 720
 Query: 803 tttggagcaccaatgctagacccttatgagccttggaagtaaagtatagaacgaacct 862
 Sbjct: 721 |||tttggagcagcaatgctagacccttaatgagccttggaagtaaagtatagaacagaacca 780
 Query: 863 tatttattatccccacaaacctttatataaatgacgcttggtgatgtacaaaatgtgtttt 922
 Sbjct: 781 |||tatttattatcaccacaaa-cattatataaatgacgcttggtgatgtacaaaatgtgtttt 839
 Query: 923 cccctgggcacctttccttgaagaagaaagtgggaaaatttgcattttacatgggttggtg 982
 Sbjct: 840 |||cccctgggcacctttccttgaagaagaaagtggcagaa-ttgcaatttactatggctgtg 898
 Query: 983 caaatactgttacgggggatgcttttaccttgaggaagaacctaatgatttt 1037
 Sbjct: 899 |||cagatactgttacaggtgatgc-tttaccatgagggatg-agctaattgatttt 951

#####

Cphy1718-1 reverse sequence

Query= HR0ADKBY82ZB06_1718C1P17_1.SCF 1374 0 1374 SCF

>cphy1718

Query: 65 gtgtaatggatagtgatcTTAatggtgatggtgatgatgaagccttgaattctttttcat 124
 Sbjct: 1011 |||gtgtaatggatagtgatccttaatggtgatggtgatgatgaagccttgaattctttttcat 952
 Query: 125 aaaatcaattagctcatccctcatggtaaagcatacacctgtaacagtatctgcacagcc 184

Sbjct: 951 |||||
aaaatcaattagctcatccctcatggtaaagcatacacctgtaacagtatctgcacagcc 892

Query: 185 atagtaaattgcaattctgccactttcttcttcatgtaaagctgcacatgggaaaacaac 244
Sbjct: 891 atagtaaattgcaattctgccactttcttcttcatgtaaagctgcacatgggaaaacaac 832

Query: 245 atttggtacatcaccaacgcattcatataatgtttggtgataataaatatggttctgt 304
Sbjct: 831 atttggtacatcaccaacgcattcatataatgtttggtgataataaatatggttctgt 772

Query: 305 tctatactttactttccaaggctcattaaggcttagcattgctgctccaaagctatacac 364
Sbjct: 771 tctatactttactttccaaggctcattaaggcttagcattgctgctccaaagctatacac 712

Query: 365 ataccattacaggaggtcagtacacatgataaaacagtagccaaccctcttttgtttc 424
Sbjct: 711 ataccattacaggaggtcagtacacatgataaaacagtagccaaccctcttttgtttc 652

Query: 425 aatcggtagcaggtccggctccaatttttggtgattgccaccaacctctaggtgccattac 484
Sbjct: 651 aatcggtagcaggtccggctccaatttttggtgattgccaccaacctctaggtgccattac 592

Query: 485 gtgacgatgtcttcccaatggatcaaaccggtgactcactataaaaaatcaccaaa 544
Sbjct: 591 gtgacgatgtcttcccaatggatcaaaccggtgactcactataaaaaatcaccaaa 532

Query: 545 agcagtatgtcccgtatcactcggctctgcttaagatcgcatatttctcattgatttttct 604
Sbjct: 531 agcagtatgtcccgtatcactcggctctgcttaagatcgcatatttcccattgatttttct 472

Query: 605 tggaaacagaacaccattcctgttataaggtaaaaatataattttccatctggtgaaaggt 664
Sbjct: 471 tggaaacagaacaccattcctgttataaggtaaaaatataattttccatctggtgaaaggt 412

Query: 665 ttcaaaatcaaaggatatatgcaattccaatggtaggacatgatatccattacaccaagt 724
Sbjct: 411 ttcaaaatcaaaggatatatgcaattccaatggtaggacatgatatccattacaccaagt 352

Query: 725 aacataatatctatcttcaatgaacatactcttggatcataccatattcaaatggttc 784
Sbjct: 351 aacataatatctatcttcaatgaacatactcttggatcataccatattcaaatggttc 292

Query: 785 gctatcctctacttcagattgaaactcgattgggtcaggatttatattccacttcactcc 844
Sbjct: 291 gctatcctctacttcagattgaaactcgattgggtcaggatttatattccacttcactcc 232

Query: 845 atctacactaaaatcagcatggagtaacatttctcttcttttatcatcacacctaatac 904
|||||
Sbjct: 231 atctacactaaaatccagcatggagtaacatttctcttcttttatcatcacacctaatac 172

Query: 905 ccctgcataaccatctttaaagggtaccaccgcactaataaataactattgcttctttt 964
|||||
Sbjct: 171 ccctgcataaccatctttaaagggtaccaccgcactattaaataactattgcttctttt 112

Query: 965 gatttcatttctatgtataatcggattttttgattatctccaacaacatcctcacaatc 1024
|||||
Sbjct: 111 gatttcatttctatgtataatcggattttttgaatatctccaacaacatcctcacaatc 52

Query: 1025 aacaggctccttgggtccccagggtaaattttttcatgatcccattcttctttt 1079
|||||
Sbjct: 51 aacaggct-ccttgggt-cccattgggtata-tttttcatgatcctatc-tccttcttt 1

#####

Cphy1719-1 forward sequence

Query= HR0ADKBY82ZC01_1719C1P16_1.SCF 1373 0 1373 SCF

>Cphy1719

Query: 68 aaagaaggagataggatcATGgaaacttcaaaagcgatagaagaattatttgagacggta 127
|||||
Sbjct: 1 aaagaaggagataggatcatggaaacttcaaaagcgatagaagaattatttgagacggta 60

Query: 128 aacagaaaattaacgggtatggaaaaagtataatggcatttgaaaaatgttttctcaat 187
|||||
Sbjct: 61 aacagaaaattaacgggtatggaaaaagtataatggcatttgaaaaatgttttctcaat 120

Query: 188 acaatcaccactacagttaaaagggttagacgatggttcttctctatgtaattacaggtgat 247
|||||
Sbjct: 121 acaatcaccactacagttaaaagggttagacgatggttcttctctatgtaattacaggtgat 180

Query: 248 attcctgctatgtggcttagagattccacttgcaaatccgcccgtatctagtattagca 307
|||||
Sbjct: 181 attcctgctatgtggcttagagattccacttgcaaatccgcccgtatctagtattagca 240

Query: 308 aataaagatttagcgatagctcagatgataaaggggctaattcataggcaatttaatac 367
|||||
Sbjct: 241 aataaagatttagcgatagctcagatgataaaggggctaattcataggcaatttaatac 300

Query: 368 atacggctagatccttatgcaaatgcctttaacgaaagcgccaatggacattgctgggaa 427
|||||
Sbjct: 301 atacggctagatccttatgcaaatgcctttaacgaaagcgccaatggacattgctgggaa 360

Query: 428 caagatgaatgCGGcatgggaccttgggtatgggaacgaaaatatgagattgattcttta 487
 |||
 Sbjct: 361 caagatgaatgCGGcatgggaccttgggtatgggaacgaaaatatgagattgattcttta 420

Query: 488 tgctttccaatacagttagcgtgggtatattggaaaacgacaggtgataccactcacttc 547
 |||
 Sbjct: 421 tgctttccaatacagttagcgtgggtatattggaaaacgacaggtgataccactcacttc 480

Query: 548 gataaaaattttaagaatgccattaaagtaattatgcatacatggaagctggagcaaaaat 607
 |||
 Sbjct: 481 gataaaaattttaagaatgccattaaagtaattatgcatacatggaagctggagcaaaaat 540

Query: 608 catgaggggaaatctcagtaccattttattcgaaaaataccttttttaaggatacgtta 667
 |||
 Sbjct: 541 catgaggggaaatctcagtaccattttattcgaaaaataccttttttaaggatacgtta 600

Query: 668 tcgagagaagggaaaagggcgtagtaagccaaatatcggattgacttggtcaggcttt 727
 |||
 Sbjct: 601 tcgagagaagggaaaagggcgtagtaagccaaatatcggattgacttggtcaggcttt 660

Query: 728 cgtccaagtgatgatgcttgctacatggctatttaattccatcgaacatggtcgctacc 787
 |||
 Sbjct: 661 cgtccaagtgatgatgcttgctacatggctatttaattccatcgaacatggtcgctacc 720

Query: 788 gttgtattaaactatgtggaagagattgcaacagaggttctaaaagatgacagcatagca 847
 |||
 Sbjct: 721 gttgtattaaactatgtggaagagattgcaacagaggttctaaaagatgacagcatagca 780

Query: 848 aaagaagctcttctgttaagaaaagaaatcggggacggatttgagaattaccgtattgtg 907
 |||
 Sbjct: 781 aaagaagctcttctgttaagaaaagaaatcggggacggaattgagaattaccgtattgtg 840

Query: 908 aacacaaaggaatttgccgcatctattgctatgaaacagatgggtatggccatataat 967
 |||
 Sbjct: 841 aacacagaggaatttgccgcatctatgcatatgaaacagatgggtatggccaatataat 900

Query: 968 ttaatggatgacgcaatgtaccaagttactatctattccttaaatcg 1016
 |||
 Sbjct: 901 ttaatggatgacgcaatgtaccaagttactatctattccttataatcg 949

#####

Cphy1719-1 reverse sequence

Query= HR0ADKBY82ZC01_1719C1P17_1.SCF 1386 0 1386 SCF

>Cphy1719

Query: 65 gtgtaatggatagtgatcTTAatggtgatggtgatgatgaattcctgcctttataaccaca 124
 |||
 Sbjct: 1338 gtgtaatggatagtgatccttaatggtgatggtgatgatgaattcctgcctttataaccaca 1279

Query: 125 aaaatctagtagccaattcagcaaaaagtgagttcgcccatgcaaacattctctggtgta 184
 |||
 Sbjct: 1278 aaaatctagtagccaattcagcaaaaagtgagttcgcccatgcaaacattctctggtgta 1219

Query: 185 tattacggcatcatccgcataaattccttcatgcattaacaaatcttcacctaattgtatt 244
 |||
 Sbjct: 1218 tattacggcatcatccgcataaattccttcatgcattaacaaatcttcacctaattgtatt 1159

Query: 245 catgattcggtttatacactgaagcttatcttctactttctcgctcgttaaaccttccat 304
 |||
 Sbjct: 1158 catgattcggtttatacactgaagcttatcttctactttctcgctcgttaaaccttccat 1099

Query: 305 tgcaaccgctatatgccagacatagtttgatagagtatgagcacttccgattcctgataa 364
 |||
 Sbjct: 1098 tgcaaccgctatatgccagacatagtttgatagagtatgagcacttccgattcctgataa 1039

Query: 365 catcttaccttcaaagtaataagggttgatgacttaataataaatcgcttgtattatt 424
 |||
 Sbjct: 1038 catcttaccttcaaagtaataagggttgatgacttaataataaatcgcttgtattatt 979

Query: 425 agcaacctcttcttcttccacatatccgatataaggaatagatagtaaacttggtac 484
 |||
 Sbjct: 978 agcaacctcttcttcttccacatatccgatataaggaatagatagtaaacttggtac 919

Query: 485 attcgcgtcatccattaaattatattggccatacccatctgtttcatatgcatagatgcg 544
 |||
 Sbjct: 918 attcgcgtcatccattaaattatattggccatacccatctgtttcatatgcatagatgcg 859

Query: 545 gccaaaattcctctgtgttcacaataaccgtaattctcaattccgtccccgatttcttttct 604
 |||
 Sbjct: 858 gccaaaattcctctgtgttcacaataaccgtaattctcaattccgtccccgatttcttttct 799

Query: 605 taacagaagagcttcttttgctatgctgtcatcttttagaacctctgttgcaatctcttc 664
 |||
 Sbjct: 798 taacagaagagcttcttttgctatgctgtcatcttttagaacctctgttgcaatctcttc 739

Query: 665 cacatagtttaataacaacggtagcgaacatgttcgatggaattaaatagccataggtaca 724
 |||
 Sbjct: 738 cacatagtttaataacaacggtagcgaacatgttcgatggaattaaatagccataggtaca 679

Query: 725 agcatcatcacttggacgaaagcctgaccaagtcaatccgatatttggctttactaacgc 784
 |||

Sbjct: 678 agcatcatcacttggacgaaagcctgaccaagtcaatccgatatttggctttactaaccg 619

Query: 785 ccctttcccttctctcgataacgtatccttaaaaaaggatatttttcgaataaaaatggta 844
|||||

Sbjct: 618 ccctttcccttctctcgataacgtatccttaaaaaaggatatttttcgaataaaaatggta 559

Query: 845 ctgaaatttcccctcatgattttgctccagcttccaggtatgcataattacttttatggc 904
|||||

Sbjct: 558 ctgagatttcccctcatgattttgctccagcttccatgtatgcataattactttaatggc 499

Query: 905 cttcttaaaatttttatccaagtgagtggtatcacctggcgtttccaattataaccacc 964
|||||

Sbjct: 498 attcttaaaatttttatcgaagtgagtggtatcacct-gtcgtttccaatataacca-c 441

Query: 965 gctaacggtattgggaaagcataaagaaatcaatcccaaattttcgttccccatacccaa 1024
|||||

Sbjct: 440 gctaaactgtatt-ggaaagcataaag-aatcaatctcatattttcgtt-cccatacccaa 384

Query: 1025 ggtcccatgccgca 1038
|||||

Sbjct: 383 ggtcccatgccgca 370

#####

Cphy1720-2 forward sequence

Query= HR0ADKBY82ZC07_1720C2P16_1.SCF 1369 0 1369 SCF

>cphy1720

Query: 69 aaagaaggagataggatcATGttttatacagagcgaaaattggaaagaagaattgatgaa 128
|||||

Sbjct: 1 aaagaaggagataggatcatgttttatacagagcgaaaattggaaagaagaattgatgaa 60

Query: 129 ttaagcaattatcgatatagagatgtgatatcttttcaggagttatatgtaaaaggagat 188
|||||

Sbjct: 61 ttaagcaattatcgatatagagatgtgatatcttttcaggagttatatgtaaaaggagat 120

Query: 189 gtcgagaaattagtaagaccagaggtaccaacaacctttggcgattttaagacaatgaat 248
|||||

Sbjct: 121 gtcgagaaattagtaagaccagaggtaccaacaacctttggcgattttaagacaatgaat 180

Query: 249 gttggtgaaacctggtctggccgcgattgttatctttggctacataaggaagttaccgta 308
|||||

Sbjct: 181 gttggtgaaacctggtctggccgcgattgttatctttggctacataaggaagttaccgta 240

Query: 309 cctgctgattgggatnnnnnnngagtggtaggtatttttgatttcggaaataccggagct 368
|||||

Sbjct: 241 cctgctgattgggataaaaaaagagtggtaggtatTTTTgatttcggaaataccggagct 300

Query: 369 ggtaataattctggTTTTgaatccctattgtacctaaatgagcaaccctatcagggagtt 428
 |||
 Sbjct: 301 ggtaataattctggTTTTgaatccctattgtacctaaatgagcaaccctatcagggagtt 360

Query: 429 gatgtaaatcataaagaagnnnnnngaaggaagatttggttgtaagaacgtaaacttc 488
 |||
 Sbjct: 361 gatgtaaatcataaagaagtTTTTgaaggaagatttggttgtaagaacgtaaacttc 420

Query: 489 acatttcgTTTgtggcaggacttgaaggcggaggagtaccacatgcacaggagcacaaa 548
 |||
 Sbjct: 421 acatttcgTTTgtggcaggacttgaaggcggaggagtaccacatgcacaggagcacaaa 480

Query: 549 ataaatcgtgctgacttagcatatttagatgagaaaacagacgatttatattattatct 608
 |||
 Sbjct: 481 ataaatcgtgctgacttagcatatttagatgagaaaacagacgatttatattattatct 540

Query: 609 ttgatgatacttgatactTTaaaaaatcttgatgagaataatgccattcgcagcgaatta 668
 |||
 Sbjct: 541 ttgatgatacttgatactTTaaaaaatcttgatgagaataatgccattcgcagcgaatta 600

Query: 669 aaaattcatttagataatgcctTTaaattaattgactggcttatccaaatagcgaagag 728
 |||
 Sbjct: 601 aaaattcatttagataatgcctTTaaattaattgactggcttatccaaatagcgaagag 660

Query: 729 ttttaccagtcggtgcacgaagcggatgattaccttaatgagaagattgatggatggat 788
 |||
 Sbjct: 661 ttttaccagtcggtgcacgaagcggatgattaccttaatgagaagattgatggatggat 720

Query: 789 aagaactctctgtcaatgtcaaatgcataggccatacccatatcgatgtggcatggta 848
 |||
 Sbjct: 721 aagaactctctgtcaatgtcaaatgcataggccatacccatatcgatgtggcatggta 780

Query: 849 tggagactaaagcatacaagagaaaaatgtgcacgTtCcttctactgtTTtaagattg 908
 |||
 Sbjct: 781 tggagactaaagcatacaagagaaaaatgtgcacgTtCcttctactgtTTtaagattg 840

Query: 909 atgaaaaagtatccggattacatattccctgcaaacgcagcccccaactattacaaaact 968
 ||| ||
 Sbjct: 841 atggaagagtatccggattacatatt-cctgcaaacgcag-ccacaactatacgaataca 898

Query: 969 tcaaaaaatgacaatcctgaaata 991
 |||
 Sbjct: 899 tcaaaaaatgactatcctgaaata 921

#####

Cphy1720-2 reverse sequence

Query= HR0ADKBY82ZC07_1720C2P17_1.SCF 1369 0 1369 SCF

>cphy1720

Query: 66 gtgtaatggatagtgatcTTAatggtgatggtgatgatgaaatattcccttagctaaaat 125
|||||
Sbjct: 3186 gtgtaatggatagtgatcctaaggtgatggtgatgatgaaatattcccttagctaaaat 3127

Query: 126 cgtcttaatttcatatggttttacttctaaaatgatatccgaatcataatgggtatcatc 185
|||||
Sbjct: 3126 cgtcttaatttcatatggttttacttctaaaatgatatccgaatcataatgggtatcatc 3067

Query: 186 catcggctctttcccgtaaatcagcctcaaccattctgttactttaaaaccagtctgtaa 245
|||||
Sbjct: 3066 catcggctctttcccgtaaatcagcctcaaccattctgttactttaaaaccagtctgtaa 3007

Query: 246 cttactatattccttgagccactataatcatggaagcgtacgactaagtactctttatc 305
|||||
Sbjct: 3006 cttactatattccttgagccactataatcatggaagcgtacgactaagtactctttatc 2947

Query: 306 ctctgactgtttcattgcatcaatcgtaatgtactcattatcgatggagacaaagctata 365
|||||
Sbjct: 2946 ctctgactgtttcattgcatcaatcgtaatgtactcattatcgatggagacaaagctata 2887

Query: 366 attattaggaagaacacattcgccagcaatcgcttctaatttttgattgagtgcaaagtc 425
|||||
Sbjct: 2886 attattaggaagaacacattcgccagcaatcgcttctaatttttgattgagtgcaaagtc 2827

Query: 426 ttccttctcagtttctcctttcacaaaatcacctttatgaggtacaaagagtaggtgaa 485
|||||
Sbjct: 2826 ttccttctcagtttctcctttcacaaaatcacctttatgaggtacaaagagtaggtgaa 2767

Query: 486 agaatgctcgcttggctcttgtaaataatccggatgcatcgctgtcttaatcaaagttaa 545
|||||
Sbjct: 2766 agaatgctcgcttggctcttgtaaataatccggatgcatcgctgtcttaatcaaagttaa 2707

Query: 546 tcgaagtaaattatcctttacatcatgaccatacttacaattattcagtaagcttacacc 605
|||||
Sbjct: 2706 tcgaagtaaattatcctttacatcatgaccatacttacaattattcagtaagcttacacc 2647

Query: 606 ataattatattcggacaaaatctaccatttgtgagccacagtctcaaacttagcttggtc 665
|||||
Sbjct: 2646 ataattatattcggacaaaatctaccatttgtgagccacagtctcaaacttagcttggtc 2587

Query: 666 ccaactagtattccaatgatttggctgcttttacattacatattggatatcataggttgc 725

Sbjct: 2586 ||| ccaactagatattccaatgatttggtcgttttacattaccatattggatatcataggttc 2527

Query: 726 ataggtagatcttatatcaaccgggaaggctaccttagtaattgtcgtttttcatgata 785

Sbjct: 2526 ||| ataggtagatcttatatcaaccgggaaggctaccttagtaattgtcgtttttcatgata 2467

Query: 786 atccacataggtttcaaaatcaattcttctgctatatgcatacaaggctcatatcttggtt 845

Sbjct: 2466 ||| atccacataggtttcaaaatcaattcttctgctatatgcatacaaggctcatatcttggtt 2407

