FIG. 1A

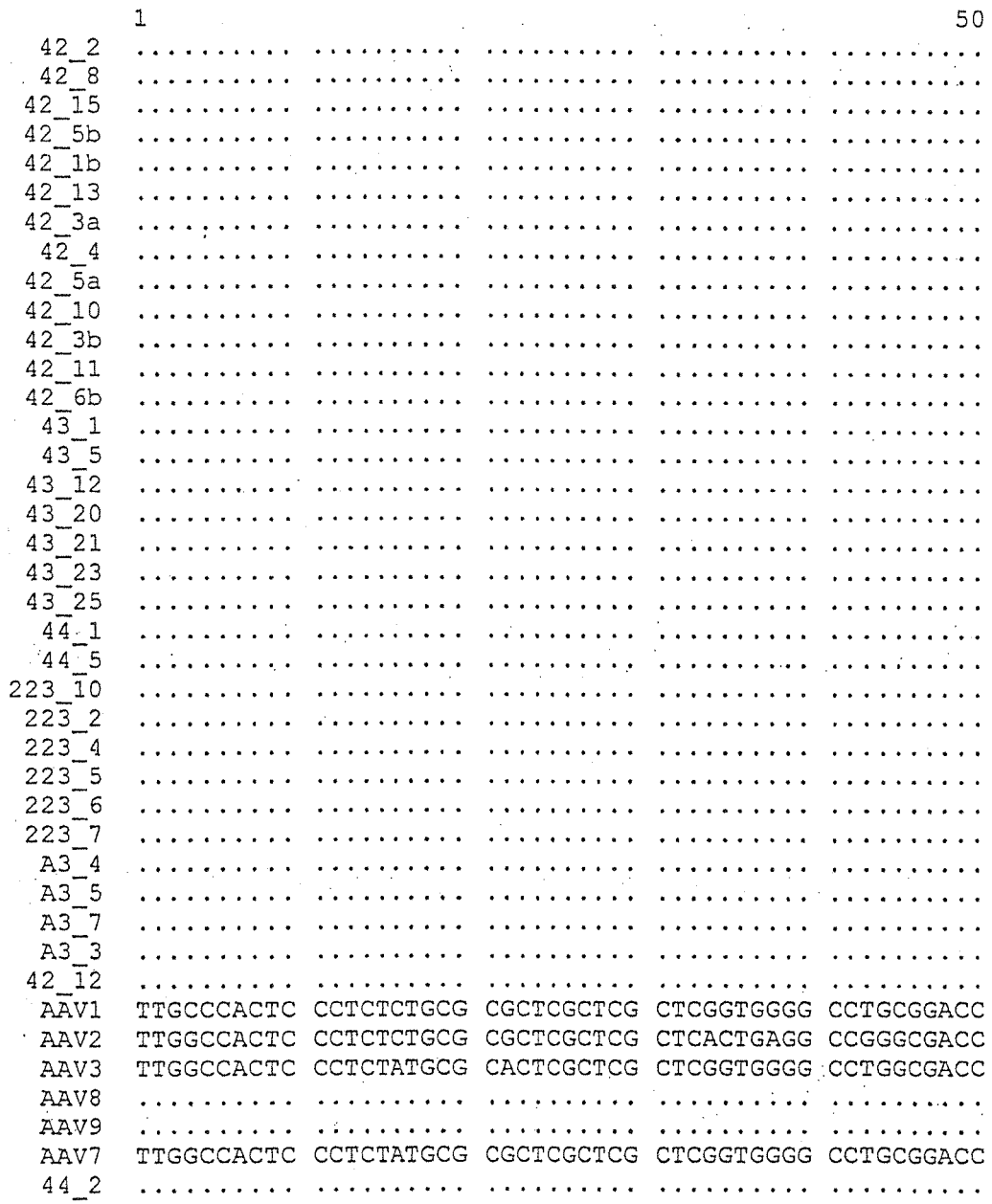

1
50
42_2 ....
42_8 ....
42_15 ....
42_5b ....
42_1b ....
42_13 ....
42_3a ....
42_4 ....
42_5a ....
42_10 ....
42_3b ....
42_11 ....
42_6b ....
43_1 ....
43_5 ....
43_12 ....
43_20 ....
43_21 ....
43_23 ....
43_25 ....
44_1 ....
44_5 ....
223_10 ....
223_2 ....
223_4 ....
223_5 ....
223_6 ....
223_7 ....
A3_4 ....
A3_5 ....
A3_7 ....
A3_3 ....
42_12 ....
AAV1 TTGCCCACTC CCTCTCTGCG CGCTCGCTCG CTCGGTGGGG CCTGCGGACC
AAV2 TTGGCCACTC CCTCTCTGCG CGCTCGCTCG CTCACTGAGG CCGGGCGACC
AAV3 TTGGCCACTC CCTCTATGCG CACTCGCTCG CTCGGTGGGG CCTGGCGACC
AAV8 ....
AAV9 ....
AAV7 TTGGCCACTC CCTCTATGCG CGCTCGCTCG CTCGGTGGGG CCTGCGGACC
44_2 ....

