```
   1 gaattgtacg tcaaagagat gaagcagaaa aacgtcgtcg agaagaagct gaacgacaaa
  61 aagtgaaatg cgagggaagt ccaagaaatg gtgattatga gggtgtctat ttcaccaaaa
 121 acggagaata tttattggaa ttaagagtct ctgggactgc tcttgtaaat gctccttgta
 181 atttaaagga tattgacata acgaaatggt tgtgtaaaac agggagatta tatcttgata
 241 aggttaagaa atttgaaata gttactattc tttcccatga cgtagaaaat caaaagatta
 301 taacagaatg ggagtcactc cccagagagg ctttacccga acaatttgat tcataagaac
 361 taattagtag cgctttccaa tggaggcgct tttttatttg ggtagttgca taccactaaa
 421 gatgttcagg tgcacatgag cattggagga aaggaacgct ttaggggggaa gggaaaccttt
 481 taaacagtct taatcccccct tgattttatg ttctctgtaa actgcgtccg gtaaatctca
 541 ggatagacaa tcggcggtta acggcttgag tgcgggggca gtttagaaag aatatgattg
 601 gagggattca tagatgcatc accatcacca tcatatgagc gccaagtcca gaaccatagg
 661 gattattgga gctcctttct caaagggaca gccacgagga ggggtggaag aaggccctac
 721 agtattgaga aaggctggtc tgcttgagaa acttaaagaa caagagtgtg atgtgaagga
 781 ttatggggac ctgccctttg ctgacatccc taatgacagt ccctttcaaa ttgtgaagaa
 841 tccaaggtct gtgggaaaag caagcgagca gctggctggc aaggtggcac aagtcaagaa
 901 gaacggaaga atcagcctgg tgctgggcgg agaccacagt ttggcaattg gaagcatctc
 961 tggccatgcc agggtccacc ctgatcttgg agtcatctgg gtggatgctc acactgatat
1021 caacactcca ctgacaacca caagtggaaa cttgcatgga caacctgtat ctttcctcct
1081 gaaggaacta aaaggaaaga ttcccgatgt gccaggattc tcctgggtga ctccctgtat
1141 atctgccaag gatattgtgt atattggctt gagagacgtg gaccctgggg aacactacat
1201 tttgaaaact ctaggcatta aatacttttc aatgactgaa gtggacagac taggaattgg
1261 caaggtgatg gaagaaacac tcagctatct actaggaaga aagaaaaggc caattcatct
1321 aagttttgat gttgacggac tggacccatc tttcacacca gctactggca caccagtcgt
1381 gggaggtctg acatacagag aaggtctcta catcacagaa gaaatctaca aaacagggct
1441 actctcagga ttagatataa tggaagtgaa cccatccctg gggaagacac cagaagaagt
1501 aactcgaaca gtgaacacag cagttgcaat aaccttggct tgtttcggac ttgctcggga
1561 gggtaatcac aagcctattg actaccttaa cccacctaag taaatgtgga aacatccgat
1621 ataaatctca tagttaatgg cataattaga aagctaatca ttttcttaag catagagtta
1681 tccttctaaa gacttgttct ttcagaaaaa tgtttttcca attagtataa actctacaaa
1741 ttcctcttg gtgtaaaatt caagatgtgg aaattctaac ttttttgaaa tttaaaagct
1801 tatatttttct aacttggcaa aagacttatc cttagaaaga gaagtgtaca ttgatttcca
1861 attaaaaatt tgctggcatt aaaaataagc acacttacat aagcccccat acatagagtg
1921 ggactcttgg aatcaggaga caaagctacc acatgtggaa aggtactatg tgtccatgtc
1981 attcaaaaaa tgtgattcta ga
```