Query: 846 gatcacagaattcatatacttccattggaatgagaatacagctctaagtggttcctatttc 905

Sbjct: 2406 ||| gatcacagaattcatatacttccattggaatgagaatacagctctaagtggttcctatttc 2347

Query: 906 ctttatctcaaagtggttctaagtcacttacttctctcatcttttctgat-nnnnnntc 964

Sbjct: 2346 ||| ctttatctcaaagtggttctaagtcacttacttctctcatcttttctgatagaaaatc 2287

Query: 965 aatatcccctgcatcattatccataaggcttatcttcaaaaacttgaaaaacatttggtc 1024

Sbjct: 2286 ||| aatatcccatgcatcattatccat-aggcttatcttcaaaaacttgagaacattt-gct 2229

Query: 1025 cggctctccagggtggcatttacctggctttttatctttatcataaa 1074

Sbjct: 2228 ||| cgttct-ccagggt-gcaattacct-gtcgttttttt-ctttatcataaa 2183

#####

Cphy1847-2 forward sequence

Query= HR0ADKBY82ZD02_1847C2P16_1.SCF 1404 0 1404 SCF

>cphy1847

Query: 69 aaagaaggagataggatcATGaagtttcggtttgaagatttaagaaaggttgattacaaa 128

Sbjct: 1 ||| aaagaaggagataggatcatgaagtttcggtttgaagatttaagaaaggttgattacaaa 60

Query: 129 ggatatattaaaagtaattacnnnnnntaattgctggtggcagta 173

Sbjct: 61 ||| ggatatattaaaagtaattacaaaaaataattgctggtggcagta 105

Query: 187 gttatggattaggtaatgtgacagcacgtggtgtagctcattaccaagaacatttgctg 246

Sbjct: 119 ||| gttatggattaggtaatgtgacagcacgtggtgtagctcattaccaagaacatttgctg 178

Query: 247 tgaatgaaaaggtagataattggggcttaggtttcggacaagaaggaactcaacccaaaag 306
|||||
Sbjct: 179 tgaatgaaaaggtagataattggggcttaggtttcggacaagaaggaactcaacccaaaag 238

Query: 307 gtactgtatctgtggaacaattaaaggaatatgatgcttactacatcggtgcgaatactg 366
|||||
Sbjct: 239 gtactgtatctgtggaacaattaaaggaatatgatgcttactacatcggtgcgaatactg 298

Query: 367 acaaagtaatatatttaacttttgattgctgctatgaaaatggtaacacagctaaaatat 426
|||||
Sbjct: 299 acaaagtaatatatttaacttttgattgctgctatgaaaatggtaacacagctaaaatat 358

Query: 427 tagatgcctnnnnnnncacaatgtttcggctactttctttgtagttgggcattttcttg 486
|||||
Sbjct: 359 tagatgccttaaaaaaacacaatgtttcggctactttctttgtagttgggcattttcttg 418

Query: 487 aaactagccctgaccttgtaaaacgaatggtagcggaagggcatgcagttgggaatcata 546
|||||
Sbjct: 419 aaactagccctgaccttgtaaaacgaatggtagcggaagggcatgcagttgggaatcata 478

Query: 547 cctaccatcactacgatatgtctaaaatctctagcttggatagttttcaaaaagaagtag 606
|||||
Sbjct: 479 cctaccatcactacgatatgtctaaaatctctagcttggatagttttcaaaaagaagtag 538

Query: 607 atgatgtggcaaaactatttgaacaaattacaggacaaaagttgatgaagtattatcgtc 666
|||||
Sbjct: 539 atgatgtggcaaaactatttgaacaaattacaggacaaaagttgatgaagtattatcgtc 598

Query: 667 caccacaaggtaaaatacagtacagaaaatctaaaattggcgaaagagctaggatataaga 726
|||||
Sbjct: 599 caccacaaggtaaaatacagtacagaaaatctaaaattggcgaaagagctaggatataaga 658

Query: 727 cattcttttggaaatctcgcttatgttgattgggatcaaaacaacaaccaacccaaaatt 786
|||||
Sbjct: 659 cattcttttggagtctcgcttatgttgattgggatcaaaacaacagccaacccaaagatc 718

Query: 787 aggcatatagtaatttattaaaagagaatacataatggggcagtagttccacttcttaat 846
|||||
Sbjct: 719 aggcatatagtaagttatt-aaagagaatacataatggggcagtagttctacttcataat 777

Query: 847 acttccactacaaaatggagaaaatttttaagaattactggacaaaatgggaagagatgggc 906
|||||
Sbjct: 778 acttctactacaaaatggagagatttttagatgaattactgacaaaatgggaagagatgggc 837

Query: 907 catgttttttaaacctttatca 927
|||||
Sbjct: 838 tatgttttttaaacattatca 858

#####

Cphy1847-2 reverse sequence

Query= HR0ADKBY82ZD02_1847C2P17_1.SCF 1367 0 1367 SCF

>cphy1847

Query: 65 gtgtaatggatagtgatcTTAatggtgatggtgatgatgctgaacatcagcaagttctga 124
|||||
Sbjct: 915 gtgtaatggatagtgatcctaaggtgatggtgatgatgctgaacatcagcaagttctga 856

Query: 125 taatggtttaaaaacatagcccatctcttccattttgtcagtaattcatctaaaatctc 184
|||||
Sbjct: 855 taatggtttaaaaacatagcccatctcttccattttgtcagtaattcatctaaaatctc 796

Query: 185 tccattttagtagaagtagtattatgaagtagaactactgccccattatgtattctctttaa 244
|||||
Sbjct: 795 tccattttagtagaagtagtattatgaagtagaactactgccccattatgtattctctttaa 736

Query: 245 taacttactatatgcctgatctttggttgctggtttgtttgatcccaatcaacataagc 304
|||||
Sbjct: 735 taacttactatatgcctgatctttggttgctggtttgtttgatcccaatcaacataagc 676

Query: 305 gagactccaaaagaatgtcttatatccttagctctttcgccaatttagattttctgtact 364
|||||
Sbjct: 675 gagactccaaaagaatgtcttatatccttagctctttcgccaatttagattttctgtact 616

Query: 365 gtattttaccttgggtggacgataaatacttcatcaacttttgcctgtaatttgttcaa 424
|||||
Sbjct: 615 gtattttaccttgggtggacgataaatacttcatcaacttttgcctgtaatttgttcaa 556

Query: 425 tagttttgccacatcatctacttcttttgaaaactatccaagctagagatttttagacat 484
|||||
Sbjct: 555 tagttttgccacatcatctacttcttttgaaaactatccaagctagagatttttagacat 496

Query: 485 atcgtagtgatggttaggtatgattcccaactgatgcccttccgctaccattcgttttac 544
|||||
Sbjct: 495 atcgtagtgatggttaggtatgattcccaactgatgcccttccgctaccattcgttttac 436

Query: 545 aaggtcagggctagtttcaagaaaatgcccaactacaaagaaagtagccgaaacattgtg 604
|||||
Sbjct: 435 aaggtcagggctagtttcaagaaaatgcccaactacaaagaaagtagccgaaacattgtg 376

Query: 605 nnnnnnaaggcatctaataattttagctgtgttaccattttcatagccgcaatcaaaagt 664
|||||
Sbjct: 375 ttttttaaggcatctaataattttagctgtgttaccattttcatagccgcaatcaaaagt 316

Query: 665 taaatatattactttgtcagatattcgcaccgatgtagtaagcatcatattcctttaattg 724
|||||
Sbjct: 315 taaatatattactttgtcagatattcgcaccgatgtagtaagcatcatattcctttaattg 256

Query: 725 ttccacagatacagtaccttttggttgagttccttcttggtccgaaacctagacccaatt 784
|||||
Sbjct: 255 ttccacagatacagtaccttttggttgagttccttcttggtccgaaacctagacccaatt 196

Query: 785 atctaccttttcattcacagcaaagtgttcttgtaagtacaccacgtgctgtcac 844
|||||
Sbjct: 195 atctaccttttcattcacagcaaagtgttcttgtaagtacaccacgtgctgtcac 136

Query: 845 attacctaataccataac 861
|||||
Sbjct: 135 attacctaataccataac 119

#####

Query= HR0ADKBY82ZD06_1877C1P16_1.SCF 1402 0 1402 SCF

>cphy1877

Query: 68 aaagaaggagataggatcATGaatcaaaatacatagattttaagacaagtccagttgct 127
|||||
Sbjct: 1 aaagaaggagataggatcatgaatcaaaatacatagattttaagacaagtccagttgct 60

Query: 128 aatcaaaaagctgttatacaaggagattgttatcgttttacagtactgacatctagatta 187
|||||
Sbjct: 61 aatcaaaaagctgttatacaaggagattgttatcgttttacagtactgacatctagatta 120

Query: 188 attcgattagaatataatgaggatggttatctcgaagatttagcaactcaagtggtaata 247
|||||
Sbjct: 121 attcgattagaatataatgaggatggttatctcgaagatttagcaactcaagtggtaata 180

Query: 248 aaccgtgagtttccagtagaccagaataaccgtgtaaaagaaggggaagatagcttagaagta 307
|||||
Sbjct: 181 aaccgtgagtttccagtagaccagaataaccgtgtaaaagaaggggaagatagcttagaagta 240

Query: 308 ataactgagcacttacatcttacctacaataaaaagctgttttagtaaaaatggtttatgt 367
|||||
Sbjct: 241 ataactgagcacttacatcttacctacaataaaaagctgttttagtaaaaatggtttatgt 300

Query: 368 attcaagtaaaaaggaaatttaagtgccttatcgaagtatatggcattttggtgagacagga 427
|||||
Sbjct: 301 attcaagtaaaaaggaaatttaagtgccttatcgaagtatatggcattttggtgagacagga 360

Sbjct: 2328 |||tctgctacgatgttttttaataaattcgataaattaaactcttacaatcaaagtcaatctg 2269

Query: 245 tgtcttatctagtaaattaaaaacttgtacaattatatcattttctataatttgatcgca 304
|||

Sbjct: 2268 tgtcttatctagtaaattaaaaacttgtacaattatatcattttctataatttgatcgca 2209

Query: 305 ttcaggcagcttaataacaagagccttattcacagtaattgagaataacctgaatatgcat 364
|||

Sbjct: 2208 ttcaggcagcttaataacaagagccttattcacagtaattgagaataacctgaatatgcat 2149

Query: 365 aatatttctttccgcatcatatcgtttcgtaaaggatatttctttccctcaagaaatac 424
|||

Sbjct: 2148 aatatttctttccgcatcatatcgtttcgtaaaggatatttctttccctcaagaaatac 2089

Query: 425 actaactaaatcactatctttgcagccaacgatgtcaatctgatagtttctttcttctgg 484
|||

Sbjct: 2088 actaactaaatcactatctttgcagccaacgatgtcaatctgatagtttctttcttctgg 2029

Query: 485 aatgataccattatttttacttctacattgaattttaaattcggagtctttattccaggt 544
|||

Sbjct: 2028 aatgataccattatttttacttctacattgaattttaaattcggagtctttattccaggt 1969

Query: 545 aaattgcatcgaagtaattacttccctaacttcactttgactgaagtaagagagttatc 604
|||

Sbjct: 1968 aaattgcatcgaagtaattacttccctaacttcactttgactgaagtaagagagttatc 1909

Query: 605 ttcatacaagtcaaatcttccgtccgcaccagcaaagaccttgattaaaagatccgatgg 664
|||

Sbjct: 1908 ttcatacaagtcaaatcttccgtccgcaccagcaaagaccttgattaaaagatccgatgg 1849

Query: 665 atttctcggcactgttggatacggcatcctttaccaccatcggataatagctccggcagc 724
|||

Sbjct: 1848 atttctcggcactgttggatacggcatcctttaccaccatcggataatagctccggcagc 1789

Query: 725 tgcaaagaccggtatcgttgaaagttcacgatagaatcgattcggcgtccccacgata 784
|||

Sbjct: 1788 tgcaaagaccggtatcgttgaaagttcacgatagaatcgattcggcgtccccacgata 1729

Query: 785 cactcttccggtaaagaaatcaaaatataattccttccgggagccatccatcaaatccacc 844
|||

Sbjct: 1728 cactcttccggtaaagaaatcaaaatataattccttccgggagccatccatcaaatccacc 1669

Query: 845 catattgagttcaaggtttaaggttttggttatcggacatgcgattaactctgagccaaa 904
|||

Sbjct: 1668 catattgagttcaaggtttaaggttttggttatcggacatgcgattaactctgagccaaa 1609

Query: 905 gtaatattgattcggaaacatggtatgcttccctcgtcctccgggTTTTGATAACATTG 964
|||||
Sbjct: 1608 gtaatattgattcggaaacatggtatgctt-cctcgttctccgggTTTTGATAACATTG 1550

Query: 965 gttggatcagtggtttattctcactatggaataaataattcattgtgtaaaaatacggaa 1024
|||||
Sbjct: 1549 gttggatcagtggtttattctcactatggaataaataattcattgtgtataaaatacggta 1490

Query: 1025 ttaattgatggccgaagttgtaaaaacca 1054
|||||
Sbjct: 1489 ttaattgatgg-cgtagttgtaaaaacca 1461

#####

Query= HR0ADKBY82ZE02_2105C2P16_1.SCF 1352 0 1352 SCF

>cphy2105 foward

Query: 68 aaagaaggagataggatcATGcatcatcaccatcaccatactgattactggcagaattgg 127
|||||
Sbjct: 1 aaagaaggagataggatcatgcatcatcaccatcaccatactgattactggcagaattgg 60

Query: 128 actgatggtggtggaacagtgaaacgctaccaatggttctggtggaactacagtgttaac 187
|||||
Sbjct: 61 actgatggtggtggaacagtgaaacgctaccaatggttctggtggaactacagtgttaac 120

Query: 188 tggacgaattgtggttaattttggttaggtaaaggtggggtactggaaatgcatcaaga 247
|||||
Sbjct: 121 tggacgaattgtggttaattttggttaggtaaaggtggggtactggaaatgcatcaaga 180

Query: 248 gttgtaaattacaatgctggtgtatttcaccatctggtaatggttatttaactttctat 307
|||||
Sbjct: 181 gttgtaaattacaatgctggtgtatttcaccatctggtaatggttatttaactttctat 240

Query: 308 ggttgacgagaaaattcactcattgaatattatggtggtgatagttggggtacttataga 367
|||||
Sbjct: 241 ggttgacgagaaaattcactcattgaatattatggtggtgatagttggggtacttataga 300

Query: 368 ccaactggaactttaagggtacagtttctagcgatggtggaacatatgatatttataca 427
|||||
Sbjct: 301 ccaactggaactttaagggtacagtttctagcgatggtggaacatatgatatttataca 360

Query: 428 agtacgagaactaatgacaccttccatcgatggtactcagactttccaacaatactggagt 487
|||||
Sbjct: 361 agtacgagaactaatgacaccttccatcgatggtactcagactttccaacaatactggagt 420

Query: 488 gttagacagtctaagagagctaccggaagtaacgtagcaattacttttagtaacctggt 547

Sbjct: 421 ||| gttagacagtctaagagagctaccggaagtaacgtagcaattacttttagtaacatggt 480

Query: 548 aatgcttggagagtaaaggaatgaacttaggaagcagctgggcttatcaagcattatgc 607

Sbjct: 481 ||| aatgcttggagagtaaaggaatgaacttaggaagcagctgggcttatcaagcattatgc 540

Query: 608 gtagaaggatatcaaagcagtggtagtgctaataacggttgtaagatcactatcca 667

Sbjct: 541 ||| gtagaaggatatcaaagcagtggtagtgctaataacggttgtaagatcactatcca 600

Query: 668 ttacac 673

Sbjct: 601 ||| ttacac 606

#####

Query= HR0ADKBY82ZE02_2105C2P17_1.SCF 1358 0 1358 SCF

>cphy2105 reverse

Query: 66 gtgtaatggatagtgatcttaccaaaccggttacattagcactaccactgctttgatatcc 125

Sbjct: 606 ||| gtgtaatggatagtgatcttaccaaaccggttacattagcactaccactgctttgatatcc 547

Query: 126 ttctacgcataatgcttgataagcccagctgcttcctaagttcattccttactcttcca 185

Sbjct: 546 ||| ttctacgcataatgcttgataagcccagctgcttcctaagttcattccttactcttcca 487

Query: 186 agcattaacatggttactaaaagtaattgctacgttacttccggtagctctcttagactg 245

Sbjct: 486 ||| agcattaacatggttactaaaagtaattgctacgttacttccggtagctctcttagactg 427

Query: 246 tctaactccagatattggttgaaagtctgagtaccatcgatggaaggtgcattagttct 305

Sbjct: 426 ||| tctaactccagatattggttgaaagtctgagtaccatcgatggaaggtgcattagttct 367

Query: 306 cgtacttgataaatatcatatgttccaccatcgctagaaactgtaccctttaaagttcc 365

Sbjct: 366 ||| cgtacttgataaatatcatatgttccaccatcgctagaaactgtaccctttaaagttcc 307

Query: 366 agttggtctataagtacccaactatcaacaacataatattcaatgagtgaatttctcgt 425

Sbjct: 306 ||| agttggtctataagtacccaactatcaacaacataatattcaatgagtgaatttctcgt 247

Query: 426 ccaaccatagaaagttaaataaccattaccagatggtgaaaatacaccagcattgtaatt 485

|||

Sbjct: 246 ccaacatagaaagttaaataaccattaccagatggtgaaaatacaccagcattgtaatt 187

Query: 486 tacaactcttgatgcatttccagtaccccaacctttacctacaacaaaattaccacaatt 545
|||||

Sbjct: 186 tacaactcttgatgcatttccagtaccccaacctttacctacaacaaaattaccacaatt 127

Query: 546 cgtccagttaacactgtagttaccaccagaaccattggttagcgttcactgttccaccacc 605
|||||

Sbjct: 126 cgtccagttaacactgtagttaccaccagaaccattggttagcgttcactgttccaccacc 67

Query: 606 atcagtccaattctgccagtaatcagatggtgatggtgatgatgatgatgatcctatctcc 665
|||||

Sbjct: 66 atcagtccaattctgccagtaatcagatggtgatggtgatgatgatgatgatcctatctcc 7

Query: 666 ttcttt 671

Sbjct: 6 ttcttt 1
|||||

#####

Query= HR0ADKBY82ZE07_2276C2P16_1.SCF 1354 0 1354 SCF

>cphy2276 forward

Query: 69 aaagaaggagataggatcATGagtaatccaaaagatgttgttgtagacacagaagtcgta 128
|||||

Sbjct: 1 aaagaaggagataggatcatgagtaatccaaaagatgttgttgtagacacagaagtcgta 60

Query: 129 aatacagaaacagtaaatacagatgctgcatgcacagataccccaagtacagttttacc 188
|||||

Sbjct: 61 aatacagaaacagtaaatacagatgctgcatgcacagataccccaagtacagttttacc 120

Query: 189 ttactacactatcacctactatgataccgattgaacttgaagcggaagatgctgtactt 248
|||||

Sbjct: 121 ttactacactatcacctactatgataccgattgaacttgaagcggaagatgctgtactt 180

Query: 249 agtggaaatgtaaagatagaaagtagcaaaagtgattttcaggaacaggatacattagc 308
|||||

Sbjct: 181 agtggaaatgtaaagatagaaagtagcaaaagtgattttcaggaacaggatacattagc 240

Query: 309 ggattcgaagatgacagtgattattgtgaatttaagcttacgatagaggaagatggtttt 368
|||||

Sbjct: 241 ggattcgaagatgacagtgattattgtgaatttaagcttacgatagaggaagatggtttt 300

Query: 369 tatgatctaaacttcattagtgacagcgcttggtggatacaaagaaaattatgtttttagta 428
|||||

Sbjct: 301 tatgatctaaacttcattagtgacagcgcttggtggatacaaagaaaattatgtttttagta 360

Query: 429 gatgatgaaaatgttggtgtagcagtaaccgatcaaagcaaattctcagattcgaatta 488
 |||
 Sbjct: 361 gatgatgaaaatgttggtgtagcagtaaccgatcaaagcaaattctcagattcgaatta 420

Query: 489 gaaagaatatttcttacaaatggaactcataacattaagctatcaaaattctgggggtgg 548
 |||
 Sbjct: 421 gaaagaatatttcttacaaatggaactcataacattaagctatcaaaattctgggggtgg 480

Query: 549 gttgctgtggataaattaatagtaacatcctccatagaactagatacagagtatctatgaa 608
 |||
 Sbjct: 481 gttgctgtggataaattaatagtaacatcctccatagaactagatacagagtatctatgaa 540

Query: 609 gttcctgcaacattagtaaatcaaaacgctagtgtatcgtaaaagagattgatgagttat 668
 |||
 Sbjct: 541 gttcctgcaacattagtaaatcaaaacgctagtgtatcgtaaaagagattgatgagttat 600