Fig. 1B

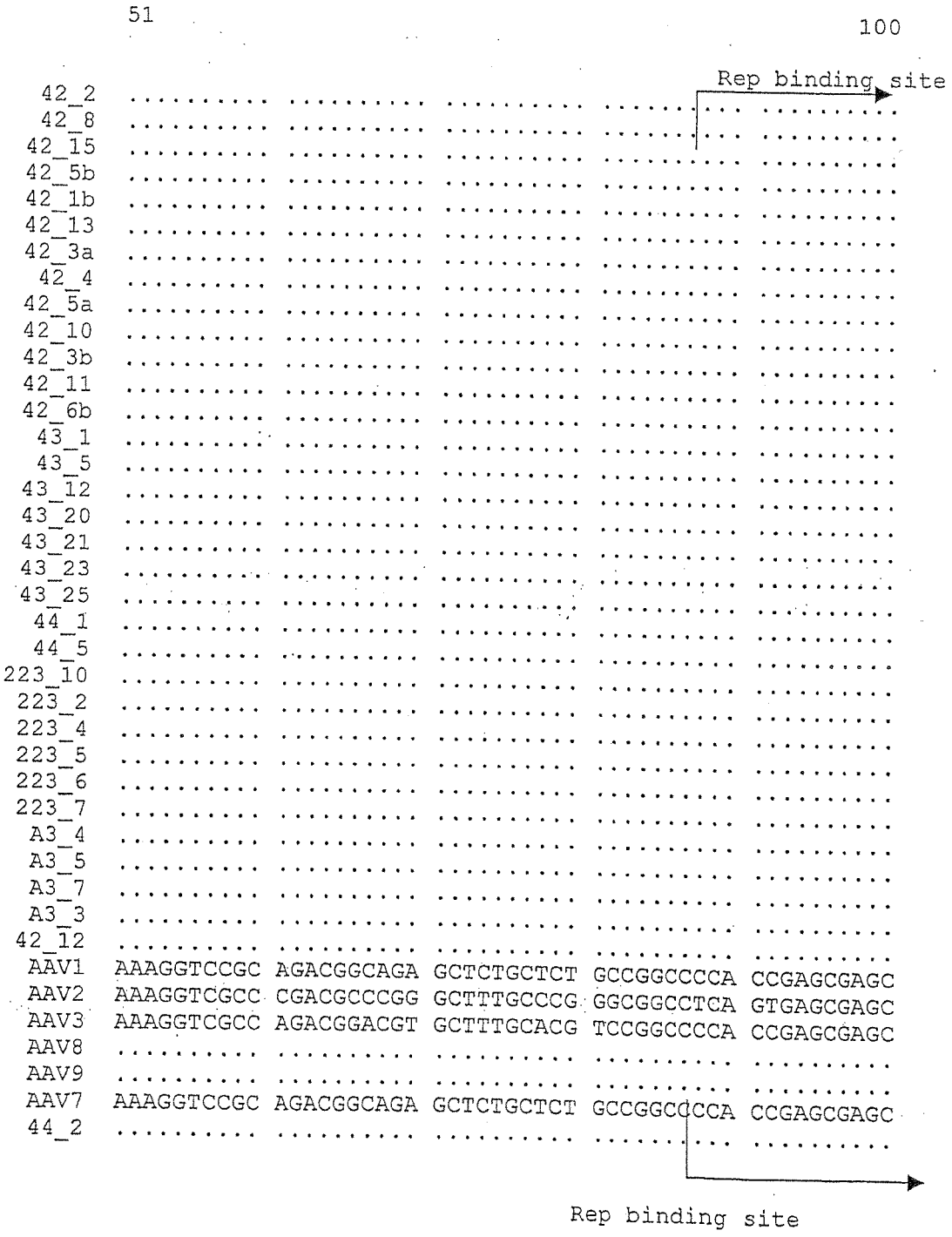

51
100
Rep binding site
42_2
42_8
42_15
42_5b
42_1b
42_13
42_3a
42_4
42_5a
42_10
42_3b
42_11
42_6b
43_1
43_5
43_12
43_20
43_21
43_23
43_25
44_1
44_5
223_10
223_2
223_4
223_5
223_6
223_7
A3_4
A3_5
A3_7
A3_3
42_12
AAV1 AAAGGTCCGC AGACGGCAGA GCTCTGCTCT GCCGGCCCCA CCGAGCGAGC
AAV2 AAAGGTCGCC CGACGCCCGG GCTTTGCCCG GGCGGCCTCA GTGAGCGAGC
AAV3 AAAGGTCGCC AGACGGACGT GCTTTGCACG TCCGGCCCCA CCGAGCGAGC
AAV8
AAV9
AAV7 AAAGGTCCGC AGACGGCAGA GCTCTGCTCT GCCGGCCCCA CCGAGCGAGC
44_2
Rep binding site