Fig. 1A

```
                          1  atgcatcaccatcaccatcat
                             M  H  H  H  H  H  H
 22 atgagcgccaagtccagaaccatagggattattggagctcctttc
    M  S  A  K  S  R  T  I  G  I  I  G  A  P  F
 67 tcaaagggacagccacgaggaggggtggaagaaggccctacagta
    S  K  G  Q  P  R  G  G  V  E  E  G  P  T  V
112 ttgagaaaggctggtctgcttgagaaacttaaagaacaagagtgt
    L  R  K  A  G  L  L  E  K  L  K  E  Q  E  C
157 gatgtgaaggattatggggacctgccctttgctgacatccctaat
    D  V  K  D  Y  G  D  L  P  F  A  D  I  P  N
202 gacagtccctttcaaattgtgaagaatccaaggtctgtgggaaaa
    D  S  P  F  Q  I  V  K  N  P  R  S  V  G  K
247 gcaagcgagcagctggctggcaaggtggcacaagtcaagaagaac
    A  S  E  Q  L  A  G  K  V  A  Q  V  K  K  N
292 ggaagaatcagcctggtgctgggcggagaccacagtttggcaatt
    G  R  I  S  L  V  L  G  G  D  H  S  L  A  I
337 ggaagcatctctggccatgccagggtccaccctgatcttggagtc
    G  S  I  S  G  H  A  R  V  H  P  D  L  G  V
382 atctgggtggatgctcacactgatatcaacactccactgacaacc
    I  W  V  D  A  H  T  D  I  N  T  P  L  T  T
427 acaagtggaaacttgcatggacaacctgtatctttcctcctgaag
    T  S  G  N  L  H  G  Q  P  V  S  F  L  L  K
472 gaactaaaaggaaagattcccgatgtgccaggattctcctgggtg
    E  L  K  G  K  I  P  D  V  P  G  F  S  W  V
517 actccctgtatatctgccaaggatattgtgtatattggcttgaga
    T  P  C  I  S  A  K  D  I  V  Y  I  G  L  R
562 gacgtggaccctggggaacactacattttgaaaactctaggcatt
    D  V  D  P  G  E  H  Y  I  L  K  T  L  G  I
607 aaatacttttcaatgactgaagtggacagactaggaattggcaag
    K  Y  F  S  M  T  E  V  D  R  L  G  I  G  K
652 gtgatggaagaaacactcagctatctactaggaagaaagaaaagg
    V  M  E  E  T  L  S  Y  L  L  G  R  K  K  R
697 ccaattcatctaagttttgatgttgacggactggacccatctttc
    P  I  H  L  S  F  D  V  D  G  L  D  P  S  F
742 acaccagctactggcacaccagtcgtgggaggtctgacatacaga
    T  P  A  T  G  T  P  V  V  G  G  L  T  Y  R
787 gaaggtctctacatcacagaagaaatctacaaaacagggctactc
    E  G  L  Y  I  T  E  E  I  Y  K  T  G  L  L
832 tcaggattagatataatggaagtgaacccatccctggggaagaca
    S  G  L  D  I  M  E  V  N  P  S  L  G  K  T
877 ccagaagaagtaactcgaacagtgaacacagcagttgcaataacc
    P  E  E  V  T  R  T  V  N  T  A  V  A  I  T
922 ttggcttgtttcggacttgctcgggagggtaatcacaagcctatt
    L  A  C  F  G  L  A  R  E  G  N  H  K  P  I
967 gactaccttaacccacctaagtaa 990
    D  Y  L  N  P  P  K  *
```

Fig. 1B

```
  1 atgagcgccaagtccagaaccatagggattattggagctcctttc
    M  S  A  K  S  R  T  I  G  I  I  G  A  P  F
 46 tcaaagggacagccacgaggaggggtggaagaaggccctacagta
    S  K  G  Q  P  R  G  G  V  E  E  G  P  T  V
 91 ttgagaaaggctggtctgcttgagaaacttaaagaacaagagtgt
    L  R  K  A  G  L  L  E  K  L  K  E  Q  E  C
136 gatgtgaaggattatggggacctgccctttgctgacatccctaat
    D  V  K  D  Y  G  D  L  P  F  A  D  I  P  N
181 gacagtccctttcaaattgtgaagaatccaaggtctgtgggaaaa
    D  S  P  F  Q  I  V  K  N  P  R  S  V  G  K
226 gcaagcgagcagctggctggcaaggtggcacaagtcaagaagaac
    A  S  E  Q  L  A  G  K  V  A  Q  V  K  K  N
271 ggaagaatcagcctggtgctgggcggagaccacagtttggcaatt
    G  R  I  S  L  V  L  G  G  D  H  S  L  A  I
316 ggaagcatctctggccatgccagggtccaccctgatcttggagtc
    G  S  I  S  G  H  A  R  V  H  P  D  L  G  V
361 atctgggtggatgctcacactgatatcaacactccactgacaacc
    I  W  V  D  A  H  T  D  I  N  T  P  L  T  T
406 acaagtggaaacttgcatggacaacctgtatctttcctcctgaag
    T  S  G  N  L  H  G  Q  P  V  S  F  L  L  K
451 gaactaaaaggaaagattcccgatgtgccaggattctcctgggtg
    E  L  K  G  K  I  P  D  V  P  G  F  S  W  V
496 actccctgtatatctgccaaggatattgtgtatattggcttgaga
    T  P  C  I  S  A  K  D  I  V  Y  I  G  L  R
541 gacgtggaccctggggaacactacattttgaaaactctaggcatt
    D  V  D  P  G  E  H  Y  I  L  K  T  L  G  I
586 aaatacttttcaatgactgaagtggacagactaggaattggcaag
    K  Y  F  S  M  T  E  V  D  R  L  G  I  G  K
631 gtgatggaagaaacactcagctatctactaggaagaaagaaaagg
    V  M  E  E  T  L  S  Y  L  L  G  R  K  K  R
676 ccaattcatctaagttttgatgttgacggactggacccatctttc
    P  I  H  L  S  F  D  V  D  G  L  D  P  S  F
721 acaccagctactggcacaccagtcgtgggaggtctgacatacaga
    T  P  A  T  G  T  P  V  V  G  G  L  T  Y  R
766 gaaggtctctacatcacagaagaaatctacaaaacagggctactc
    E  G  L  Y  I  T  E  E  I  Y  K  T  G  L  L
811 tcaggattagatataatggaagtgaacccatccctggggaagaca
    S  G  L  D  I  M  E  V  N  P  S  L  G  K  T
856 ccagaagaagtaactcgaacagtgaacacagcagttgcaataacc
    P  E  E  V  T  R  T  V  N  T  A  V  A  I  T
901 ttggcttgtttcggacttgctcgggagggtaatcacaagcctatt
    L  A  C  F  G  L  A  R  E  G  N  H  K  P  I
946 gactaccttaacccacctaagtaa 969
    D  Y  L  N  P  P  K  *
```

Fig. 1C