Query: 669 ttaaccgatatctacggtaaaaagtttttatctggtcaatattgtgagaaaggaatgtat 728
 |||
 Sbjct: 601 ttaaccgatatctacggtaaaaagtttttatctggtcaatattgtgagaaaggaatgtat 660

Query: 729 ggaacagaaatttctgcaatatggaaaacaacagaagggaatttccagcagttctaggt 788
 |||
 Sbjct: 661 ggaacagaaatttctgcaatatggaaaacaacagaagggaatttccagcagttctaggt 720

Query: 789 cttgatcttatagattatacttcatcaagagtagaaaaaggtagcagttcgaagctatc 848
 |||
 Sbjct: 721 cttgatcttatagattatacttcatcaagagtagaaaaaggtagcagttcgaagctatc 780

Query: 849 caatatgccatggaatttgatgaaaaaggcggatttgttacattctgctggcactggaat 908
 |||
 Sbjct: 781 caatatgccatggaatttgatgaaaaaggcggatttgttacattctgctggcactggaat 840

Query: 909 gcaccaacgaaatatctaactggaacatggatcgtgttttttatacggaaaaaac-aac 967
 |||
 Sbjct: 841 gcaccaacgaaatatctaactggaacatggatcgtgttttttatacggaaagaacaaac 900

Query: 968 atagatttgggttagattatgaacgggcaagatgatgaagaaatcaattggtgatgaat 1027
 |||
 Sbjct: 901 atagatttgggttaagattatgaacgggcaggatgatgaaggatatcaattggtgatgaat 960

Query: 1028 gatattgatgcctttgccaaaaaactacttaaaactaaa 1065
 |||
 Sbjct: 961 gatattgatgccattgcaaaagaactacttaaaactaaa 998

#####

Query= HR0ADKBY82ZE07_2276C2P17_1.SCF 1344 0 1344 SCF

>cphy2276 reverse

```
Query: 66   gtgtaatggatagtgatcttaatggtgatggtgatgatgttcataaattgggtaattctt 125
           |||
Sbjct: 1569 gtgtaatggatagtgatcttaatggtgatggtgatgatgttcataaattgggtaattctt 1510

Query: 126  taagtctgtagtttatctagtgttataaacactatcatgggcatagaccttcttaacct 185
           |||
Sbjct: 1509 taagtctgtagtttatctagtgttataaacactatcatgggcatagaccttcttaacct 1450

Query: 186  atactcctctgtatactgttctgatagccagttaatcaaagcggatnttgtaacaaattc 245
           |||
Sbjct: 1449 atactcctctgtatactgttctgatagccagttaatcaaagcggatnttgtaacaaattc 1390

Query: 246  gccaccccatgttgcaaaaaatccccacattgcacatcacgaattgctaaatccgggtc 305
           |||
Sbjct: 1389 gccaccccatgttgcaaaaaatccccacattgcacatcacgaattgctaaatccgggtc 1330

Query: 306  aaacagacaaccttttcagataatacagaccatcttttttgcttgtgtataattcatggc 365
           |||
Sbjct: 1329 aaacagacaaccttttcagataatacagaccatcttttttgcttgtgtataattcatggc 1270

Query: 366  ctttaaatatttattaatctgagaggtataaactttttcaccaggataaataatcctcacc 425
           |||
Sbjct: 1269 ctttaaatatttattaatctgagaggtataaactttttcaccaggataaataatcctcacc 1210

Query: 426  gataatatcaacatattcatctcccggataaccattccttatcctgcccattccatagcca 485
           |||
Sbjct: 1209 gataatatcaacatattcatctcccggataaccattccttatcctgcccattccatagcca 1150

Query: 486  gattaagttatttagcccgtattcgtttgtagtttttcatataataatgtacaattt 545
           |||
Sbjct: 1149 gattaagttatttagcccgtattcgtttgtagtttttcatataataatgtacaattt 1090

Query: 546  cttataggcttctgcacctttggctccccacaaaaccaccaccgcttgcttcatgtaa 605
           |||
Sbjct: 1089 cttataggcttctgcacctttggctccccacaaaaccaccaccgcttgcttcatgtaa 1030

Query: 606  cggtctccataaaaataggcacatctgcttcttttagtttaagtagttcttttgcaatggc 665
           |||
Sbjct: 1029 cggtctccataaaaataggcacatctgcttcttttagtttaagtagttcttttgcaatggc 970

Query: 666  atcaatatcattcatcaacaattgatatccttcatcatcctgaccgttcataatcttaac 725
```

Sbjct: 969 |||atcaatatcattcatcaacaattgataccttcatcatcctgaccgttcataatcttaac 910
 Query: 726 caaatctatgtttgtttcttccgtataaaaaccacgataccatgttccagttagatattt 785
 Sbjct: 909 |||caaatctatgtttgtttcttccgtataaaaaccacgataccatgttccagttagatattt 850
 Query: 786 cgttggatgattccagtgccagcagaatgtaacaataccgcctttttcatcaaattccat 845
 Sbjct: 849 |||cgttggatgattccagtgccagcagaatgtaacaataccgcctttttcatcaaattccat 790
 Query: 846 ggcatattggatagctttcgaactgctacctttttctactcttgatgaagtataatctat 905
 Sbjct: 789 |||ggcatattggatagctttcgaactgctacctttttctactcttgatgaagtataatctat 730
 Query: 906 aagatcaagaactagaactgctggaaatttcccttctngtgttttccatattgcagaatt 965
 Sbjct: 729 |||aagatcaagacctagaactgctggaaatttcccttctngtgttttccatattgcagaa-a 671
 Query: 966 tttctgttcataactttcttttctccacatatttgaccgaataaaaactttttaccgtaa 1025
 Sbjct: 670 |||tttctgttcataactttcttttctccacatatttgaccgaataaaaactttttaccgtag 612
 Query: 1026 atatcgggtaaaataactcatcaatctctttgtacgatccactaccgttttgattttact 1085
 Sbjct: 611 |||atatc-ggttaaataactcatcaatctctttgtacgat-cactagcgttttga-tttact 555
 Query: 1086 -atgttgaggaaacttcataaaataactcgtatcaagtt 1123
 Sbjct: 554 |||aatgttgagg-aacttcat-agatactcgtatctagtt 518

#####

Query= HR0ADKBY82ZF02_2848C2P16_1.SCF 1340 0 1340 SCF

>Cphy2848 forward

Query: 68 aaagaaggagataggatcATGacaagtaggaggagacttcttagttggaactataaagta 127
 Sbjct: 1 |||aaagaaggagataggatcatgacaagtaggaggagacttcttagttggaactataaagta 60
 Query: 128 tttacagagaagggagctagtcagatgaagtatcagagtaatatggtatcagatttacia 187
 Sbjct: 61 |||tttacagagaagggagctagtcagatgaagtatcagagtaatatggtatcagatttacia 120
 Query: 188 atagcttatattggtggaggttcccgaggatgggcatggactttcatgactgacctagca 247

Sbjct: 1098 agatgcctttaaatcaactttctcttctccactcactaaacgatggcttttctcaagtct 1039

Query: 546 ctgtttaaggtcttcctttctccaatctactgtagttaatccaaacttccagctctttac 605
|||||

Sbjct: 1038 ctgtttaaggtcttcctttctccaatctactgtagttaatccaaacttccagctctttac 979

Query: 606 gttttccggatctttcaagtaccaatcgccaggtacaaactctgccaagtgacgatctcc 665
|||||

Sbjct: 978 gttttccggatctttcaagtaccaatcgccaggtacaaactctgccaagtgacgatctcc 919

Query: 666 tgcagctgcaatcaatccatatttctggaataaatcaaattttacacgatgagaacatgc 725
|||||

Sbjct: 918 tgcagctgcaatcaatccatatttctggaataaatcaaattttacacgatgagaacatgc 859

Query: 726 aaatgtagtatttgcccagtttgcatcattttctataaaaccttctcaaaatgttcctt 785
|||||

Sbjct: 858 aaatgtagtatttgcccagtttgcatcattttctataaaaccttctcaaaatgttcctt 799

Query: 786 tacataatctctatagatagggataaatctattccttgataggatgcataatcaaacca 845
|||||

Sbjct: 798 tacataatctctatagatagggataaatctattccttgataggatgcataatcaaacca 739

Query: 846 agtaaagtgattaatccctaaaacattaacatgaacttcatttcttggtatatcctcaat 905
|||||

Sbjct: 738 agtaaagtgattaatccctaaagacattaacatgaacttcatttcttggtatatcctcaat 679

Query: 906 accaagcacctgttctgcgatcccttttaaaactttctgagttccaaatact-catgaca 964
|||||

Sbjct: 678 accaagcacctgttctgcgatcccttttaaaactttctgagttccaaatacttcatgaca 619

Query: 965 acaaccaaagtgctttaatccccggaaaaacatgaaaataatgttttccacataaaagt 1024
|||||

Sbjct: 618 acaaccaaagtg-ctttaatctctggaaatacatgata-taatgttttccacataaa-gt 562

Query: 1025 ccttggaattccaattaattaattacccatgcttt 1059
| ||||| ||| || |||||

Sbjct: 561 cattgga-ttcgtat-aattaattacccatgcttt 529

#####

Query= HR0ADKBY82ZF06_3010C1P16_1.SCF 1352 0 1352 SCF

>cphy3010 forward

Query: 68 aaagaaggagataggatcATGgaaaccttaaaggaaaaatataaagattatttccttatt 127
|||||

Sbjct: 1 aaagaaggagataggatcatggaaaccttaaaggaaaaatataaagattatttccttatt 60

Sbjct: 721 |||gtatcaatg|tttcg|ccatga|agacag|gtcagaa|atcttgaa|accaac|gataga|acagtat 780

Query: 848 aaagcacaggccagag|tttacaa|agagtgc|tttcaga|tat|tttaga|gaatata|aaaaat|gat 907

Sbjct: 781 aaagcacaggccagag|tttacaa|agagtgc|tttcaga|tat|tttaga|gaatata|aaaaat|gat 840

Query: 908 attacatccgtgacc|ctatgg|gggag|tatcaga|tgaag|tcagct|ggcta|aacca|ttttcc 967

Sbjct: 841 attacatccgtgacc|ctat-g|gggag|tatcaga|t|gat|gtcag|ctggc|taaacc|at|ttttcc 899

Query: 968 agtaaataacc|cgtaaa|acctgg|ccattac|t|gtttg|aagaa|atgaa|gaaac|caaa|agaac 1027

Sbjct: 900 agtaaataa-cc|gtagaa|actgg|ccattac|t|gtttg|atgag|atgag|aaac|caaa|agaag 958

Query: 1028 aat|ttttat|gaaatt|atgaatt|ttt 1050

Sbjct: 959 cat|ttttat|gaaatt|atgaatt|ttt 981

#####

Query= HR0ADKBY82ZF06_3010C1P17_1.SCF 1384 0 1384 SCF

>cphy3010 reverse

Query: 66 gtg|taatgg|atagtg|atctta|atgg|tgatgg|tgatgat|gaaa|attcata|attcata|aaa 125

Sbjct: 1020 gtg|taatgg|atagtg|atctta|atgg|tgatgg|tgatgat|gaaa|attcata|attcata|aaa 961

Query: 126 tgctt|ctttt|ggttt|catcat|ctcat|caaac|agtaat|ggccag|tttctac|ggttatt|ttac 185

Sbjct: 960 tgctt|ctttt|ggttt|catcat|ctcat|caaac|agtaat|ggccag|tttctac|ggttatt|ttac 901

Query: 186 tgg|aaaatg|g|tttag|ccagct|gacat|catct|gatact|cccc|atagg|gtcac|ggatg|taat 245

Sbjct: 900 tgg|aaaatg|g|tttag|ccagct|gacat|catct|gatact|cccc|atagg|gtcac|ggatg|taat 841

Query: 246 atc|at|ttttat|at|tctcta|aatat|ctgaa|agcact|ctttg|taaact|ctggc|ctgtg|c|ttt 305

Sbjct: 840 atc|at|ttttat|at|tctcta|aatat|ctgaa|agcact|ctttg|taaact|ctggc|ctgtg|c|ttt 781

Query: 306 atact|gttct|atc|gttgg|tttca|agatt|tctg|acctgt|cttcat|ggc|gaaac|attg|atac 365

Sbjct: 780 atact|gttct|atc|gttgg|tttca|agatt|tctg|acctgt|cttcat|ggc|gaaac|attg|atac 721

Query: 366 atcc|atttcc|gtgat|ctcaat|cgatact|ccaag|cgataa|aatat|ttttt|caatt|gctt|c|tt 425

Sbjct: 720 atcc|atttcc|gtgat|ctcaat|cgatact|ccaag|cgataa|aatat|ttttt|caatt|gctt|c|tt 661

Query: 426 taattcatccatggaagaatgatagatattgatatggcattgcatcccaataaccgtctac 485
|||||
Sbjct: 660 taattcatccatggaagaatgatagatattgatatggcattgcatcccaataaccgtctac 601

Query: 486 tggaaatccctttctctttaagttctttgattagtttaaagattttatcccgcttgattgg 545
|||||
Sbjct: 600 tggaaatccctttctctttaagttctttgattagtttaaagattttatcccgcttgattgg 541

Query: 546 attggtttcattataatcgttataaaacagtttagcctctggcatctcttgcttcgcaag 605
|||||
Sbjct: 540 attggtttcattataatcgttataaaacagtttagcctctggcatctcttgcttcgcaag 481

Query: 606 gagaaatgccctttctatataatcattccctaaccctgaagccaactggattctcttaa 665
|||||
Sbjct: 480 gagaaatgccctttctatataatcattccctaaccctgaagccaactggattctcttaa 421

Query: 666 aaatccatctaatttatcctctatcgcttcgtttactacatctacactataacaatcctt 725
|||||
Sbjct: 420 aaatccatctaatttatcctctatcgcttcgtttactacatctacactataacaatcctt 361

Query: 726 tccataaccgcttacctagcatatggatagatttgatagcctttcctctaaccctcctt 785
|||||
Sbjct: 360 tccataaccgcttacctagcatatggatagatttgatagcctttcctctaaccctcctt 301

Query: 786 cgtagtatctaaaaataccattcaggcgtttggttggtgccaactaaagtatgcattct 845
|||||
Sbjct: 300 cgtagtatctaaaaataccattcaggcgtttggttggtgccaactaaagtatgcattct 241

Query: 846 cattttcagttcattatcttttgcaaactgcacaatcgatatctgctttttcgaactgata 905
|||||
Sbjct: 240 cattttcagttcattatcttttgcaaactgcacaatcgatatctgctttttcgaactgata 181

Query: 906 ttccttctctctgggacaaagatta-aaaaattcctctca-tttcacatgttaaagaatt 963
|||||
Sbjct: 180 ttccttctctctgggacaaagattagaaaacttcatctcattttcacatgttatagatt 121

Query: 964 aaaatgatcccttatttactccccctgtgtccttatcgttgaaacctttccctgctgcc 1023
|||||
Sbjct: 120 aaaatgatcccttatttactccccctgtgtccttatcgttg-aagcgttactgctgcc 62

Query: 1024 caataagg 1031
|||||
Sbjct: 61 caataagg 54

#####

Query: 727 ccagaaaattataacgttgtagaagggttcttattcaacaaatccttatgatggagctgta 786
|||||
Sbjct: 661 ccagaaaattataacgttgtagaagggttcttattcaacaaatccttatgatggagctgta 720

Query: 787 agagtgaagaatttaagacattagccaatcgcttcatgagaatggacttcgtgtcatt 846
|||||
Sbjct: 721 agagtgaagaatttaagacattagccaatcgcttcatgagaatggacttcgtgtcatt 780

Query: 847 atggatgttgctataaccatacaatgaaaacagaaaaatccaatttcaataaaattgtt 906
|||||
Sbjct: 781 atggatgttgctataaccatacaatgaaaacagaaatccaatttcaataaaattgtt 840

Query: 907 ccagattactattatcgtaaaagttgaaaataaattttcagatgcttctgcttgccggaa 966
|||||
Sbjct: 841 ccagattactattatcgt-aaagttggagataaattttcagatgcttctgcttg-cggga 898

Query: 967 aggaaacagcttccaagcgtttgaagggtccaaaagtttatttgagattctattatcta 1025
|
Sbjct: 899 atgaaacagcttccgagcgtttgatggg-ccgaaagtttattgtagattctattatcta 956

#####

Query= HR0ADKBY82ZF10_2331C1P17_1.SCF 1355 0 1355 SCF

>cphy2331 reverse

Query: 65 gtgtaatggatagtgatcttaatggatggatggatgatgatctttcacaagaacatgca 124
|||||
Sbjct: 1998 gtgtaatggatagtgatcttaatggatggatggatgatgatctttcacaagaacatgca 1939

Query: 125 agagattggttcaacttctaccgttggtccttttacttcatagagaggctccacaccga 184
|||||
Sbjct: 1938 agagattggttcaacttctaccgttggtccttttacttcatagagaggctccacaccga 1879

Query: 185 attatttccatcaatatagacggtccaatcactctcaggaagtcttatcgttacttttc 244
|||||
Sbjct: 1878 attatttccatcaatatagacggtccaatcactctcaggaagtcttatcgttacttttc 1819

Query: 245 ctcagaagaattataaataacacatagcgtcttatctactaaatcaccttgaataagata 304
|||||
Sbjct: 1818 ctcagaagaattataaataacacatagcgtcttatctactaaatcaccttgaataagata 1759

Query: 305 ggatatgacgtcctctctttcctctggtaagaaagttaaccgctttgatatctcttttgc 364
|||||
Sbjct: 1758 ggatatgacgtcctctctttcctctggtaagaaagttaaccgctttgatatctcttttgc 1699

Sbjct: 1311 tggcatctcgtcaccatcgccacttcccatctgagcattttcaactacaatatttttgaa 1252

Query: 425 agtaattccacttatcgctgcatcatctgcattatgaactgatattacaggcttatggaa 484
|||||

Sbjct: 1251 agtaattccacttatcgctgcatcatctgcattatgaactgatattacaggcttatggaa 1192

Query: 485 gttatgaagcaccgtaatatctcaaatgtgatatcagagataaaagcattctctcgttt 544
|||||

Sbjct: 1191 gttatgaagcaccgtaatatctcaaatgtgatatcagagataaaagcattctctcgttt 1132

Query: 545 gcctttattcgtttcatatccaacctccatagactgcgcaaaatccgtccatagctgcat 604
|||||

Sbjct: 1131 gcctttattcgtttcatatccaacctccatagactgcgcaaaatccgtccatagctgcat 1072

Query: 605 attttcaaactttatattttttgagttatcatcataatttttaattaccaagaatcatc 664
|||||

Sbjct: 1071 attttcaaactttatattttttgagttatcatcataatttttaattaccaagaatcatc 1012

Query: 665 ccagcttcgaacaaaaccatttttaacgggtgtaatcttggcaggactgtaaagtatacc 724
|||||

Sbjct: 1011 ccagcttcgaacaaaaccatttttaacgggtgtaatcttggcaggactgtaaagtatacc 952

Query: 725 atccccatttggccttgaggatataatttttatattatctatagtaccgtttttagaatt 784
|||||

Sbjct: 951 atccccatttggccttgaggatataatttttatattatctatagtaccgtttttagaatt 892

Query: 785 aatgcctgacataaccaagcattcggatttaataactataatatctttaatcgtgatgtt 844
|||||

Sbjct: 891 aatgcctgacataaccaagcattcggatttaataactataatatctttaatcgtgatgtt 832

Query: 845 ctcgcagttatcaaactttaatggatgtatgcttctttcccttccatccattaaatta 904
|||||

Sbjct: 831 ctcgcagttatcaaactttaatggatgtatgcttctttcccttccatccattaaattt 772

Query: 905 aaaaccatcgataattcctcttccggaacggggaaattcttagcaaaaattaacatttac 964
| ||||| ||||| || ||||| ||||| |||||

Sbjct: 771 agaaccatcgataattcctcttccggaacgggtgatattcttagcaaaaattagcatttac 712

Query: 965 tatgcatgaatttacagnnnnnnngaaaaatatagggtttgattatccccaaaaataa 1024
||||| ||||| || ||||| ||||| ||||| |||||