Fig. 1C

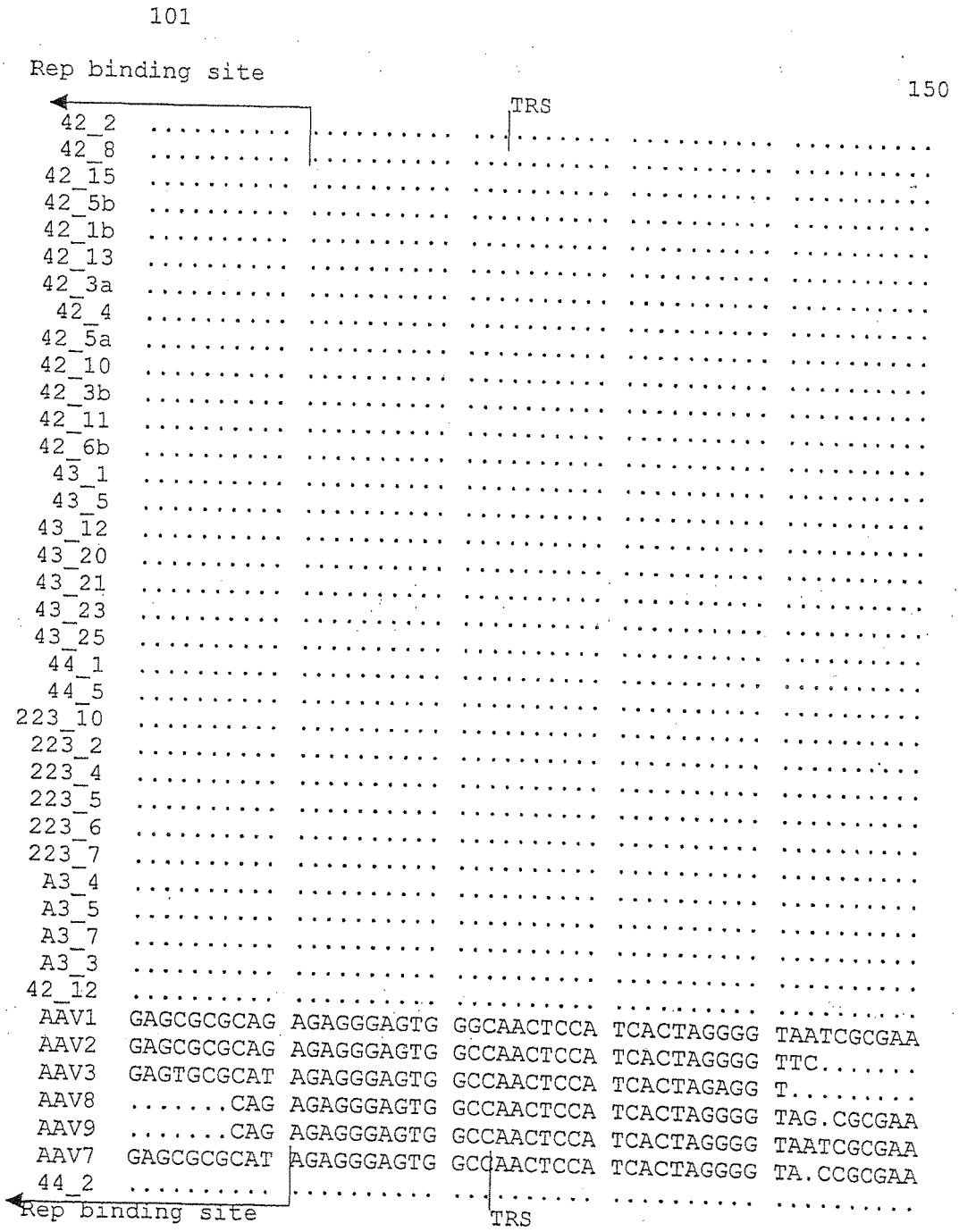

101
Rep binding site
150
TRS
42_2 ....
42_8 ....
42_15 ....
42_5b ....
42_1b ....
42_13 ....
42_3a ....
42_4 ....
42_5a ....
42_10 ....
42_3b ....
42_11 ....
42_6b ....
43_1 ....
43_5 ....
43_12 ....
43_20 ....
43_21 ....
43_23 ....
43_25 ....
44_1 ....
44_5 ....
223_10 ....
223_2 ....
223_4 ....
223_5 ....
223_6 ....
223_7 ....
A3_4 ....
A3_5 ....
A3_7 ....
A3_3 ....
42_12 ....
AAV1 GAGCGCGCAG AGAGGGAGTG GGCAACTCCA TCACTAGGGG TAATCGCGAA
AAV2 GAGCGCGCAG AGAGGGAGTG GCCAACTCCA TCACTAGGGG TTC.....
AAV3 GAGTGCGCAT AGAGGGAGTG GCCAACTCCA TCACTAGAGG T.....
AAV8 .....CAG AGAGGGAGTG GCCAACTCCA TCACTAGGGG TAG.CGCGAA
AAV9 .....CAG AGAGGGAGTG GCCAACTCCA TCACTAGGGG TAATCGCGAA
AAV7 GAGCGCGCAT AGAGGGAGTG GCCAACTCCA TCACTAGGGG TA.CCGCGAA
44_2 ....
Rep binding site
TRS

Fig. 1D

```
          151                                                        200
42_2      .......... .......... .......... .......... ..........
42_8      .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
42_4      .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... .......... .......... ..........
43_1      .......... .......... .......... .......... ..........
43_5      .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
44_1      .......... .......... .......... .......... ..........
44_5      .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
A3_4      .......... .......... .......... .......... ..........
A3_5      .......... .......... .......... .......... ..........
A3_7      .......... .......... .......... .......... ..........
A3_3      .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
AAV1      GCGCCTCCCA CGCTGCCGCG TCAGCGCTGA CGTAAATTAC GTCATAGGGG
AAV2      .......CTG GAGGGGTGGA GTCGTGACGT GAATTACGTC ATAGGGTTAG
AAV3      .......ATG GCAGTGACGT AACGCGAAGC GCGCGAAGCG AGACCACGCC
AAV8      GCGCCTCCCA CGCTGCCGCG TCAGCGCTGA CGTAAATTAC GTCATAGGGG
AAV9      GCGCCTCCCA CGCTGCCGCG TCAGCGCTGA CGTAGATTAC GTCATAGGGG
AAV7      GCGCCTCCCA CGCTGCCGCG TCAGCGCTGA CGTAAATCAC GTCATAGGGG
44_2      .......... .......... .......... .......... ..........
```