Sbjct: 711 tatgcatgaa-ttacagcaccaccgagatatatagtgtttgattatcctcaagaataa 653

Query: 1025 aggtttcaaaattccatt 1042
| ||||| |||||

Sbjct: 652 tgttttcaatattccatt 635

#####

Sbjct: 601 |||tcaacatgggaaacaattcctcagccatgctgggatacaatgaaatatggtggaacgaat 660

Query: 728 ggtttcctcgacttattcactggcgatagttcctatgcacagcaatttaagtatacggat 787

Sbjct: 661 |||ggtttcctcgacttattcactggcgatagttcctatgcacagcaatttaagtatacggat 720

Query: 788 gcaccagatgctgatgcaagagcaattcaggctgcttattgggcaagtgaatgggcgaaa 847

Sbjct: 721 |||gcaccagatgctgatgcaagagcaattcaggctgcttattgggcaagtgaatgggcgaaa 780

Query: 848 gattatggtgtaaagtctgatacttattcctcaaacctacgatgatggcgattatctc 907

Sbjct: 781 |||gattatggtgtaaagtctgatacttattcatcaaaagctacgatgatggcgattatctt 840

Query: 908 cgttattcctgttttgataaatattnnnnnnnngg-aatttcacagttgctgggaaa 966

Sbjct: 841 |||cgttattcctgttttgataaatattnnnnnnnngg-aatttcacagttgctgggaaa 900

Query: 967 ggaaataatgcatcaaataatctggtatccgggtattatggcttggggcgggtggaattac 1026

Sbjct: 901 |||ggaaataatgcatcaaataatctggtatccgggtattatggcttggggcgggtggaattac 959

Query: 1027 agctgatggggcatgggggttttgggatctagccctaaacccttgggttatcaaaatcc 1086

Sbjct: 960 |||agctgatggggcat-ggggtatttgggatctagccat-aaccactt-ggttatcaaaatcc 1016

#####

Query= HR0ADKBY82ZG08_3368C3P17_1.SCF 1390 0 1390 SCF

>Cphy3368 reverse

Query: 66 gtgtaatggatagtgatcttaatggtgatggtgatgatgtggttcgataccccaattaag 125

Sbjct: 2718 |||gtgtaatggatagtgatcttaatggtgatggtgatgatgtggttcgataccccaattaag 2659

Query: 126 ttttccacttatataagcagttgccttgttccaatcaacataggagttaccgctgctatt 185

Sbjct: 2658 |||ttttccacttatataagcagttgccttgttccaatcaacataggagttaccgctgctatt 2599

Query: 186 aaatgaataatccccagctctgggtataattagaccagtcagtttttgagaatctaccttg 245

Sbjct: 2598 |||aaatgaataatccccagctctgggtataattagaccagtcagtttttgagaatctaccttg 2539

Query: 246 aacttcgattccctgtcctgcctttaaagaaccagcaccacttgtaaataccaatctcaag 305

Sbjct: 2538 |||aacttcgattccctgtcctgcctttaaagaaccagcaccacttgtaaataccaatctcaag 2479

Query: 306 ataataatctgctccagtccttggagttgccatctttacaaaagttccggtaacattact 365
|||||
Sbjct: 2478 ataataatctgctccagtccttggagttgccatctttacaaaagttccggtaacattact 2419

Query: 366 gcttccaatcgatgaccaatcacaccagaaactctggctcttctcaccatcaattgtata 425
|||||
Sbjct: 2418 gcttccaatcgatgaccaatcacaccagaaactctggctcttctcaccatcaattgtata 2359

Query: 426 gtagtaacgaagctttacatcagaaagattaataactattagagcctgtatttacaagata 485
|||||
Sbjct: 2358 gtagtaacgaagctttacatcagaaagattaataactattagagcctgtatttacaagata 2299

Query: 486 aaaacgaggtgcaattccattcgttgttgactagtatttccattgaacatctgaacctt 545
|||||
Sbjct: 2298 aaaacgaggtgcaattccattcgttgttgactagtatttccattgaacatctgaacctt 2239

Query: 546 aacatctcctactaccacaactactgttgtatccacaacggttactacaaaaggttttgt 605
|||||
Sbjct: 2238 aacatctcctactaccacaactactgttgtatccacaacggttactacaaaaggttttgt 2179

Query: 606 ataagaattgctaaaattaaaagtaattgtagtatcaccaagtggtaatgtagataggaa 665
|||||
Sbjct: 2178 ataagaattgctaaaattaaaagtaattgtagtatcaccaagtggtaatgtagataggaa 2119

Query: 666 ttctttcttaaggactactgtagtaccattaacagtatagtctgtatttaaagtcagagg 725
|||||
Sbjct: 2118 ttctttcttaaggactactgtagtaccattaacagtatagtctgtatttaaagtcagagg 2059

Query: 726 tgtagtacctttacttaagttaacaaaaggataaccttgattgataatgttgtactaag 785
|||||
Sbjct: 2058 tgtagtacctttacttaagttaacaaaaggataaccttgattgataatgttgtactaag 1999

Query: 786 atctgcttgTTTTcctacagctttatcaaaggaaccatttgtaggattaatattagcata 845
|||||
Sbjct: 1998 atctgcttgTTTTcctacagctttatcaaaggaaccatttgtaggattaatattagcata 1939

Query: 846 atcagtattgccagaaccattctcataaaggagtgcataaccaccattggcaagcgcta 905
|||||
Sbjct: 1938 atcagtattgccagaaccattctcataaaggagtgcata-caccatttgcaagcgcta 1880

Query: 906 catcacactgaccccaaatctaagaaaaataactcctggtgacttattactc 958
|||||
Sbjct: 1879 catcacactgagccagaatctatgatataataactcctggtgacttattactc 1827

#####

Query: 486 ttgataatatgggcaaagtgcattataaaattccattgctctgtcaccacggccaagttc 545
 |||
 Sbjct: 2028 ttgataatatgggcaaagtgcattataaaattccattgctctgtcaccacggccaagttc 1969

Query: 546 acattcagcagcccatgcccatggatttgggtgactaaaaattgctccattttcttttaa 605
 |||
 Sbjct: 1968 acattcagcagcccatgcccatggatttgggtgactaaaaattgctccattttcttttaa 1909

Query: 606 tccaggataaacacgggtaacaaatccaatgcatcatcaggcactgtataggaaggagc 665
 |||
 Sbjct: 1908 tccaggataaacacgggtaacaaatccaatgcatcatcaggcactgtataggaaggagc 1849

Query: 666 attcagtaaaattccatatggagtataaaatgctcatatacactatccatagctttgag 725
 |||
 Sbjct: 1848 attcagtaaaattccatatggagtataaaatgctcatatacactatccatagctttgag 1789

Query: 726 acctttttcttcggtagctgcaccggataatacagcccaagagttagactctaagtgaat 785
 |||
 Sbjct: 1788 acctttttcttcggtagctgcaccggataatacagcccaagagttagactctaagtgaat 1729

Query: 786 cttaccttctttatcatttattgtaccaannnnnnnaccgtttttcgtaattccacggat 845
 |||
 Sbjct: 1728 cttaccttctttatcatttattgtaccaattttttaccgtttttcgtaattccacggat 1669

Query: 846 aaaccattcctgatcccataattctttattacatacttctttacatgatcgggctaaagc 905
 |||
 Sbjct: 1668 aaaccattcctgatcccataattctttattacatacttctttacatgatcgggctaaagc 1609

Query: 906 tgtgtatttctgtacatcctcttcacgatttaaaaacttcgcaagagaaaataaaattatt 965
 |||
 Sbjct: 1608 tgtgtatttctgtacatcctcttcacgatttaaaaacttcgcaagagagataaaattatt 1549

Query: 966 aagaaccagtaatgca 982
 |||
 Sbjct: 1548 aagagccagtagtgca 1532

#####

Query= HR0ADKBY82ZH06_3862C1P16_1.SCF 1378 0 1378 SCF

>Cphy3862 forward

Query: 70 aaagaaggagataggatcATGtcaacaacagcatattccatggcgtctgatagcgacatc 129
 |||
 Sbjct: 1 aaagaaggagataggatcatgtcaacaacagcatattccatggcgtctgatagcgacatc 60

Query: 850 gccgtaggcaacgagggtaaagatacactttaggaccgggcatcgctcctgagtggcgat 909
|||||
Sbjct: 781 gccgtaggcaacgagggtaaagatacactttaggaccgggcatcgctcctgagtggcgat 840

Query: 910 tatacaggctccacaggcgtgaccaaattcccggccaacttccgcacaattagtaacaag 969
|||||
Sbjct: 841 tatacaggctcaacaggcgtgaccaaattcccggccgacttcggcacaattagtacagag 900

Query: 970 acatggaagatgtagtataaccaccccgaagggtgttctgaacgaaaacctaaga 1029
|||||
Sbjct: 901 acatggaagatgtagtataa-ccacaccgga-ggtggtctgaacgagacactaaaga 958

Query: 1030 ccatccaccttccgtttccttgtaaa 1055
|||||
Sbjct: 959 gcatcga-cttccgtttcgttgtaaa 983

#####

Query= HR0ADKBY82ZH06_3862C1P17_1.SCF 1415 0 1415 SCF

>cphy3862 reverse

Query: 66 gtgtaatggatagtgatcttaatggatggatggatgctcttcaataataactttaat 125
|||||
Sbjct: 7329 gtgtaatggatagtgatcttaatggatggatggatgctcttcaataataactttaat 7270

Query: 126 tgacttcttcataccatctacatttacataaatccaatctgtttttgcagaaacggcctt 185
|||||
Sbjct: 7269 tgacttcttcataccatctacatttacataaatccaatctgtttttgcagaaacggcctt 7210

Query: 186 aactgttgcagttgtacttcttgattcttcttcacaactactccatcctttttactaga 245
|||||
Sbjct: 7209 aactgttgcagttgtacttcttgattcttcttcacaactactccatcctttttactaga 7150

Query: 246 catccagaggatgctatcttcatctaaaccatttacttttattttaaatactgcttcttc 305
|||||
Sbjct: 7149 catccagaggatgctatcttcatctaaaccatttacttttattttaaatactgcttcttc 7090

Query: 306 tcccactttcatatgcacagcactttccacaaattcaatggtcgcttttttaacagataa 365
|||||
Sbjct: 7089 tcccactttcatatgcacagcactttccacaaattcaatggtcgcttttttaacagataa 7030

Query: 366 ttttctagtataaaccttctgtgttccatcctgcattgtaacagtagccgtaataactat 425
|||||
Sbjct: 7029 ttttctagtataaaccttctgtgttccatcctgcattgtaacagtagccgtaataactat 6970


```

Sbjct 121 ACAGCACTTACAGGTTGGGAACCTCCAGTAGTTCCTGCACTATGGTCATTATATAGCGGT 180
Query 249 GGGACTACGCAAACCGTAGCTACACCTGCATTTAACCCGGCGGGTGGAACTATACTGCC 308
      |||
Sbjct 181 GGGACTACGCAAACCGTAGCTACACCTGCATTTAACCCGGCGGGTGGAACTATACTGCC 240
Query 309 TCGCAAAGCGTAAACAATTACCTGTTTCGACTTCCGGTAGTACTATCCGCTATACCTTGAAT 368
      |||
Sbjct 241 TCGCAAAGCGTAAACAATTACCTGTTTCGACTTCCGGTAGTACTATCCGCTATACCTTGAAT 300
Query 369 GGCAGTGAGCCTACCTCTTCTTCTACTGTCTATAGCGGAGCTATCTTGTTGCATCCACA 428
      |||
Sbjct 301 GGCAGTGAGCCTACCTCTTCTTCTACTGTCTATAGCGGAGCTATCTTGTTGCATCCACA 360
Query 429 ACCACAGTAAAAGCAAAGGCTTTCCTCTCTGGCATGAATGATTCTCAAACAGCTACTTCC 488
      |||
Sbjct 361 ACCACAGTAAAAGCAAAGGCTTTCCTCTCTGGCATGAATGATTCTCAAACAGCTACTTCC 420
Query 489 ACTTATACCATAAAATAAAAACGATACTGTAGCAACTCCTGTATTTTCTGTAGCGGAAGGA 548
      |||
Sbjct 421 ACTTATACCATAAAATAAAAACGATACTGTAGCAACTCCTGTATTTTCTGTAGCGGAAGGA 480
Query 549 ACCTATTATGGAAACATTGATGTTGTCCTTACCTGTGCAACAAGTAATGCAACAATTCAA 608
      |||
Sbjct 481 ACCTATTATGGAAACATTGATGTTGTCCTTACCTGTGCAACAAGTAATGCAACAATTCGA 540
Query 609 TATACTACAGATGGCACCCTCCTGTATCAACTTCAAAGGTATATACCGGTGCGATAGCA 668
      |||
Sbjct 541 TATACTACAGATGGCACCCTCCTGTATCAACTTCAAAGGTATATACCGGTGCGATAGCA 600
Query 669 GTTACAGCAACTACTACAATTAACCTATGCAACAGCTTCCAATCTGAAAGATTCCGCT 728
      |||
Sbjct 601 GTTACAGCAACTACTACAATTAACCTATGCAACAGCTTCCAATCTGAAAGATTCCGCT 660
Query 729 GTCGCAAGTGCAACATATACAATATCCAAAGAACCAAACAGGTCTTCCTACTCACATTCC 788
      |||
Sbjct 661 GTCGCAAGTGCAACATATACAATATC-AAAGAACCAAACAGGTCTTCCTACTCACAT-CC 718
Query 789 TGACTGGTTACTGGCAAAATTTTAAAAACGGCCCCAAATTGTTAAAAAATCATTGATGT 848
      |||
Sbjct 719 TGACTGGTTACTGGCAGAAATTTGATAA-CGGCGTAAGT-GTTTAAAAATCAGTGATGT 776
Query 849 TCCCACAAAAC-ACCATATAAAATTTCAAAAATTTTTGCTAAACCCACAACCACCGCCG 907
      |||
Sbjct 777 TCC-ACAAAAGCTACAATATAA-TTGCAATAGCTTTT-GCTGAAGCAACAACCACTGCC-G 832
Query 908 GGGAAAGTTACTTTTAACTTGATATCTAATTCTTGTTTCAAAGTTTAGCGGGCTAAACC 967
      |||
Sbjct 833 GTGAAGTTACTTTTAACTGGAT-TCTAAT-CTTGCTTCTAAGTT-AGGCGG-CTATACC 888
Query 968 CAAAAAGCAAATTTATACAATG 990
      |||
Sbjct 889 GAACA--GCAA-TTTAT-CAATG 907

```

> cphy1799 reverse

```

Query 67 GTGTAATGGATAGTGATCTTAATGGTGATGGTGATGATGCGGAAGAGTCTTTAATTTTGC 126

```

Sbjct	1632	 GTGTAATGGATAGTGATCTTAATGGTGATGGTGATGATGCGGAAGAGTCTTTAATTTTGC	1573
Query	127	ACCAACTGTATTGGAAAAATCATAATTATTGCTGGCATCCCAATTGATGGACCAGGTCAT	186
Sbjct	1572	 ACCAACTGTATTGGAAAAATCATAATTATTGCTGGCATCCCAATTGATGGACCAGGTCAT	1513
Query	187	TGCACCACGTAGTGTAGGGTATGTCTTAGGTGGTTTATAAGAACCACCGTTGGTACCTTT	246
Sbjct	1512	 TGCACCACGTAGTGTAGGGTATGTCTTAGGTGGTTTATAAGAACCACCGTTGGTACCTTT	1453
Query	247	TGTAAGGCAATCAAGAGCTGCATTTACAACACTTGGTGCAACATAGCCGCTACCAGCTCC	306
Sbjct	1452	 TGTAAGGCAATCAAGAGCTGCATTTACAACACTTGGTGCAACATAGCCGCTACCAGCTCC	1393
Query	307	CTTTGTGGAAGCAGGCAATCCAAGACCAACCTGATCGGGACGTAGTCCATTTTCTAGTTG	366
Sbjct	1392	 CTTTGTGGAAGCAGGCAATCCAAGACCAACCTGATCGGGACGTAGTCCATTTTCTAGTTG	1333
Query	367	AATAGCTGCCAAAGCAGTTATGAAATCCACAGAGCCTTGGGAGTATACCTTGCCATCCTG	426
Sbjct	1332	 AATAGCTGCCAAAGCAGTTATGAAATCCACAGAGCCTTGGGAGTATACCTTGCCATCCTG	1273
Query	427	ACCTAACATACTACCGGAGTTATAGTACTGAGTATTCACAACAGTTAAAATATCCTTGAT	486
Sbjct	1272	 ACCTAACATACTACCGGAGTTATAGTACTGAGTATTCACAACAGTTAAAATATCCTTGAT	1213
Query	487	ATTCAATGCTACCTGGAAATAACCTGAGTTTACAGACTGCATGTCAAGAGTCTGAGGGGC	546
Sbjct	1212	 ATTCAATGCTACCTGGAAATAACCTGAGTTTACAGACTGCATGTCAAGAGTCTGAGGGGC	1153
Query	547	CATTGTAATAATTAGTCCAGAACCAGCTTTTGTGGATAGTTGGCGTAATGCAGAAGTCAT	606
Sbjct	1152	 CATTGTAATAATTAGTCCAGAACCAGCTTTTGTGGATAGTTGGCGTAATGCAGAAGTCAT	1093
Query	607	GTAGGTTGCATTGATTCCGTTTTCTAAGTCAATATCTACACCGTCAAATCCGTATTTTAC	666
Sbjct	1092	 GTAGGTTGCATTGATTCCGTTTTCTAAGTCAATATCTACACCGTCAAATCCGTATTTTAC	1033
Query	667	CATGAGTGCATATACACTGTTAGCAAAATTAGTAGCTGAGGTCGTATTATTTACACTTAC	726
Sbjct	1032	 CATGAGTGCATATACACTGTTAGCAAAATTAGTAGCTGAGGTCGTATTATTTACACTTAC	973
Query	727	AGTACCGTTTTACCACCTACAGAAATGATTACCTTCTGGCCCTTTGCCTTAGCTGCTGC	786
Sbjct	972	 AGTACCGTTTTACCACCTACAGAAATGATTACCTTCTGGCCCTTTGCCTTAGCTGCTGC	913
Query	787	TATGTCATTGATAAATTGCTGTTTCGGTATAGCCGCCTAACTTAGAAGCAAGATTAGAATC	846
Sbjct	912	 TATGTCATTGATAAATTGCTGTTTCGGTATAGCCGCCTAACTTAGAAGCAAGATTAGAATC	853
Query	847	CAGTTTAAAAGTAACTTCACCGGCAGTGGTTGTTGCTTCACCAAAAGCTATTGCAATTAT	906
Sbjct	852	 CAGTTTAAAAGTAACTTCACCGGCAGTGGTTGTTGCTTCACCAAAAGCTATTGCAATTAT	793
Query	907	ATTGTAACTTTGTGAAACATCACTGAATTTAAACACTTACCGCCCTTATCAAAATTCTG	966
Sbjct	792	 ATTGTAGCTTTGTGGAACATCACTGATTTTAAACACTTAGCGCCGTTATCAAAATTCTG	733


```

Query 788 AATCCCAATGACCCTTGTCCCTACTTCACCTGTTGACATTA AAAACAGGTATAATACGGGA 847
          ||||| ||||||||||||||||||||||||||||||||||||||| ||||||||||||||||| |
Sbjct 721 AATCCTAATGACCCTTGTCCCTACTTCACCTGTTGACATTAAGAACAGGTATAATACGG-A 779

Query 848 CTCCGCTATGAAAACCTTACAGCAGGTATATAAAATTCCTGCCGAGAACTGTTGGGTAG 907
          ||||||||||| ||||||||||||||||||||||||||||||||||| ||||||||||||| |||
Sbjct 780 CTCCGCTATGAAGACCTTACAGCAGGTATATAAGATTCCTGCCGAGAACTGTTGG-TAG 838

Query 908 GTCCCCCTTATTTATTCCAAAAGAAGGAAAGGGTGTACTgggggggAATCAACGGGGAT 967
          || ||||||||| ||||||||| || || ||||||||| || || || ||||||||| || ||
Sbjct 839 GTTCCCCTTATT-ATTCCAGAGGATGGAAAAGG-TGTTACTGGTGGAG--TCAACGGG-AT 893

Query 968 GGTAGGCAAAATGCAACTTGGAACCACCAACCGGTACCCTGGGAAAAATCCCCAATCC 1027
          || || ||||||||| || || || || || || || || || || || || || || || ||
Sbjct 894 G-TATGCAAA-TGCAACT-GGAGC-AGCAACCGG-TACC-TGGGATAA-TCCAC-AATCA 945

Query 1028 CCCAggggggggCAA 1041
          || ||| ||| ||| |||
Sbjct 946 CC-AGGTGGG-CAA 957

```

> cphy1800 reverse

```

Query 68 GTGTAATGGATAGTGATCCTAATGGTGATGGTGATGATGTTGTAATAACCCCAATGC 127
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 1911 GTGTAATGGATAGTGATCCTAATGGTGATGGTGATGATGTTGTAATAACCCCAATGC 1852

Query 128 TGGTACCACATCAGGGGTCCAGCCAGCCAAAGCTGTATGTGGCTGGATACATTTATAGGT 187
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 1851 TGGTACCACATCAGGGGTCCAGCCAGCCAAAGCTGTATGTGGCTGGATACATTTATAGGT 1792

Query 188 CTTTCCGCTATAGGTTACCAGATCACCTGCTTTATAAGCTGTTCCAATTGTCCAAGCAGT 247
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 1791 CTTTCCGCTATAGGTTACCAGATCACCTGCTTTATAAGCTGTTCCAATTGTCCAAGCAGT 1732

Query 248 TATTTGTGTAGAGCTGATTGTATAGGTTTGTGTGACCGTAGAGGAGCTAGTCATACCGGT 307
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 1731 TATTTGTGTAGAGCTGATTGTATAGGTTTGTGTGACCGTAGAGGAGCTAGTCATACCGGT 1672

Query 308 CATAAATGCCTTAGCCTTTATGGTTGTAGTGGAACCTACCGTAATAGGAGAAGAGTATAA 367
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 1671 CATAAATGCCTTAGCCTTTATGGTTGTAGTGGAACCTACCGTAATAGGAGAAGAGTATAA 1612

Query 368 AGCAGAGGTAGCTGTAGGTTCCGTACCATCTGTAGTATAACGAATTTCCGCTCCTTGGGT 427
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 1611 AGCAGAGGTAGCTGTAGGTTCCGTACCATCTGTAGTATAACGAATTTCCGCTCCTTGGGT 1552

Query 428 TGCACAGGTAATGGTTACCGTCTGAGCACTTGAATAAGTTCCTCCCGCTGGGCTAAATAC 487
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 1551 TGCACAGGTAATGGTTACCGTCTGAGCACTTGAATAAGTTCCTCCCGCTGGGCTAAATAC 1492

Query 488 CGGTGTTGCTACTGTCTGGGTATTACCTATTGTATAAACAACCGTTGTTGTTAACGAGCT 547
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 1491 CGGTGTTGCTACTGTCTGGGTATTACCTATTGTATAAACAACCGTTGTTGTTAACGAGCT 1432

Query 548 GTTCATACCACTCTTAAATGCTTTTGTCTTTTAAAGGTTGTTGTAGTATTTACTGTAAGAGC 607
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 1431 GTTCATACCACTCTTAAATGCTTTTGTCTTTTAAAGGTTGTTGTAGTATTTACTGTAAGAGC 1372

```

```

Query 608 AGAAGAGTAAAGAGCAGAAGAAGCCGTAGGTTCCGGTACCGTCTTTAGTATAACGAATTTTC 667
          |||
Sbjct 1371 AGAAGAGTAAAGAGCAGAAGAAGCCGTAGGTTCCGGTACCGTCTTTAGTATAACGAATTTTC 1312

Query 668 AGCTCCGGAAGTTGCACAGGTAATAGTCACTGTCTGAGCATTAGTGTAAGTACCACCTGC 727
          |||
Sbjct 1311 AGCTCCGGAAGTTGCACAGGTAATAGTCACTGTCTGAGCATTAGTGTAAGTACCACCTGC 1252

Query 728 CGGACTAAATACTGGTGTGCTACTGTCTGTGTTGTACTACCAATTAATTTCTGGAAAGC 787
          |||
Sbjct 1251 CGGACTAAATACTGGTGTGCTACTGTCTGTGTTGTACTACCAATTAATTTCTGGAAAGC 1192

Query 788 AAGTGTGTTAATTCAAATACTGGTATCCCCTGAGATTTCCCATACAATTAACCGCC 847
          |||
Sbjct 1191 AAGTGTGTTAATTCAAATACTGGTATCCCCTGAGATTTCCCATACAATTAACCGCC 1132

Query 848 ATATCCGTTACTGTTAATATAATCACATCTTGCACTTAAGGAAGTGGTATCTTCATAGCT 907
          |||
Sbjct 1131 ATATCCGTTACTGTTAATATAATCACATCTTGCACTTAAGGAAGTGGTATCTTCATAGCT 1072

Query 908 AAATACAATTTCCCTGAGATGCGTTATATAACCCAAGGCGTCCTTTTGC - TAGGTGTCGT 966
          |||
Sbjct 1071 AAGTACAATT - CCCTGAGATGCGTTATATAACC - AAGGCGTC - TTT - GCATAGGTGTCGT 1016

Query 967 CCCCAATATTTACAAAAATCCTTTTTGGTTTCTCCATGGTCCTTTAAGGGGAAATAAAGG 1026
          |||
Sbjct 1015 CGCGA - TATTTACAAA - TCCATTTGGTT - CTCCATGGTC - TTTAAGGTGAAATAA - GG 961

Query 1027 AAAATTGCCACCCTGGTGAATTGTGGGAATATCCCAGG 1065
          |||
Sbjct 960 ATA - TTGCCACC - TGGTGA - TTGTGG - ATTATCCCAGG 926

```

###

cphy0601 forward

Query= B01_601C2P16_1.SCF

>cphy_0601

```

Query: 71 aaagaaggagataggatcATGcaatTTgagattgataaagacaaattggagaaatggtgt 130
          |||
Sbjct: 1 aaagaaggagataggatcatgcaatTTgagattgataaagacaaattggagaaatggtgt 60

Query: 131 aaaactggaatTTtagtactTTccatcatcttagttatagcggtaggagttatTTtTgt 190
          |||
Sbjct: 61 aaaactggaatTTtagtactTTccatcatcttagttatagcggtaggagttatTTtTgt 120

Query: 191 ccaaagattattgcgaaagcagcaggagagaaacgagaactaccgatttattgtgtacag 250
          |||
Sbjct: 121 ccaaagattattgcgaaagcagcaggagagaaacgagaactaccgatttattgtgtacag 180

Query: 251 acagagaaaaaacaagttgcattatcctTTgatgcagcctgggggaatgaagatactgca 310

```



```

|||||
Sbjct: 181 acagagaaaaaacaagttgcattatcctttgatgcagcctgggggaatgaagatactgca 240

Query: 311 cggatactagaaatattaaagaacaaaatgttaatgtcacatTTTTTatgaccggtggc 370
|||||
Sbjct: 241 cggatactagaaatattaaagaacaaaatgttaatgtcacatTTTTTatgaccggtggc 300

Query: 371 tgggttgaaaaataccctgatgatgtaaaagcaatagcggcagccggtcatgatttggga 430
|||||
Sbjct: 301 tgggttgaaaaataccctgatgatgtaaaagcaatagcggcagccggtcatgatttggga 360

Query: 431 aaccatagtgaaaaccataagcagatgtcaaagctttcaaaagagcagtcggtaaaggaa 490
|||||
Sbjct: 361 aaccatagtgaaaaccataagcagatgtcaaagctttcaaaagagcagtcggtaaaggaa 420

Query: 491 ataatgtcaccgcatgataaggttaaagcacttactggtaaggatagcaactTTTTtaga 550
|||||
Sbjct: 421 ataatgtcaccgcatgataaggttaaagcacttactggtaaggatagcaactTTTTtaga 480

Query: 551 ccacctttcggtgactataataataaccttgattcaagcaacaaaagaatgtgggtattac 610
|||||
Sbjct: 481 ccacctttcggtgactataataataaccttgattcaagcaacaaaagaatgtgggtattac 540

Query: 611 tgtattcaatgggatgtggattccctagattggaagactacggaaaagatagcattcct 670
|||||
Sbjct: 541 tgtattcaatgggatgtggattccctagattggaagactacggaaaagatagcattcct 600

Query: 671 aaacaagtcttaataataaacatctaggaaatggttccatttatactttgccataatgg 730
|||||
Sbjct: 601 aaacaagtcttaataataaacatctaggaaatggttcca-ttatactttgccataatgg 659

Query: 731 tgcctaatttaccgagaccattggaagaattaattgtagggttaaagataaaggtta 790
||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Sbjct: 660 tgctaaatttaccgagacgcattggaagaattaattgtagggttaaagataaaggtta 719

Query: 791 tgaaatcgtgcctatttctaattgatctacacagagaatTTTgaaatggattcttgagg 850
||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Sbjct: 720 tgaaatcgtgcctatttctaagttgatctacacagagaatTTTgagatgga-tcatga-g 777

Query: 851 ggaagaaaggtaacaaaagcttcatccccatca-cattaagaattactatccatt 903
||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Sbjct: 778 ggaagacaggtaacagaagcatcatcacatcaccattaag-atcactatccatt 830
=====

```

Cphy0601 reverse

Query= HR0ADKBY98ZB01_601C2P17_1.SCF

Query: 728 cacaataaatcggtagttctcgttttctctcctgctgctttcgcaataatctttggnnn 787
|||||
Sbjct: 175 cacaataaatcggtagttctcg-tttctctcctgctgctttcgcaataatctttggaaca 117

Query: 788 nnntaaactcctaccgctataactaaaatgatggaaagtactaaaatttccagttttaca 847
|||||
Sbjct: 116 aaataaaactcctaccgctataactaaagatgatggaaagtactaaaa-ttccagttttaca 58

Query: 848 cccttttctccaatttgtctttaacaatcccaaattgc 885
|||
Sbjct: 57 -ccatttctccaatttgtctttatcaatctcaaattgc 21

=====
Cphy0666 forward

Query= HR0ADKBY98ZE01_666C2P16_1.SCF 1

>cphy_0666

Query: 70 aaagaaggagataggatcATGaaatcatttataaaaagaattaattgaacagaaggaaggt 129
|||||
Sbjct: 1 aaagaaggagataggatcatgaaatcatttataaaaagaattaattgaacagaaggaaggt 60

Query: 130 aattatattttaccttttttctggcagcatggagagagtgaaggaagcttcgggagtat 189
|||||
Sbjct: 61 aattatattttaccttttttctggcagcatggagagagtgaaggaagcttcgggagtat 120

Query: 190 atggaggcaatccatagctgcggtattcgtgcagtctgtggtgaggccagaccccatccg 249
|||||
Sbjct: 121 atggaggcaatccatagctgcggtattcgtgcagtctgtggtgaggccagaccccatccg 180

Query: 250 gattatcttggaccgggctggtggcatgatttggatatcattattgatgaagctaagaaa 309
|||||
Sbjct: 181 gattatcttggaccgggctggtggcatgatttggatatcattattgatgaagctaagaaa 240

Query: 310 agggatatgaagttatggattctggatgatgcacattttcctaccggctatgccgctggg 369
|||||
Sbjct: 241 agggatatgaagttatggattctggatgatgcacattttcctaccggctatgccgctggg 300

Query: 370 aaaatcgccgagtcagaagataaatactgtaagcagtatattagccggaagtttatcgat 429
|||||
Sbjct: 301 aaaatcgccgagtcagaagataaatactgtaagcagtatattagccggaagtttatcgat 360

Query: 430 gtcagcggtcctacacctgaggttgaggttaatcttgccgctatgatgatgccgatcatg 489
|||||
Sbjct: 361 gtcagcggtcctacacctgaggttgaggttaatcttgccgctatgatgatgccgatcatg 420

Query: 490 ctaccctccggattaaatcttgaaatgtttggtatgagctcggagaagaagcgctatntt 549
|||||
Sbjct: 421 ctaccctccggattaaatcttgaaatgtttggtatgagctcggagaagaagcgctatntt 480

Query: 550 acagatgacagaatcttgtccatccgtgcatatcagatggataaggactcctccctgata 609
|||||
Sbjct: 481 acagatgacagaatcttgtccatccgtgcatatcagatggataaggactcctccctgata 540

Query: 610 ggagaaggaatcgatctttaccacgaaaattgtgaatggaaaattaatatgggacgtttc 669
|||||
Sbjct: 541 ggagaaggaatcgatc-ttaccacgaacattgtgaatggaaaattaatatgggacg-ttc 598

Query: 670 ccaaggtacctggaaaattaatgctctctttattactagaaatggtgagggcgctgcg 729
|||||
Sbjct: 599 ccaaggtacctggagaattaatgctctctttattactagaaatggtgagggcgctgcg 658

Query: 730 actaaatcataaggggggataaggattccggtaaaacccgaatagatgcggtgtatgaac 789
|||||
Sbjct: 659 actatatcaatatggaggataaggattcctgtagaatccagatagatgcggtgtatgaac 718

Query: 790 ct cattatgagcttttacaagaagaatnttggaaaaatgattgcaggcttcttttcgg 849
|||||
Sbjct: 719 ct cattatgagc-attacaagaagaa-tttggaaaacgattgcaggctt-cttttcgg 775

Query: 850 a 850
|
Sbjct: 776 a 776

=====

Cphy0666 reverse

Query= HR0ADKBY98ZE01_666C2P17_1.SCF

>cphy_0666

Query: 66 gtgtaatggatagtgatCTTAatggatggatgatgattccagattccacactacc 125
|||||
Sbjct: 2748 gtgtaatggatagtgatcttaatggatggatgatgattccagattccacactacc 2689

Query: 126 tacgataaccgtcggctctgttatctttgaatagaacatcagggaacgcatatcctgggg 185
|||||
Sbjct: 2688 tacgataaccgtcggctctgttatctttgaatagaacatcagggaacgcatatcctgggg 2629

Query: 186 aagggattttaccttccgggtccagggttgtggcaacctcaatccttatatggttctctcc 245
|||||
Sbjct: 2628 aagggattttaccttccgggtccagggttgtggcaacctcaatccttatatggttctctcc 2569

Query: 246 ggctcttaatgcttctcccaaaggaaactgatatggcggacagattttcattccaagaca 305
 |||
 Sbjct: 2568 ggctcttaatgcttctcccaaaggaaactgatatggcggacagattttcattccaagaca 2509

Query: 306 gtggccattcagccaaacttcagcgcctcatagacatctgtaatattaagtagctccct 365
 |||
 Sbjct: 2508 gtggccattcagccaaacttcagcgcctcatagacatctgtaatattaagtagctccct 2449

Query: 366 gccggttgccattctatcatagacaaactcactttcataacgtaaataagccgaaaaatc 425
 |||
 Sbjct: 2448 gccggttgccattctatcatagacaaactcactttcataacgtaaataagccgaaaaatc 2389

Query: 426 aggtaatacccggcccatgctttttaactccgtcgttaacttctacaggttgaaactcagg 485
 |||
 Sbjct: 2388 aggtaatacccggcccatgctttttaactccgtcgttaacttctacaggttgaaactcagg 2329

Query: 486 atatttactgacttcggcactggagatgcgccatgctgcgtccagtctgtatccaggctt 545
 |||
 Sbjct: 2328 atatttactgacttcggcactggagatgcgccatgctgcgtccagtctgtatccaggctt 2269

Query: 546 agcctcgaaattgccttggctctccacctccttcagatcctcaaacagagcaaccacact 605
 |||
 Sbjct: 2268 agcctcgaaattgccttggctctccacctccttcagatcctcaaacagagcaaccacact 2209

Query: 606 ttgatagggtgtaataatctaataatgatgcttgttccgtccttcggtatttctatattctgc 665
 |||
 Sbjct: 2208 ttgatagggtgtaataatctaataatgatgcttgttccgtccttcggtatttctatattctgc 2149

Query: 666 cggaattatcctgttgtccctagcatcatataagctaacctcaccttttgatttcccggt 725
 |||
 Sbjct: 2148 cggaattatcctgttgtccatagcatcatataagctaacctcaccttttgatttcccggt 2089

Query: 726 tatccagccattgtattccttaccgaaactttcattggaaaacatatatagctcctggtc 785
 |||
 Sbjct: 2088 tatccagccattgtattccttaccgataactttcattggagaacatatatagctc--tgtc 2031

Query: 786 tgctccttacggtaatggtaataaccaactccatcaaaatggattgtcactgcctgatt 845
 |||
 Sbjct: 2030 tgctccttacggtaatggtaataacgcagc--ccatc--aaattgattgtcactg-ctga-t 1975

Query: 846 ttcaaataatttg 858
 |||
 Sbjct: 1974 ttcaaataatttg 1962

###

Cphy0769 forward

Query= G01_769C1P16_1.SCF

>cphy_0769

Query: 72 aaagaaggagataggatcATGattaaaaattacgtttatgggtgcgggaagtaccatattt 131
|||||
Sbjct: 1 aaagaaggagataggatcatgattaaaaattacgtttatgggtgcgggaagtaccatattt 60

Query: 132 gcaaggaatgtattaggagattgtatgtgcaccgaagcgctttgtgaaagcgagatagcc 191
|||||
Sbjct: 61 gcaaggaatgtattaggagattgtatgtgcaccgaagcgctttgtgaaagcgagatagcc 120

Query: 192 ttatatgacattgatgctgaacggctttcagattctaaaataatattggacgcaatcaac 251
|||||
Sbjct: 121 ttatatgacattgatgctgaacggctttcagattctaaaataatattggacgcaatcaac 180

Query: 252 aaaaatgtaaacgagggaaaggctgttataaaaacttatttaggagtggaaaatagaaag 311
|||||
Sbjct: 181 aaaaatgtaaacgagggaaaggctgttataaaaacttatttaggagtggaaaatagaaag 240

Query: 312 gctgctttaaagggtgcaagctttgtggtcaatgccatccaggtaggcggttacgatcct 371
|||||
Sbjct: 241 gctgctttaaagggtgcaagctttgtggtcaatgccatccaggtaggcggttacgatcct 300

Query: 372 agtactattatagattttgagataccgaagaaattcggctctacgccagaccattgctgac 431
|||||
Sbjct: 301 agtactattatagattttgagataccgaagaaattcggctctacgccagaccattgctgac 360

Query: 432 aactaggcatcggcggcattatgagaggactacgcacaattccagtcattcaggaattt 491
|||||
Sbjct: 361 aactaggcatcggcggcattatgagaggactacgcacaattccagtcattcaggaattt 420

Query: 492 gctgcagatatggaggagatgtgccagacgccctattcctcaattatacgaatcccac 551
|||||
Sbjct: 421 gctgcagatatggaggagatgtgccagacgccctattcctcaattatacgaatcccac 480

Query: 552 gccattctgactggctatatgcagcgttataccaatatccgtacgggtggcctctgccac 611
|||||
Sbjct: 481 gccattctgactggctatatgcagcgttataccaatatccgtacgggtggcctctgccac 540

Query: 612 agtgtccagggtgtgttcagagcatctcttaaaggacccttggcatggatgataaagctgg 671
|||||
Sbjct: 541 agtgtccagggtgtgttcagagcatctcttaaaggacccttggcatggatgat-aagctgg 598

Query: 672 agggccgtaaggagctgattgctggaatttaacatattgggatggttggtaaaagatac 731

Sbjct: 599 agggccgtaaggagctgattgctggaa-ttaaccata-tgggatggtt-gttaagatac 655

Query: 732 agggaaagatatggtaatgacctgtatcccctgaaaatttaataaaaagagctgttgtcaag 791

Sbjct: 656 a-ggatagatatggtaatgacctgtat-cctgaaa--ttaaaaaagagctgttgtcaag 711

Query: 792 aactctaactttccccacataaaaagaattggttaaggatgaatacatcaaccagtttg 851

Sbjct: 712 aactcta--cttccccacat-aaagatatggtt-aggtatgaatacatcaa-ccagtttg 766

Query: 852 gatatt 857

Sbjct: 767 gatatt 772

=====
Cphy0769 reverse

Query= G07_769C1P17_1.SCF

>cphy_0769

Query: 67 gtgtaatggatagtgatCTTAatggatggatgatgattggaattccgcatgtaatc 126

Sbjct: 1377 gtgtaatggatagtgatcttaatggatggatgatgattggaattccgcatgtaatc 1318

Query: 127 cccatgagctgcaattagctcatcacacatacagcggatatcagagatattcaattctgc 186

Sbjct: 1317 cccatgagctgcaattagctcatcacacatacagcggatatcagagatattcaattctgc 1258

Query: 187 agctgtgtgaggatctagcatggcagcttgataaatatggctacgatctttggttactgc 246

Sbjct: 1257 agctgtgtgaggatctagcatggcagcttgataaatatggctacgatctttggttactgc 1198

Query: 247 tgcttctatagtcaaaaagctggacattaatattggtcatgttcatagcagccagttgaac 306

Sbjct: 1197 tgcttctatagtcaaaaagctggacattaatattggtcatgttcatagcagccagttgaac 1138

Query: 307 aggtaggcgaccacatggcatggcgtgattccattaccatccacaagacaaggaacctc 366

Sbjct: 1137 aggtaggcgaccacatggcatggcgtgattccattaccatccacaagacaaggaacctc 1078

Query: 367 cacgcaggcatctgagggaaagattgtcaattaaaccgttgtttaacacattgcctccgat 426

Sbjct: 1077 cacgcaggcatctgagggaaagattgtcaattaaaccgttgtttaacacattgcctccgat 1018

Query: 427 gacataaggtttgggtgacaattgcttccatgatataggaggcatattcagcagatcg 486

Sbjct: 1017 ||| gacataagggtttggttgacaaattgcttccatgatataggaggcatattcagcagatcg 958

Query: 487 tgtatgggtaatctgaccatthttgcaggattccgacctthttctgcctcccattctgcaat 546

Sbjct: 957 tgtatgggtaatctgaccatthttgcaggattccgacctthttcagcctcccattctgcaat 898

Query: 547 ctgcttgatgcagcgacgaggatattcatccaggggaatgccataaccgtcaatcatctc 606

Sbjct: 897 ctgcttgatgcagcgacgaggatattcatccaggggaatgccataaccgtcaatcatctc 838

Query: 607 aggatatctgtthtttgataaaaagcggattatactccgattgtgttcgcttgattcggt 666

Sbjct: 837 aggatatctgtthtttgataaaaagcggattatactccgattgtgttcgcttgattcggt 778

Query: 667 gcaattatatccaaaactgggatggagtatttcatacctaaccatatcttgatgtggggaa 726

Sbjct: 777 gcagtaatatccaaaact-gggtgatgta-ttcatacctaaccatatctttatgtggggaa 720

Query: 727 gtaaagttcttgacaacagctc 748

Sbjct: 719 gtagagttcttgacaacagctc 698

=====

Cphy0776 forward

Query= D02_776C3P16_1.SCF

>cphy_0776

Query: 70 aaagaaggagataggatcATGaaggaagcagaattaattcagaaaatagaagcaaaaatg 129

Sbjct: 1 aaagaaggagataggatcatgaaggaagcagaattaattcagaaaatagaagcaaaaatg 60

Query: 130 gthtttatgctggaacattthgggagactgtgtgccatgggatggtaggacggcgatac 189

Sbjct: 61 gthtttatgctggaacattthgggagactgtgtgccatgggatggtaggacggcgatac 120

Query: 190 catggatggcaagaggattcctgggtcagtggtctthttggccagggatgctgtggattthg 249

Sbjct: 121 catggatggcaagaggattcctgggtcagtggtctthttggccagggatgctgtggattthg 180

Query: 250 tatgacttaacaggaagggagagttataagcaagcggcctgggagtgggatggcaggatc 309

Sbjct: 181 tatgacttaacaggaagggagagttataagcaagcggcctgggagtgggatggcaggatc 240

Query: 310 gagcagtgctattttaagaaattctaaccttcatcacgatgtggggtccagtttctacct 369
|||||
Sbjct: 241 gagcagtgctattttaagaaattctaaccttcatcacgatgtggggtccagtttctacct 300

Query: 370 acggcggatgatgaagtataagctgaccggagatgaggatggaagacgcaggggacttttt 429
|||||
Sbjct: 301 acggcggatgatgaagtataagctgaccggagatgaggatggaagacgcaggggacttttt 360

Query: 430 gcggccaattttctggcaggtcgctttaacctagcaggaagttttatccgggcgtggaat 489
|||||
Sbjct: 361 gcggccaattttctggcaggtcgctttaacctagcaggaagttttatccgggcgtggaat 420

Query: 490 ttagataagattggatggtctatcattgattctacatgaatttatcccttctattctgg 549
|||||
Sbjct: 421 ttagataagattggatggtctatcattgattctacatgaatttatcccttctattctgg 480

Query: 550 gcgtccaatgagacaaaagatcctaggttccgacaaattggcgtggcacaagcggagaca 609
|||||
Sbjct: 481 gcgtccaatgagacaaaagatcctaggttccgacaaattggcgtggcacaagcggagaca 540

Query: 610 gttttaaaagcactttatcaggccggatggatctgtttgtcacatactttcttttgacccc 669
|||||
Sbjct: 541 gttttaaaagcactttatcaggccggatggatctgtttgtcacatactttcttttgacccc 600

Query: 670 gagacaggagcattccttgagccattgggaggccaggatacgataaagattcttcatgg 729
|||||
Sbjct: 601 gagacaggagcattccttgagccattgggaggccaggatacgataaagattcttcatgg 660

Query: 730 agccgggggcaggccttgggcaatataatgggatgggctatgtataaccgttatacaggggat 789
|||||
Sbjct: 661 agccgggggcaggccttgggcaatataatgggatgggctatgtataaccgttatacaggggat 720

Query: 790 agacgatttttagatgccgcaagcgagtcgcccattatcttctgggcaaactctaaaag 849
|||||
Sbjct: 721 agacga-ttttagatgccgcaagcgagtcgcccattatcttct-ggcaaact- agag 777

Query: 850 gaaacgggaattccttgttgggattttcgtgttccac 886
|||||
Sbjct: 778 gaaacgggaattccttgttgggattttcgtgttccac 814

=====

Cphy0776 reverse

Query= D08_776C3P17_1.SCF

>cphy_0776

Query: 69 gtgtaatggatagtgatcTTAatggtgatggtgatgatgaaatactctgtggttccagcc 128
|||
Sbjct: 1149 gtgtaatggatagtgatcctaaggtgatggtgatgatgaaatactctgtggttccagcc 1090

Query: 129 gtgaagcttagctagtgctcctccaaataaaaaatagtctccatatattagtgacacatccac 188
|||
Sbjct: 1089 gtgaagcttagctagtgctcctccaaataaaaaatagtctccatatattagtgacacatccac 1030

Query: 189 ttgtgctcccttgggtttctctccggttccatgctttaaaggcctggtactctacttc 248
|||
Sbjct: 1029 ttgtgctcccttgggtttctctccggttccatgctttaaaggcctggtactctacttc 970

Query: 249 ttctaaagcaccgcaatgctctgtaaggctttcaagcaaacgcatagctgcctttcggtta 308
|||
Sbjct: 969 ttctaaagcaccgcaatgctctgtaaggctttcaagcaaacgcatagctgcctttcggtta 910

Query: 309 aaagctcccatcccactcgcttacttccgcaagttccaaaaggcctgaggcagcaatggc 368
|||
Sbjct: 909 aaagctcccatcccactcgcttacttccgcaagttccaaaaggcctgaggcagcaatggc 850

Query: 369 tcccgccgaggaatccaaggttcttttctctgtgtggaacacgaaaatccaacaagg 428
|||
Sbjct: 849 tcccgccgaggaatccaaggttcttttctctgtgtggaacacgaaaatccaacaagg 790

Query: 429 aattcccgtttcctctagatttgccagaaaataatgggcgactcgcttcgcgcatctaa 488
|||
Sbjct: 789 aattcccgtttcctctagatttgccagaaaataatgggcgactcgcttcgcgcatctaa 730

Query: 489 aaatcgctctatcccctgtataacggtatacattagccatcccatatattgcccaagcctg 548
|||
Sbjct: 729 aaatcgctctatcccctgtataacggtatacattagccatcccatatattgcccaagcctg 670

Query: 549 cccccggtccatgaagaatctttatcgatatccctggcctcccaatggctcaaggaatgc 608
|||
Sbjct: 669 cccccggtccatgaagaatctttatcgatatccctggcctcccaatggctcaaggaatgc 610

Query: 609 tcctgtctcgggtcaaaagaaagtatgtgacaaacagatccatccggcctgataaagtg 668
|||
Sbjct: 609 tcctgtctcgggtcaaaagaaagtatgtgacaaacagatccatccggcctgataaagtg 550

Query: 669 ctttaaaactgtctccgcttgtgccacgccaatttgtcggaacctaggatcttttgtctc 728
|||
Sbjct: 549 ctttaaaactgtctccgcttgtgccacgccaatttgtcggaacctaggatcttttgtctc 490

```
Query: 729 attggacgcccagaatagaagggataaaattcatggtaaaatcaatgatagaccatccaat 788
      |||
Sbjct: 489 attggacgcccagaatagaagggataaaattcatggtagaatcaatgatagaccatccaat 430

Query: 789 cttatctaaattccacgcccggataaaaacttcctgctaagttaaagcgaactgccagaaa 848
      |||
Sbjct: 429 cttatctaaattccacgcccggataaaaacttcctgctaggttaaagcgacctgccagaaa 370

Query: 849 aatggccgcaaaaaatcccctgcttccatcctcatctccggtcagcttatacttcat 908
      |||
Sbjct: 369 aatggccgcaaaaaagtcccctgcttccatcctcatctccggtcagcttatacttcat 310

Query: 909 cacc 912
      |||
Sbjct: 309 cacc 306
```

=====

Cphy0777 forward

Query= F02_777C2P16_1.SCF

>cphy_0777

```
Query: 73 aaagaaggagataggatcATGggtgaaatcaagtggatgcaggaccgggtctatggtttg 132
      |||
Sbjct: 1 aaagaaggagataggatcatgggtgaaatcaagtggatgcaggaccgggtctatggtttg 60

Query: 133 atggtacattatctaagccacataatgccgaaagaaggagagaaaaggcaaagtgggat 192
      |||
Sbjct: 61 atggtacattatctaagccacataatgccgaaagaaggagagaaaaggcaaagtgggat 120

Query: 193 gagatgactgctacatttccgatacaacaattctgtgatgcggtggcggactcaggagcc 252
      |||
Sbjct: 121 gagatgactgctacatttccgatacaacaattctgtgatgcggtggcggactcaggagcc 180

Query: 253 ggctgggtgatctttcccttgggtcagaatacgggatattattgttctgaaaatgccgtg 312
      |||
Sbjct: 181 ggctgggtgatctttcccttgggtcagaatacgggatattattgttctgaaaatgccgtg 240

Query: 313 ctggagcagtactggccaggaaaatgctcccaaagagacctgatgctagaactagctgag 372
      |||
Sbjct: 241 ctggagcagtactggccaggaaaatgctcccaaagagacctgatgctagaactagctgag 300

Query: 373 gcactttcagagcgggatattaagttaatagtctatctgccgtctgaggtggacgcagct 432
      |||
Sbjct: 301 gcactttcagagcgggatattaagttaatagtctatctgccgtctgaggtggacgcagct 360
```

Query: 433 ccagaagaagaacgtaaagcgctgggctgggaacaggattcccatgataaatcagtattt 492
|||||
Sbjct: 361 ccagaagaagaacgtaaagcgctgggctgggaacaggattcccatgataaatcagtattt 420

Query: 493 atggaacgctatatgggaattatccggtactggtcacaaaaattcgggaagctggtttct 552
|||||
Sbjct: 421 atggaacgctatatgggaattatccggtactggtcacaaaaattcgggaagctggtttct 480

Query: 553 ggatggtggtttgatggttgctattacgcatgggagaagacctttacaagaactcatagc 612
|||||
Sbjct: 481 ggatggtggtttgatggttgctataacgagggagaagacctttacaagaactcatagc 540

Query: 613 tgggataacacccgattcgattatgtgctgctgggcatatggcagcccgggatgggcaatc 672
|||||
Sbjct: 541 tgggataacacccgattcgattatgtgctgct-ggcagatggcagcccgggat-ggcaatc 598

Query: 673 ctgatgccttgattgctaattgtgtccaggagcgggaagacatgaaatatggtatttcggga 732
|||||
Sbjct: 599 ctgatgccgtgattgct-atgtgtccaggagcggaggacatgagatatg-tatttcggga 656

Query: 733 tcaggatttacctggccgagaaaggcaattactctgaa 770
|||||
Sbjct: 657 tcagga-ttacctggccg-gagaggcaaataactctgaa 692

=====

Cphy0777 reverse

Query= F08_777C2P17_1.SCF

>cphy_0777

Query: 68 gtgtaatggatagtgatcTTAatggtgatggtgatgatgtcctgtaattctagaattctc 127
|||||
Sbjct: 1002 gtgtaatggatagtgatcctaaggtgatggtgatgatgtcctgtaattctagaattctc 943

Query: 128 tatgtttttcttcacttccctaactctgttccaatgttttttcagccataactccatcttc 187
|||||
Sbjct: 942 tatgtttttcttcacttccctaactctgttccaatgttttttcagccataactccatcttc 883

Query: 188 atagattcccacattccaggatgtagcgcctttttgctgctggcactggagtgcgaaatc 247
|||||
Sbjct: 882 atagattcccacattccaggatgtagcgcctttttgctgctggcactggagtgcgaaatc 823

Query: 248 cgtcacctcttggtcagaaaacctaggcggcacgatctctcctggctccttaccgtgcat 307
|||||
Sbjct: 822 cgtcacctcttggtcagaaaacctaggcggcacgatctctcctggctccttaccgtgcat 763

Query: 308 ccagaaacagtccagccataccagacagtgccactgcatgccgtcgatcagcggtccttc 367
 |||
 Sbjct: 762 ccagaaacagtccagccataccagacagtgccactgcatgccgtcgatcagcggtccttc 703

Query: 368 attttaaagattcagagatattgcctctccggccaggtaatcctgatccccgaaatacata 427
 |||
 Sbjct: 702 attttaaagattcagagatattgcctctccggccaggtaatcctgatccccgaaatacata 643

Query: 428 tctcatgtcctccgctcctggacacatagcaatcacggcatcaggattgccatcccgggc 487
 |||
 Sbjct: 642 tctcatgtcctccgctcctggacacatagcaatcacggcatcaggattgccatcccgggc 583

Query: 488 tgccatctgccagcgcaaataatcgaatcgggtgttatcccagctatgagttcttgtaa 547
 |||
 Sbjct: 582 tgccatctgccagcgcaaataatcgaatcgggtgttatcccagctatgagttcttgtaa-aa 524

Query: 548 aggtcttctcccctgcgttataacaacatcaaacaccatccagaaaccagcttcccga 607
 |||
 Sbjct: 523 aggtcttctcccctgcgttataagcaaacatcaaacaccatccagaaaccagcttcccga 464

Query: 608 atttttgtgacctgtaccggataattcccatatagcgttcccataaatactgatttacc 667
 | |||
 Sbjct: 463 a-tttttgtgaccagtaccggataattcccatatagcgtt-ccataaatactgatttacc 406

Query: 668 atgggaatcctgtttccagccatcgctttaaatttcttcttctggaactgcgttcacct 727
 |||
 Sbjct: 405 atgggaatcctgttcccagccagcgtt-acgttcttcttctggaactgcgttcacct 347

Query: 728 caaacggcaaatataactattaac 750
 || |||
 Sbjct: 346 cagacggcagatagactattaac 324

=====

Cphy1169 forward

Query= A03_1169C2P16_1.SCF

>cphy_1169

Query: 72 aaagaaggagataggatcATGaaagcaaaacttactttatcaaagattagtaagatagga 131
 |||
 Sbjct: 1 aaagaaggagataggatcatgaaagcaaaacttactttatcaaagattagtaagatagga 60

Query: 132 accatagacaaaagaatttatggctcctttattgagcatctaggaagagcagtatacggc 191
 |||
 Sbjct: 61 accatagacaaaagaatttatggctcctttattgagcatctaggaagagcagtatacggc 120

Query: 192 ggtattttatgaaccagggtcatgaaacttcagatgacatgggatttcgtcaggatgtaatg 251
|||||
Sbjct: 121 ggtattttatgaaccagggtcatgaaacttcagatgacatgggatttcgtcaggatgtaatg 180

Query: 252 gaattgattaaagaattaaatattccaatcgttcgttatccagggtggaatTTTTGTATCA 311
|||||
Sbjct: 181 gaattgattaaagaattaaatattccaatcgttcgttatccagggtggaatTTTTGTATCA 240

Query: 312 ggctatcgttggaagatggtattggagataatgcaagagaccaaggcgtcttgacctt 371
|||||
Sbjct: 241 ggctatcgttggaagatggtattggagataaggcaagagaccaaggcgtcttgacctt 300

Query: 372 gcttgaagagcattgagacaaatgaggttggtgtagatgagtttcaagaatggcgaaa 431
|||||
Sbjct: 301 gcttgaagagcattgagacaaatgaggttggtgtagatgagtttcaggaatggcgaaa 360

Query: 432 cgtgccaatagtgatggttatgatggctgtaaatctaggtaccagaggaccacaagaagcg 491
|||||
Sbjct: 361 cgtgccaatagtgatggttatgatggctgtaaatctaggtaccagaggaccacaagaagcg 420

Query: 492 catgatttaatttgagtattgtaattttcaaggaggaacttattactgttgacttatgaa 551
|| |
Sbjct: 421 caggatttaa-ttgagtattgtaattttcaaggaggaacttattacag-tgacttaagaa 478

Query: 552 gaaagaacggatttgagaagccatttgatatttcagtttggtgcttatgttatgagatgg 611
|||||
Sbjct: 479 gaaagaacggatttgagaagccatttgatattaaagtttggtgcttaggtaatgagatgg 538

Query: 612 atggactctgtctaacctgtgctaactgtataagaatatgggagaattg 662
|||||
Sbjct: 539 atggacatggcaaacctgtgctaagacagcagaagaatacgggagaattg 589

=====

Cphy1169 reverse

Query= A09_1169C2P17_1.SCF

>cphy_1169

Query: 66 gtgtaatggatagtgatCTTAatggtgatggtgatgatgcaatgaaaaacgaattacatt 125
|||||
Sbjct: 1554 gtgtaatggatagtgatcttaatggtgatggtgatgatgcaatgaaaaacgaattacatt 1495

Query: 126 ccaagaataaggctttaacgtagctattgCGGTATTTTCTCTATTTTTGTAactccagt 185
|||||
Sbjct: 1494 ccaagaataaggctttaacgtagctattgCGGTATTTTCTCTATTTTTGTAactccagt 1435

Query: 186 tgcaactaggaactacattcttaggattgcttgagcatttcgtagcttttaaatcagcatg 245
|||
Sbjct: 1434 tgcaactaggaactacattcttaggattgcttgagcatttcgtagcttttaaatcagcatg 1375

Query: 246 aatcatctcagtatgctccaccaatgctcattctgaaactctgttaaatcaattgaaa 305
|||
Sbjct: 1374 aatcatctcagtatgctccaccaatgctcattctgaaactctgttaaatcaattgaaa 1315

Query: 306 atcaatggtttgatctgaggagcatttacagcaaacactacaacctcattctttcttc 365
|||
Sbjct: 1314 atcaatggtttgatctgaggagcatttacagcaaacactacaacctcattctttcttc 1255

Query: 366 attatgtactgcaactgcttctacataaggcttctcactgattttattctcataagt 425
|||
Sbjct: 1254 attatgtactgcaactgcttctacataaggcttctcactgattttattctcataagt 1195

Query: 426 ctgcactcctaagattggttttaaggcggctaccctaccataatgatacgtgcataaa 485
|||
Sbjct: 1194 ctgcactcctaagattggttttaaggcggctaccctaccataatgatacgtgcataaa 1135

Query: 486 tggatagaaaattggttgagccaagcagctccaccattctctgtcataataggagcaat 545
|||
Sbjct: 1134 tggatagaaaattggttgagccaagcagctccaccattctctgtcataataggagcaat 1075

Query: 546 aacatttactaattgagcaagacacgcatctttaaagcggtcacaatgtttaaaccagt 605
|||
Sbjct: 1074 aacatttactaattgagcaagacacgcatctttaaagcggtcacaatgtttaaaccagt 1016

Query: 606 cgattagcaaacatcccactaacaagcatcttcaaagtgtagacatcctctaaataaa 665
|||
Sbjct: 1015 cgattagcaaacatcccactaacaagcatcttcaaagtgtagacatcctct-aaataaa 957

Query: 666 ctaggagcttgcccaaggctctatcctcttatctttgacctgactaatggaaccata 725
|||
Sbjct: 956 ctaggagcttgcccaaggctctatcctcttatc-ttgacctgact-atggaaccata 899

Query: 726 cattccactcatcaaaggaaagattgatggctttttaaaatgctttttccctttcaaag 785
|||
Sbjct: 898 cattccactcatcaaaggaaagattgatggcttttttagaatgctttttcgctttcacag 839

Query: 786 aatcacaaaattgctactaccgattcaataaagggtttcattcttctaattgatttaagct 845
|||
Sbjct: 838 aatcacaaaattgctactaccgattc-aaataaagggtttccat--ctctaattgatt-agct 783

Query: 846 nnnnnncatctggattcattttcataatttattatagtagctgggttgaggggaaatat 905

Sbjct: 782 aagaaaaacatctgga-tcattttcataa-ttattatagtactgg--tgca-gggaaatat 728

Query: 906 aatcaacttaaccaatagg-atgttctaatacccgcacgtccccaatcctccaaaggtag 964

Sbjct: 727 aatcaacataatc-ataggatgttctaata-ccgtacgttcccaat-ctccaaaggtag 671

Query: 965 gctttgttaaaccaaaactaaccacaagc 993

Sbjct: 670 gcattgttaaaccagaact-accacaagc 643

=====

Cphy1612 forward

Query= HR0ADKBY98ZC02_1612C2P16_1.SCF

>cphy_1612

Query: 66 aaagaaggagataggatcATGagtactaacattgacctaatacgaaagtagtggatggta 125

Sbjct: 1 aaagaaggagataggatcatgagtactaacattgacctaatacgaaagtagtggatggta 60

Query: 126 gaatccgcatatgtgaagtggatgcctatggacgggtagacggatattgtagcgtatggt 185

Sbjct: 61 gaatccgcatatgtgaagtggatgcctatggacgggtagacggatattgtagcgtatggt 120

Query: 186 aagggtgcttatgaagaggataccgcttatgttaagttagataatgaattaataagaaaa 245

Sbjct: 121 aagggtgcttatgaagaggataccgcttatgttaagttagataatgaattaataagaaaa 180

Query: 246 tatccaacttactatagggcggatgccgtagggcttgacagcaggtatttatgtcattaa 305

Sbjct: 181 tatccaacttactatagggcggatgccgtagggcttgacagcaggtatttatgtcattaa 240

Query: 306 gttgtccctgttatatctgggatagaagttgaggagagtgacagagtaactggtacttta 365

Sbjct: 241 gttgtccctgttatatctgggatagaagttgaggagagtgacagagtaactggtacttta 300

Query: 366 tttgtatcagcacatacaagagaaggttttgcattttcagagttttcaacgtacaaaaca 425

Sbjct: 301 tttgtatcagcacatacaagagaaggttttgcattttcagagttttcaacgtacaaaaca 360

Query: 426 ggatccggtggttataataacgatggaactgtagagatggtgcacagattgtttatcta 485

Sbjct: 361 ggatccggtggttataataacgatggaactgtagagatggtgcacagattgtttatcta 420

Query: 486 accaatgaaaataaggatactgttaccttgggcgtaaacacaggtagcaaggaggaaact 545
 |||
 Sbjct: 421 accaatgaaaataaggatactgttaccttgggcgtaaacacaggtagcaaggaggaaact 480

Query: 546 tgtaccggtattgttgacatthttgtcaaagagagaaaagggaaaagatttaaggccactt 605
 |||
 Sbjct: 481 tgtaccggtattgttgacatthttgtcaaagagagaaaagggaaaagatttaaggccactt 540

Query: 606 atcatacgtatcattggaaaagtagaaactcctgctggagtgagtggttctttgttaaat 665
 |||
 Sbjct: 541 atcatacgtatcattggaaaagtagaaactcctgctggagtgagtggttctttgttaaat 600

Query: 666 ataaagaaaacttccaacgtaacattagaaggatcggagacgatgcaacagtctatggc 725
 |||
 Sbjct: 601 ataaagaaaacttccaacgtaacattagaaggatcggagacgatgcaacagtctatggc 660

Query: 726 tggggtattctagttcgaaaaggtaaaaacattgaaattagaaacttagggatcatgtgg 785
 |||
 Sbjct: 661 tggggtattctagttcgagaaggtaaaaacattgagattagaaacttaggaatcatgtgg 720

Query: 786 tttggtgatgatgcagtttcattggacacctaataaaatgagaaatatttgggttcttaac 845
 |||
 Sbjct: 721 tttggtgatgatgcagtttcattggacac--taaaaatgag-aatatatgggttcataac 777

Query: 846 aatgattttatthttatgggaaaaccaggggagcgattct 885
 |||
 Sbjct: 778 aatga-tttatthttatgg--aaaacca-gggagcgattct 813

=====

Cphy1612 reverse

Query= HR0ADKBY98ZC02_1612C2P17_1.SCF

>cphy_1612

Query: 65 gtgtaatggatagtgatCTAatggtgatggtgatgatgthttataaacttgactttggt 124
 |||
 Sbjct: 4182 gtgtaatggatagtgatcttaatggtgatggtgatgatgthttataaacttgactttggt 4123

Query: 125 tttgatagaaaagtaatttgccatthttatctttcacactaacaacgacataatcttccc 184
 |||
 Sbjct: 4122 tttgatagaaaagtaatttgccatthttatctttcacactaacaacgacataatcttccc 4063

Query: 185 tacagattthtgctgatactacagcggthtaatttaccattatthttgccaacgatagcaat 244
 |||
 Sbjct: 4062 tacagattthtgctgatactacagcggthtaatttaccattatthttgccaacgatagcaat 4003

Query: 245 atctcgctttgtagttttccatacaattttcttcattttctatagccattgacttccaatgt 304
|||||
Sbjct: 4002 atctcgctttgtagttttccatacaattttcttcattttctatagccattgacttccaatgt 3943

Query: 305 aatgagtttttatcacctatcaccatggatgaagctgccctcttaaacgtaatgctcgc 364
|||||
Sbjct: 3942 aatgagtttttatcacctatcaccatggatgaagctgccctcttaaacgtaatgctcgc 3883

Query: 365 ttcatttactgtgacttgttgttgtaattgctttgtttaccgtctgacaaagtaactgt 424
|||||
Sbjct: 3882 ttcatttactgtgacttgttgttgtaattgctttgtttaccgtctgacaaagtaactgt 3823

Query: 425 aatataaattatgggtttttcctttactcttaccaacaatctttccagtttgacttactat 484
|||||
Sbjct: 3822 aatataaattatgggtttttcctttactcttaccaacaatctttccagtttgacttactat 3763

Query: 485 agcaatcttggattaccagacttataactaagcatcatttcaccttcggaatattagt 544
|||||
Sbjct: 3762 agcaatcttggattaccagacttataactaagcatcatttcaccttcggaatattagt 3703

Query: 545 attggagcttgtaaagtcctttacaacttttagtgacttgggtaacgtaagcctacca 604
|||||
Sbjct: 3702 attggagcttgtaaagtcctttacaacttttagtgacttgggtaacgtaagcctacca 3643

Query: 605 ttccaatccattgttcctccaatataaatannnnnncggaatttacattaatctgatc 664
|||||
Sbjct: 3642 ttccaatccattgttcctccaatataaataatnttttttcggaatttacattaatctgatc 3583

Query: 665 aattaacgccactttcgggtgttggttcaggtgttggacttggttttacgtctggtactgg 724
|||||
Sbjct: 3582 aattaacgccactttcgggtgttggttcaggtgttggacttggttttacgtctggtactgg 3523

Query: 725 atctggtttccccctgggtgttggacttggctttacctctgggtgttggtttttgggtgta 784
|||||
Sbjct: 3522 atctggtttccccctgggtgttggacttggctttacctctgggtgttgg-ttttgggtgta 3464

Query: 785 cttcaggggttggcgttgggttcaggggtaggctctacaataacctcatcttataaaaactg 844
|||||
Sbjct: 3463 cttcaggggttggcgttgggttcaggggtaggctctacaataacctcatcttataaaaactg 3404

Query: 845 caccaataaaaaccgccattcgttgagaaagttgcctatttactaattctccttaattttg 904
|||||
Sbjct: 3403 caccaataaaaaccgccattcgttgagaaatgttgcataatttact-attctccttaa-tttg 3346

Query: 905 ca-aaaaccatgagtattaatggaacc 930

|| ||||||||||||||||||||||||
Sbjct: 3345 cagaaaacatgagtattaatggaacc 3319

=====
Cphy1640 forward

Query= HR0ADKBY98ZA02_1640C3P16_1.SCF

>cphy_1640

Query: 68 aaagaaggagataggatcATGacttggatcatcagctgaccaatgggctacatggagtaat 127
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 1 aaagaaggagataggatcatgacttggatcatcagctgaccaatgggctacatggagtaat 60

Query: 128 ggaggttatacgatttataataatgtatggggcagcgggtgcaggataccaatcaatctgg 187
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 61 ggaggttatacgatttataataatgtatggggcagcgggtgcaggataccaatcaatctgg 120

Query: 188 gctaatagctacagcaattgggggtgtatgggcgagcatcctaatacaggaggtataaaa 247
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 121 gctaatagctacagcaattgggggtgtatgggcgagcatcctaatacaggaggtataaaa 180

Query: 248 tcttatccaaatgtaactaagtgcgattggcaaacattatcttcgataaaaaccttaca 307
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 181 tcttatccaaatgtaactaagtgcgattggcaaacattatcttcgataaaaaccttaca 240

Query: 308 agtagttttaatgttaccaggccaagtagcggggcttatgaaagtgcttatgatatttg 367
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 241 agtagttttaatgttaccaggccaagtagcggggcttatgaaagtgcttatgatatttg 300

Query: 368 tcgaatggctcgtcttatgaaattatgttatggatgaattcatatggaagtgttgctccg 427
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 301 tcgaatggctcgtcttatgaaattatgttatggatgaattcatatggaagtgttgctccg 360

Query: 428 atatcttataattgggatgcttccggttaagcctgtaccagtctatacgaatcttagtcta 487
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 361 atatcttataattgggatgcttccggttaagcctgtaccagtctatacgaatcttagtcta 420

Query: 488 ggcggtcattcatggaatgtgtatcagggtagcaatggatcgaatccggtatattcattc 547
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 421 ggcggtcattcatggaatgtgtatcagggtagcaatggatcgaatccggtatattcattc 480

Query: 548 gtaagaacaagtagtacgaattccgggtacgggtcgatatattagctataacttaattggatt 607
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 481 gtaagaacaagtagtacgaattccgggtacgggtcgatatattagctataacttaattggatt 540

Query: 608 aatggtaaaggctggtttagtggaaactcaaacagttaatttagttcaatttggggttgag 667
|||||
Sbjct: 541 aatggtaaaggctggtttagtggaaactcaaacagttaatttagttcaatttggggttgag 600

Query: 668 attacttcatcaagtgccggatcagactttatctgcaatagttattctgtaaccagtaat 727
|||||
Sbjct: 601 attacttcatcaagtgccggatcagactttatctgcaatagttattctgtaaccagtaat 660

Query: 728 catcatcaccatcaccattaagatcactatccattacac 766
|||||
Sbjct: 661 catcatcaccatcaccattaagatcactatccattacac 699

=====

Cphy1640 reverse

Query= HR0ADKBY98ZA02_1640C3P17_1.SCF

>cphy_1640

Query: 66 gtgtaatggatagtgatCTAatggtgatggtgatgatgattactggttacagaataact 125
|||||
Sbjct: 699 gtgtaatggatagtgatcttaatggtgatggtgatgatgattactggttacagaataact 640

Query: 126 attgcagataaagtctgatccggcacttgatgaagtaatctcaaaccxaaattgaactaa 185
|||||
Sbjct: 639 attgcagataaagtctgatccggcacttgatgaagtaatctcaaaccxaaattgaactaa 580

Query: 186 attaactgtttgagttccactaaaccagcctttaccattaatccaattaagtatagctaa 245
|||||
Sbjct: 579 attaactgtttgagttccactaaaccagcctttaccattaatccaattaagtatagctaa 520

Query: 246 tatatcgaccgtaccggaattcgtactacttgttcttacgaatgaatataccggattcga 305
|||||
Sbjct: 519 tatatcgaccgtaccggaattcgtactacttgttcttacgaatgaatataccggattcga 460

Query: 306 tccattgctaccctgatacacattccatgaatgaccgcctagactaagattcgtatagac 365
|||||
Sbjct: 459 tccattgctaccctgatacacattccatgaatgaccgcctagactaagattcgtatagac 400

Query: 366 tggtagaggcttaccggaagcatccaattataagatatcggagcaacacttctatatga 425
|||||
Sbjct: 399 tggtagaggcttaccggaagcatccaattataagatatcggagcaacacttccatatga 340

Query: 426 attcatccataacataatttcataagacgagcattcgaccaaatatcataagcactttc 485
|||||
Sbjct: 339 attcatccataacataatttcataagacgagcattcgaccaaatatcataagcactttc 280

Query: 486 ataagccccgctacttggcctggtaacattaaaactactttgtaaggtttttatcgaaga 545
|||||
Sbjct: 279 ataagccccgctacttggcctggtaacattaaaactactttgtaaggtttttatcgaaga 220

Query: 546 taatgttttgccaatcgacttagttacatttggataagattttataacctcctgtattagg 605
|||||
Sbjct: 219 taatgttttgccaatcgacttagttacatttggataagattttataacctcctgtattagg 160

Query: 606 atgctgcgccatacaccccaattgctgtagctattagccagattgattggtatcctgc 665
|||||
Sbjct: 159 atgctgcgccatacaccccaattgctgtagctattagccagattgattggtatcctgc 100

Query: 666 accgctgccccatacattattataaatcgtataacctccattactccatgtagcccattg 725
|||||
Sbjct: 99 accgctgccccatacattattataaatcgtataacctccattactccatgtagcccattg 40

Query: 726 gtcagctgatgaccaagtcatgatcctatctccttcttt 764
|||||
Sbjct: 39 gtcagctgatgaccaagtcatgatcctatctccttcttt 1

=====

Cphy2028 forward

Query= C04_2028C3P16_1.SCF

>cphy_2028

Query: 69 aaagaaggagataggatcATGaattatcaaaatcctattattaggggattttatccggat 128
|||||
Sbjct: 1 aaagaaggagataggatcatgaattatcaaaatcctattattaggggattttatccggat 60

Query: 129 ccaagtgtatgctttgcaaatggtaaataattatttagtctgcagttccatgcagtat 188
|||||
Sbjct: 61 ccaagtgtatgctttgcaaatggtaaataattatttagtctgcagttccatgcagtat 120

Query: 189 cctggtgtacccttatttgaaagcgaggacttggtaaattggactcagattggccactgt 248
|||||
Sbjct: 121 cctggtgtacccttatttgaaagcgaggacttggtaaattggactcagattggccactgt 180

Query: 249 ctaacaagacctgatcagattgcattacaaggggtcagcagttcaggcggggttttgct 308
|||||
Sbjct: 181 ctaacaagacctgatcagattgcattacaaggggtcagcagttcaggcggggttttgct 240

Query: 309 ccttccatacgatattttgaaggctgattctacatgaccaccacgaactctaccactcag 368
|||||
Sbjct: 241 ccttccatacgatattttgaaggctgattctacatgaccaccacgaactctaccactcag 300

Query: 369 cagaannnnnngtttggacggatgatatctatggtgaatggtccgaccatattttcatt 428
||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct: 301 cagaatttttttgtttggacggatgatatctatggtgaatggtccgaccatattttcatt 360

Query: 429 gatcaggacggaatctatccatccctatttttcgaaaacggaaaagttattttatgagc 488
|||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Sbjct: 361 gatcaggacggaatcgatccatccctatttttcgaaaacggaaaagttattttatgagc 420

Query: 489 aacggatctgatgcagaggggaatatcaggtatcgtgcaatgtgaaatcgctatcgacaca 548
|||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Sbjct: 421 aacggatctgatgcagaggggaatatcaggtatcgtgcaatgtgaaatcgctatcgacaca 480

Query: 549 tgtaaaaagctttccccaagtaaaactatctggcagggttcagggtggtcgttattttaga 608
|||||||||||||||| |||||||||||||||||||||||||||||||||||||||||| |||||
Sbjct: 481 ggtaaaaagctttccccaagtaaaactatctggcagggttcagggtggtcgtta-tttaga 539

Query: 609 aggacccattttatataaaaatcaaagattattattatctggtagctgcaaagggaggta 668
|||||||| |||||||||||||||||||||||||||||||||||||| |||||||||
Sbjct: 540 aggacccca-tttatataaaaatcaaagattattattatctggtagctgcaaagggaggta 598

Query: 669 ctgaatatggtcatatggtcacctatggcagaagtacttctccttacggtcccctttaa 728
|||||||||||||||| |||||||||||||||||||||||||||||||||| ||||| ||
Sbjct: 599 ctgaatatggtcatatggtcacctatggcagaagtacttctccttacggt-cccctttaa 657

Query: 729 tcctaccctaccaatcccgtccttactaa-aataacctaggtgggttttcaattcaagg 787
|||||||| |||| |||||||||||||| || | |||||||||| ||| |||||||||
Sbjct: 658 gcctaccctagcaat-cccgtccttactaacagaaacctaggtgggttttcaattcaagg 716

Query: 788 tgtccggcatggtgaattgattgaaactcc 817
|||| |||||||||| ||||||||| ||||

=====

Cphy2028 reverse

Query= C10_2028C3P17_1.SCF

>cphy_2028

Query: 69 gtgtaatggatagtgatCTTAatggtgatggtgatgatggtcatgcaagtattcacatt 128
|||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Sbjct: 1551 gtgtaatggatagtgatcctaagtggtgatggtgatgatggtcatgcaagtattcacatt 1492

Query: 129 aaaatccttgaatttagcagtatttatggagttatgatcaagagcatataaaccaatgat 188
|||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Sbjct: 1491 aaaatccttgaatttagcagtatttatggagttatgatcaagagcatataaaccaatgat 1432

Query: 609 tatgtgatattaaatactcacatgatgtaagtaaaaatTTTTATTATCCAAGTAATGAA 668
|||||
Sbjct: 541 tatgtgatattaaatactcacatgatgtaagtaaaaatTTTTATTATCCAAGTAATGAA 600

Query: 669 aatttagaatcttctaaaaaatatatcaacgcagatggacacaagtaagtgaacgattt 728
|||||
Sbjct: 601 aatttagaatcttctaaaaaatatatcaacgcagatggacacaagtaagtgaacgattt 660

Query: 729 tcttcctatggagaaaagttattatttgaaggatgaacgaaccaatgcttgaggttct 788
|||||
Sbjct: 661 tcttcctatggagaaaagttattatttgaaggatgaacgaaccaatgcttgaggttct 720

Query: 789 aatttacgaatggtggttagatttatcaaagcctgagtgtaaagaagcaatcgaaagtat 848
|| |||||
Sbjct: 721 aa-ttacgaatggtggttagatttatcaaagcctgagtgtaaagaagcaatcgaaagtat 779

Query: 849 taatcaattaaatcaagaatttgttgataccgttcgcaaatcgaggagagaataactt 908
|||||
Sbjct: 780 taatcaattaaatcaggaatttgttgataccgttcgcaaatc-gggaggagagaataactt 838

Query: 909 ccaggttaacttctgataccagggtatgatggatcctctcaatatgcacttattaatgatt 968
| |||||
Sbjct: 839 ctaggatcttctgataccagggtatgatgatcgtctcaatatgcacttattaatgatt 898

Query: 969 ataaattaccnnnnnnntataaatggatcgTTAATTGTATCAATACCTGGCAAATCT 1028
|||||
Sbjct: 899 ataagttacaaaagataataaat-gatcgTTAATTGTATCAGTACAT-gcatact 956

Query: 1029 acctattgactttgccctaaaaagtccaaaaggaaaatggcag 1071
||| |||||
Sbjct: 957 accatattgactttgccctaaaaagtcc-aaaggaaatggcag 998

=====

Cphy2058 reverse

Query= D10_2058C1P17_1.SCF

>cphy_2058

Query: 69 gtgtaatggatagtgatCTTAatggtgatggtgatgatgTTCTGCGTATTTcattaaacc 128
|||||
Sbjct: 1359 gtgtaatggatagtgatcttaatggtgatggtgatgatgTTCTGCGTATTTcattaaacc 1300

Query: 129 ttgcaatatctcaggatattttatagtacaactctttctatcaaaaagaccgaagttttc 188
|||||
Sbjct: 1299 ttgcaatatctcaggatattttatagtacaactctttctatcaaaaagaccgaagttttc 1240

Query: 189 cccgtcccctttaaatgcatgattatcccaccagaagcatgtgattccattcgcttttg 248
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 1239 cccgtcccctttaaatgcatgattatcccaccagaagcatgtgattccattcgcttttg 1180

Query: 249 agcacctatataataagtagcatactctacccgagattctaaattatctttctttatctct 308
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 1179 agcacctatataataagtagcatactctacccgagattctaaattatctttctttatctct 1120

Query: 309 ggacacaaattcaccgataattacgggaactccattttttataaacttcatatataaact 368
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 1119 ggacacaaattcaccgataattacgggaactccattttttataaacttcatatataaact 1060

Query: 369 atttaaaaaagaatctatctccttagtacatccagctatttttgaattccattctgatat 428
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 1059 atttaaaaaagaatctatctccttagtacatccagctatttttgaattccattctgatat 1000

Query: 429 actgccactttcctttggacttttttagggcaaagtcatatggtagatatgcatgtactga 488
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 999 actgccactttcctttggacttttttagggcaaagtcatatggtagatatgcatgtactga 940

Query: 489 tacaattaaacgatcatttatattatcttttgtaacttataatcattaataagtgcata 548
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 939 tacaattaaacgatcatttatattatcttttgtaacttataatcattaataagtgcata 880

Query: 549 ttgagacgatgcatcataacctgggtatcagaagatacctagaagtattctctcctcccga 608
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 879 ttgagacgatgcatcataacctgggtatcagaagatacctagaagtattctctcctcccga 820

Query: 609 tttgCGAACGGTATCAACAAATTCCTGATTAATTGATTAATAACATTCGATTGCTTCTT 668
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Sbjct: 819 tttgCGAACGGTATCAACAAATTCCTGATTAATTGATTAATAACATTCGATTGCTTCTT 760

Query: 669 aactcaggcttttgataaaaatctaaccaccattcgtaattagaaacctgcaagccttg 728
 |||||||||| ||||| |||||||||||||||||||||| |||||||||| ||||||||
 Sbjct: 759 aactcaggc-tttgat-aaatctaaccaccattcgtaattag-aacctgcaagccttg 703

Query: 729 ttccgttcatcccttcaataataacttttctccattaggaagaaaatcgttcactttac 788
 || |||||||||||||||||||||||||||||| |||||||||| ||||||||
 Sbjct: 702 tt-cgttcatcccttcaataataacttttctcca-taggaagaaaatcgttcac-ttac 646

Query: 789 tttgtgtccatactgCGTTG 808
 ||||||||||||||||||||
 Sbjct: 645 -ttgtgtccatactgCGTTG 627

=====

Sbjct: 601 |||tattgatgcagggaaacaggaactatttcaccgaaggctgactttatcaagagaagtaag 660

Query: 730 gaaattgaatcggcattgattacttccatgaaggaaataactatcaagcttttccgttcc 789

Sbjct: 661 |||gaaattgaatcggcattgattacttccatgaaggaaataacagtcaagc-tttccgttcc 719

Query: 790 ttgcagagtagatgatatacaagcaggatggaatttaaactttcgccgaaaattagctgtt 849

Sbjct: 720 |||ttgcagagtagatgatatacaagcaggatgg-atttaaactttcgccg-aaattagctgtt 777

Query: 850 tccaagggggaagcgaccaataacaaggacagtgaatac 888

Sbjct: 778 |||tccaaggtggaagcgacaagtacaaggacagtgaatac 816

=====
Cphy2304 reverse

Query= H10_2304C2P17_1.SCF

>cphy_2304

Query: 68 gtgtaatggatagtgatCTTAatggatggatggatggcgtttctttttaaatacca 127

Sbjct: 3105 |||gtgtaatggatagtgatcttaatggatggatggatggcgtttctttttaaatacca 3046

Query: 128 gaataggactcctcctgcaagaacacagactgtagctatgccgaccataacatgcatt 187

Sbjct: 3045 |||gaataggactcctcctgcaagaacacagactgtagctatgccgaccataacatgcatt 2986

Query: 188 cccgctctcttttctgctacttctgcatattcgtaggtagctcttggatttcgtctcc 247

Sbjct: 2985 |||cccgctctcttttctgctacttctgcatattcgtaggtagctcttggatttcgtctcc 2926

Query: 248 ctttactgcatctttatcgcccttttattactgcatctttattctctagaagaactagtgt 307

Sbjct: 2925 |||ctttactgcatctttatcgcccttttattactgcatctttattctctagaagaactagtgt 2866

Query: 308 agattttgcgggcactttaattgttccacctgttatggtttctatgacatcggttcagc 367

Sbjct: 2865 |||agattttgcgggcactttaattgttccacctgttatggtttctatgacatcggttcagc 2806

Query: 368 agtatcttggtttactaatacatcccatgcatttgcagaaagtactacttcttttcttc 427

Sbjct: 2805 |||agtatcttggtttactaatacatcccatgcatttgcagaaagtactacttcttttcttc 2746

Query: 428 taatgttccattgaatattaatgcgatttctctaccatcttttaccgcatcatgaattcg 487

Sbjct: 2745 |||taatg|ttccattg|aatattaatg|c|g|at|tt|t|c|t|accat|c|t|t|t|accg|c|at|c|at|g|a|a|t|t|c|g| 2686

Query: 488 g|t|a|a|g|c|a|a|t|c|a|c|g|g|a|a|g|a|g|t|c|a|g|a|a|t|c|g|a|c|a|a|a|t|t|c|t|a|a|c|t|t|t|g|t|t|g|t|a|t|t|t|c|t|t|c|t|g|c| 547

Sbjct: 2685 |||g|t|a|a|g|c|a|a|t|c|a|c|g|g|a|a|g|a|g|t|c|a|g|a|a|t|c|g|a|c|a|a|a|t|t|c|t|a|a|c|t|t|t|g|t|t|g|t|a|t|t|t|c|t|t|c|t|g|c| 2626

Query: 548 t|g|t|c|t|g|c|a|t|a|c|g|g|a|a|t|g|c|a|t|c|g|t|a|a|g|t|t|t|t|c|t|a|a|g|a|g|c|g|a|t|t|a|a|t|c|c|t|t|t|g|t|a|a|t|a|t|t|c| 607

Sbjct: 2625 |||t|g|t|c|t|g|c|a|t|a|c|g|g|a|a|t|g|c|a|t|c|g|t|a|a|g|t|t|t|t|c|t|a|a|g|a|g|c|g|a|t|t|a|a|t|c|c|t|t|t|g|t|a|a|t|a|t|t|c| 2566

Query: 608 a|a|a|t|a|a|a|t|c|c|t|t|g|t|a|t|t|c|t|g|t|c|t|t|a|t|t|g|t|c|c|c|a|a|t|t|c|a|c|a|t|a|t|t|t|a|a|t|g|c|t|g|t|c|t|g|g|c|g| 667

Sbjct: 2565 |||a|a|a|t|a|a|a|t|c|c|t|t|g|t|a|t|t|c|t|g|t|c|t|t|a|t|t|g|t|c|c|c|a|a|t|t|c|a|c|a|t|a|t|t|t|a|a|t|g|c|t|g|t|c|t|g|g|c|g| 2507

Query: 668 a|c|t|g|a|t|a|t|g|a|a|t|t|a|t|c|a|t|t|t|c|c|c|t|t|c|t|t|t|g|c|c|t|a|g|c|c|a|t|t|t|t|c|t|t|c|c|c|c|c|t|g|c|t|t|g|g|a| 727

Sbjct: 2506 |||a|c|t|g|a|t|a|g|g|a|a|t|t|a|t|c|a|t|t|t|c|c|c|t|t|c|t|t|t|g|t|c|c|t|a|g|c|c|a|t|t|t|c|t|t|c|c|c|c|t|g|c|t|t|g|g|a| 2450

Query: 728 a|a|a|a|c|g|g|a|a|t|t|c|c|t|t|g|g|g|a|a|g|t|c|a|g|g|a|c|a|a|t|t|t|g|c|c|g|c|c|g|a|c|a|a|t|t|t| 774

Sbjct: 2449 |||a|a|a|a|c|g|g|a|a|t|t|c|c|t|t|g|g|g|a|a|g|t|t|a|g|t|a|c|a|a|t|t|g|c|c|g|c|a|g|a|c|a|a|t|t|t| 2404

=====
Cphy2344 forward

Query= B05_2344C1P16_1.SCF

>cphy_2344

Query: 69 a|a|a|g|a|g|g|a|g|a|t|a|g|g|a|t|c|A|T|G|g|t|a|a|a|t|c|a|g|a|a|t|c|c|g|t|c|t|g|a|a|t|t|a|a|t|c|a|g|g|a|t|g|a|a|a|g|t| 128

Sbjct: 1 |||a|a|a|g|a|g|g|a|g|a|t|a|g|g|a|t|c|a|t|g|g|t|a|a|a|t|c|a|g|a|a|t|c|c|g|t|c|t|g|a|a|t|t|a|a|t|c|a|g|g|a|t|g|a|a|a|g|t| 60

Query: 129 c|a|a|a|a|g|g|a|a|a|g|g|a|a|g|a|a|a|c|g|a|t|g|a|t|g|a|a|g|g|c|a|c|a|c|c|g|g|a|a|g|t|g|t|c|t|c|a|g|g|a|t|g|a|a|a|c|t| 188

Sbjct: 61 |||c|a|a|a|a|g|g|a|a|a|g|g|a|a|g|a|a|a|c|g|a|t|g|a|t|g|a|a|g|g|c|a|c|a|c|c|g|g|a|a|g|t|g|t|c|t|c|a|g|g|a|t|g|a|a|a|c|t| 120

Query: 189 a|a|g|g|c|a|g|t|a|t|t|c|c|t|t|a|t|g|a|c|t|a|t|g|t|a|c|a|g|a|a|t|t|t|a|a|a|t|a|a|a|t|t|g|a|t|g|a|a|a|c|t|a|c|c|g|t| 248

Sbjct: 121 |||a|a|g|g|c|a|g|t|a|t|t|c|c|t|t|a|t|g|a|c|t|a|t|g|t|a|c|a|g|a|a|t|t|t|a|a|a|t|a|a|a|t|t|g|a|t|g|a|a|a|c|t|a|c|c|g|t| 180

Query: 249 a|a|t|t|t|t|t|a|t|g|a|a|a|t|a|t|t|c|g|t|t|t|a|c|t|c|t|t|t|t|a|t|g|a|c|a|g|c|a|c|g|g|t|g|a|c|g|g|c|a|t|t|g|g|a|g|a|t| 308

Sbjct: 181 |||a|a|t|t|t|t|t|a|t|g|a|a|a|t|a|t|t|c|g|t|t|t|a|c|t|c|t|t|t|t|a|t|g|a|c|a|g|c|a|c|g|g|t|g|a|c|g|g|c|a|t|t|g|g|a|g|a|t| 240

Query: 309 a|t|t|a|a|t|g|g|t|g|t|t|a|t|a|t|c|a|a|a|a|t|t|a|g|a|c|t|a|t|a|t|t|a|a|t|g|a|t|g|g|c|a|a|t|g|a|t|g|c|g|a|c|c|g|a|t|t|c|a| 368

Sbjct: 1470 |||gtcctttgtgcataattcttcaattacactcatatctcctcttgcaatctctgggttctc 1411

Query: 367 attacggattctaactgctctcttatagtatgattataaaaggatagaggatctttcatttg 426

Sbjct: 1410 |||attacggattctaactgctctcttatagtatgattataaaaggatagaggatctttcatttg 1351

Query: 427 ctcatcgacaggaggaacttctgctctacagaatctgcattagctgggtgtagtaat 486

Sbjct: 1350 |||ctcatcgacaggaggaacttctgctctacagaatctgcattagctgggtgtagtaat 1291

Query: 487 tcccgtagtatctgtagctgaccactgcataggcaatcttttattctcatccttggttcc 546

Sbjct: 1290 |||tcccgtagtatctgtagctgaccactgcataggcaatcttttattctcatccttggttcc 1231

Query: 547 cttactattcataccaatctcttctccataatagacatatgggctgccattcatggtcaa 606

Sbjct: 1230 |||cttactattcataccaatctcttctccataatagacatatgggctgccattcatggtcaa 1171

Query: 607 taacatacctgctgacattttcatttgatcttcatcattgacaccttgggcaaatattct 666

Sbjct: 1170 |||taacatacctgctgacattttcatttgatcttcatcattgacacattgggagatattct 1111

Query: 667 tgtggtatcatgattaccaataaacgaatcatctatataatctaggattannnnnnnttat 726

Sbjct: 1110 |||tgtggtatcatgattactaataaacggagcatctatataatctaggatta-ccctcttat 1052

Query: 727 acttctcatctaaacgaattaaaattttaccaaaattttaccataaaaactaccccaat 786

Sbjct: 1051 |||acttctcatctaaacgaagtaaagttagcaaagttttaccagaagaagtacc--aa 994

Query: 787 ttttctggctgtgttt 802

Sbjct: 993 |||ttttctggctgtgttt 978

Cphy2350 forward

Query= G05_2350C3P16_1.SCF

>cphy_2350

Query: 71 aaagaaggagataggatcATGaaatttgaagctatttaccacagaacctctgataattat 130

Sbjct: 1 |||aaagaaggagataggatcatgaaatttgaagctatttaccacagaacctctgataattat 60

Query: 131 tgttatccgttaaatgaagaggatcttattatcaatatcaaaacgggccacgatatagag 190

Sbjct: 61 |||
tgttatccggttaaatgaagaggatcttattatcaatatcaaacgggccacgatatagag 120

Query: 191 agggtttttatctattatggggatcctttcgaaggtggaattttaggcggtaattggact 250
|||

Sbjct: 121 agggtttttatctattatggggatcctttcgaaggtggaattttaggcggtaattggact 180
|||

Query: 251 tggaaatggtgtggaagaagagttgattataaaaagaacctaacacatcatatttggtgg 310
|||

Sbjct: 181 tggaaatggtgtggaagaagagttgattataaaaagaacctaacacatcatatttggtgg 240
|||

Query: 311 acaacaacagtaaagccaaagtttaaagggtgaaatattattttaattagttgcta 370
|||

Sbjct: 241 acaacaacagtaaagccaaagtttaaagggtgaaatattattttaattagttgcta 300
|||

Query: 371 gataacttcttactattattttgaagatggattctatacagaagcagaaatgaatcatcaa 430
|||

Sbjct: 301 gataacttcttactattattttgaagatggattctatacagaagcagaaatgaatcatcaa 360
|||

Query: 431 gacaaaaatntagtatatttcacattcccatggatgaatagtagtattgatattaacaaaact 490
|||

Sbjct: 361 gacaaaaatntagtatatttcacattcccatggatgaatagtagtattgatattaacaaaact 420
|||

Query: 491 cctgactgggtaaataatgataccgatggatcagatctttccggaacgtttaataacgga 550
|||

Sbjct: 421 cctgactgggtaaataatgataccgatggatcagatctttccggaacgtttaataacgga 480
|||

Query: 551 gataaagaaaaatgacccgaagaatgtaaaagcttggggatttcatacagtgagcaatgat 610
|||

Sbjct: 481 gataaagaaaaatgacccgaagaatgtaaaagcttggggatttcatacagtgagcaatgat 540
|||

Query: 611 gagttttatggcggagatttacagggtattataaatcgattggattatttggcggataga 670
|||

Sbjct: 541 gagttttatggcggagatttacagggtattataaatcgattggattatttggcggatata 600
|||

Query: 671 ggcataagcggaaatataatctgacacctatctttgaagcaaaatccagtcataaatacgat 730
|||

Sbjct: 601 ggcataagcggaaatataatctgacacctatctttgaagcaaaatccagtcataaatacgat 660
|||

Query: 731 accaaaaac-ataatgaagatggat-cacatttgggtggatgaaaaattattttaaaacc 788
|||

Sbjct: 661 accaaagactatatgaagattgatccacatttgggt-gatgagaaagtattt--aaaaac 717
|||

Query: 789 ttatttgaaccagctcatgaaaaaggcattcgtattttatgcttgatgggtgtatttaataca 848
|||

Sbjct: 718 ttagttgatacagctcatgaaaaaggcattcgtattttatgcttgatgggtgtatttaataca 776
|||

Query: 308 ggtgcattaattaccttcgataagaatccagaagaatacccaattattcttactaattat 367
|||||
Sbjct: 241 ggtgcattaattaccttcgataagaatccagaagaatacccaattattcttactaattat 300

Query: 368 gagggacaaccaagacttcgtgcggtttctccaatccatgcatttgatgaagagaatatt 427
|||||
Sbjct: 301 gagggacaaccaagacttcgtgcggtttctccaatccatgcatttgatgaagagaatatt 360

Query: 428 gcaattactggtgaagggtgttattgatggtaatggtcacgaatggcgtccattaaaagag 487
|||||
Sbjct: 361 gcaattactggtgaagggtgttattgatggtaatggtcacgaatggcgtccattaaaagag 420

Query: 488 tttaaggtaacgaagaacagtggaagcacggttaagaagagtccttatgtaattgat 547
|||||
Sbjct: 421 tttaaggtaacgaagaacagtggaagcacggttaagaagagtccttatgtaattgat 480

Query: 548 acgaaagaaggcggatctggtatcctagtaaaacttcttatgaagggtggttagaagga 607
|||||
Sbjct: 481 acgaaagaaggcggatctggtatcctagtaaaacttcttatgaagggtggttagaagga 540

Query: 608 gaagtaagtgttgaagatccagatgcacttaagaaggcagctccaaactatgatctctac 667
|||||
Sbjct: 541 gaagtaagtgttgaagatccagatgcacttaagaaggcagctccaaactatgatctctac 600

Query: 668 cgtccagttagacgaacttagttcgctgtaataagatattaatagaaggagttacactt 727
|||||
Sbjct: 601 cgtccagttagacgaacttagttcgctgtaataagatattaatagaaggagttacactt 660

Query: 728 caaaattcaccgcttggaaaccttcaccattactttgtacgaatctaacccttcgaaat 787
|||||
Sbjct: 661 caaaattcaccgcttggaaaccttcaccattactttgtacgaatctaacccttcgaaat 720

Query: 788 gcgtttattcgtaatgctaattttgctcaaaaatggtgatggacttgacttagagtcttgt 847
|||||
Sbjct: 721 gcgtttattcgtaatgctaattttgctcaaaaatggtgatggacttgacttagagtcttgt 780

Query: 848 cgtttcggtgacatctacggagtgaatttgatggttgatgatgctatttgcataaaa 907
|||||
Sbjct: 781 cgtttcggtgacatctacggagtgaatttgatggttgatgatgctatttgcataaaa 840

Query: 908 tccggtaaaaatgcaattggaagaaaaattaccgtgccaacaaaacacgttcgatta 965
|||||
Sbjct: 841 tccggtaaaaatgcaattggaagaaaaattaccgtgccaacagaacacgttcgatta 898

=====
Cphy2567 reverse

Query= HR0ADKBY98ZF02_2567C2P17_1.SCF

>cphy_2567

```
Query: 65   gtgtaatggatagtgatcTTAatggtgatggtgatgatggaaattatgactacagtcaga 124
          |||
Sbjct: 1479 gtgtaatggatagtgatcctaatggtgatggtgatgatggaaattatgactacagtcaga 1420

Query: 125  taaaacatcctctttaaatacaaaagattgatctaaattgtcctgattagttaccgaaac 184
          |||
Sbjct: 1419 taaaacatcctctttaaatacaaaagattgatctaaattgtcctgattagttaccgaaac 1360

Query: 185  attcttaaagaaaatctgatttgcatcttaatctcgattgctttcttcgcttgaatcat 244
          |||
Sbjct: 1359 attcttaaagaaaatctgatttgcatcttaatctcgattgctttcttcgcttgaatcat 1300

Query: 245  aacatcttctaataatgatgatcatggattggcatctgctctagcccatcaatcttaattgc 304
          |||
Sbjct: 1299 aacatcttctaataatgatgatcatggattggcatctgctctagcccatcaatcttaattgc 1240

Query: 305  ttgtcctgctcgaagacagtttacatcacggatggttatattcttaaactctggtatatac 364
          |||
Sbjct: 1239 ttgtcctgctcgaagacagtttacatcacggatggttatattcttaaactctggtatatac 1180

Query: 365  ctctttcgaaatcgatatctggttcatcagacgcttgatggtctaaacggaataaggtata 424
          |||
Sbjct: 1179 ctctttcgaaatcgatatctggttcatcagacgcttgatggtctaaacggaataaggtata 1120

Query: 425  acccatggtaaatataaattgcttcttcaatatccgtcatctgaatgttacgaattgt 484
          |||
Sbjct: 1119 acccatggtaaatataaattgcttcttcaatatccgtcatctgaatgttacgaattgt 1060

Query: 485  aatatcctccacaactccaccgctccaatcgcaactcttaaacgtattcctgtatcggt 544
          |||
Sbjct: 1059 aatatcctccacaactccaccgctccaatcgcaactcttaaacgtattcctgtatcggt 1000

Query: 545  acctaaaaataagcaatcttattacaacatctcgtagccacgggacatctcactacc 604
          |||
Sbjct: 999  acctaaaaataagcaatcttattacaacatctcgtagccacgggacatctcactacc 940

Query: 605  aattacaaatccacatgtccatgatatacgacacaatctctaatacggaacgtgttctgt 664
          |||
Sbjct: 939  aattacaaatccacatgtccatgatatacgacacaatctctaatacggaacgtgttctgt 880

Query: 665  tggcacggtaatcttctccaatcgcatctttaccggattttatgcaaatagcatcatc 724
          |||
```

Sbjct: 879 tggcacggttaatTTTTCTTCCAATCGCATTTTTACC GGATTTTATGCAAATAGCATCATC 820

Query: 725 accaacatcaaatttcaactccgtagatgtcaacgaaacgacaagactctaagtcaagtcc 784

|||||

Sbjct: 819 accaacatcaaatttcaactccgtagatgtcaacgaaacgacaagactctaagtcaagtcc 760

Query: 785 atcaccatTTTgagcaaaaattagcattacgaataaacgcatttcgaagggttagattcgt 844

|||||

Sbjct: 759 atcaccatTTTgagcaaaaattagcattacgaataaacgcatttcgaagggttagattcgt 700

Query: 845 acaaagtaatgggtgaaggttccaagcgggtgaatTTTgaaatgtaacttccttctatta 904

|||||

Sbjct: 699 acaaagtaatgggtgaaggttccaagcgggtgaatTTTgaaatgtaac-tccttctatta 641

Query: 905 atatcTTTattaacgcgaaactaaatttcgtcataactgg 943

|||||

Sbjct: 640 atatc-ttattacagcgaact-aagttcgtcataactgg 604