Fig. 1E

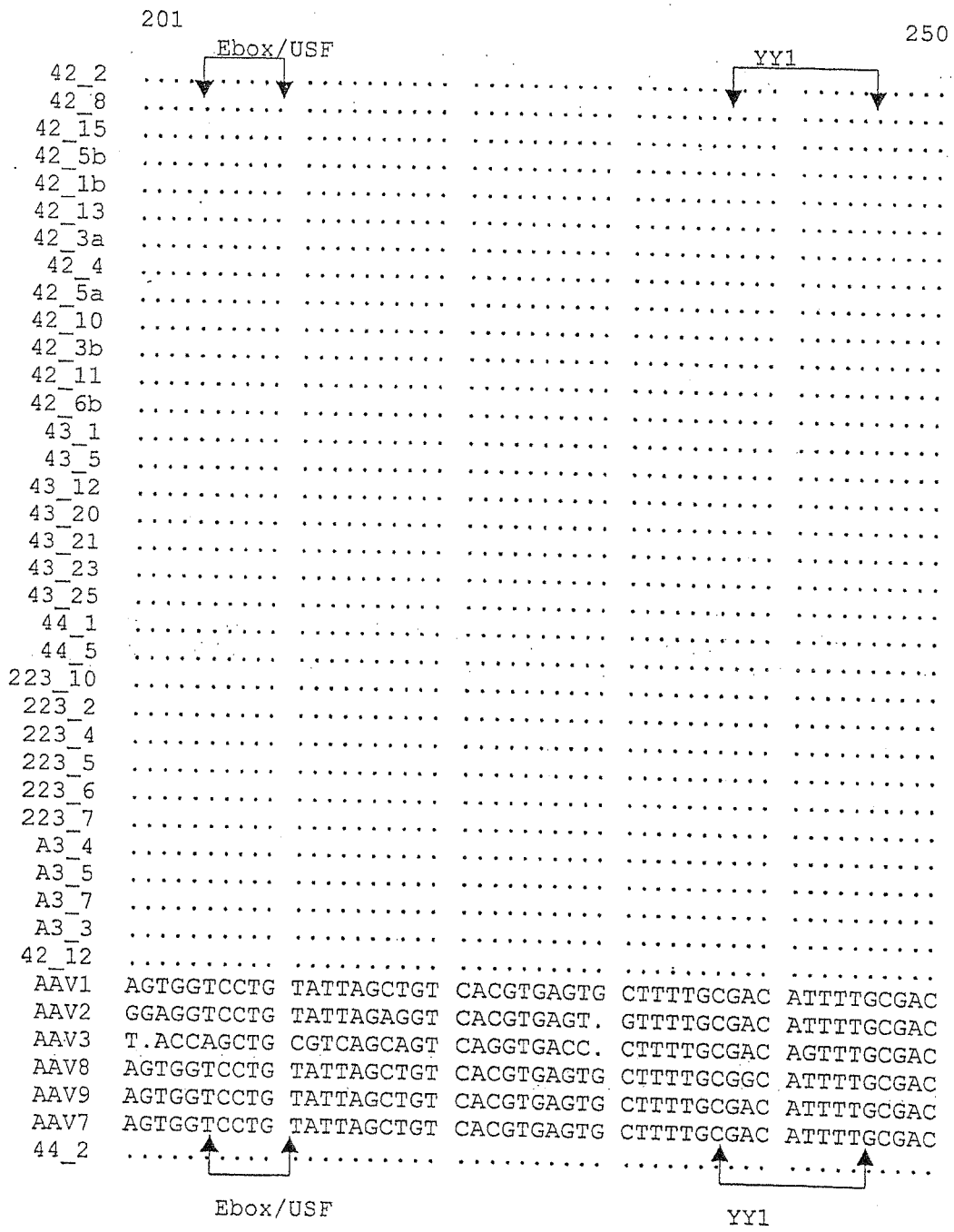

201
250
Ebox/USF
YY1
42_2
42_8
42_15
42_5b
42_1b
42_13
42_3a
42_4
42_5a
42_10
42_3b
42_11
42_6b
43_1
43_5
43_12
43_20
43_21
43_23
43_25
44_1
44_5
223_10
223_2
223_4
223_5
223_6
223_7
A3_4
A3_5
A3_7
A3_3
42_12
AAV1 AGTGGTCCTG TATTAGCTGT CACGTGAGTG CTTTTGCGAC ATTTTGCGAC
AAV2 GGAGGTCCTG TATTAGAGGT CACGTGAGT. GTTTTGCGAC ATTTTGCGAC
AAV3 T.ACCAGCTG CGTCAGCAGT CAGGTGACC. CTTTTGCGAC AGTTTGCGAC
AAV8 AGTGGTCCTG TATTAGCTGT CACGTGAGTG CTTTTGCGGC ATTTTGCGAC
AAV9 AGTGGTCCTG TATTAGCTGT CACGTGAGTG CTTTTGCGAC ATTTTGCGAC
AAV7 AGTGGTCCTG TATTAGCTGT CACGTGAGTG CTTTTGCGAC ATTTTGCGAC
44_2
Ebox/USF
YY1

Fig. 1F

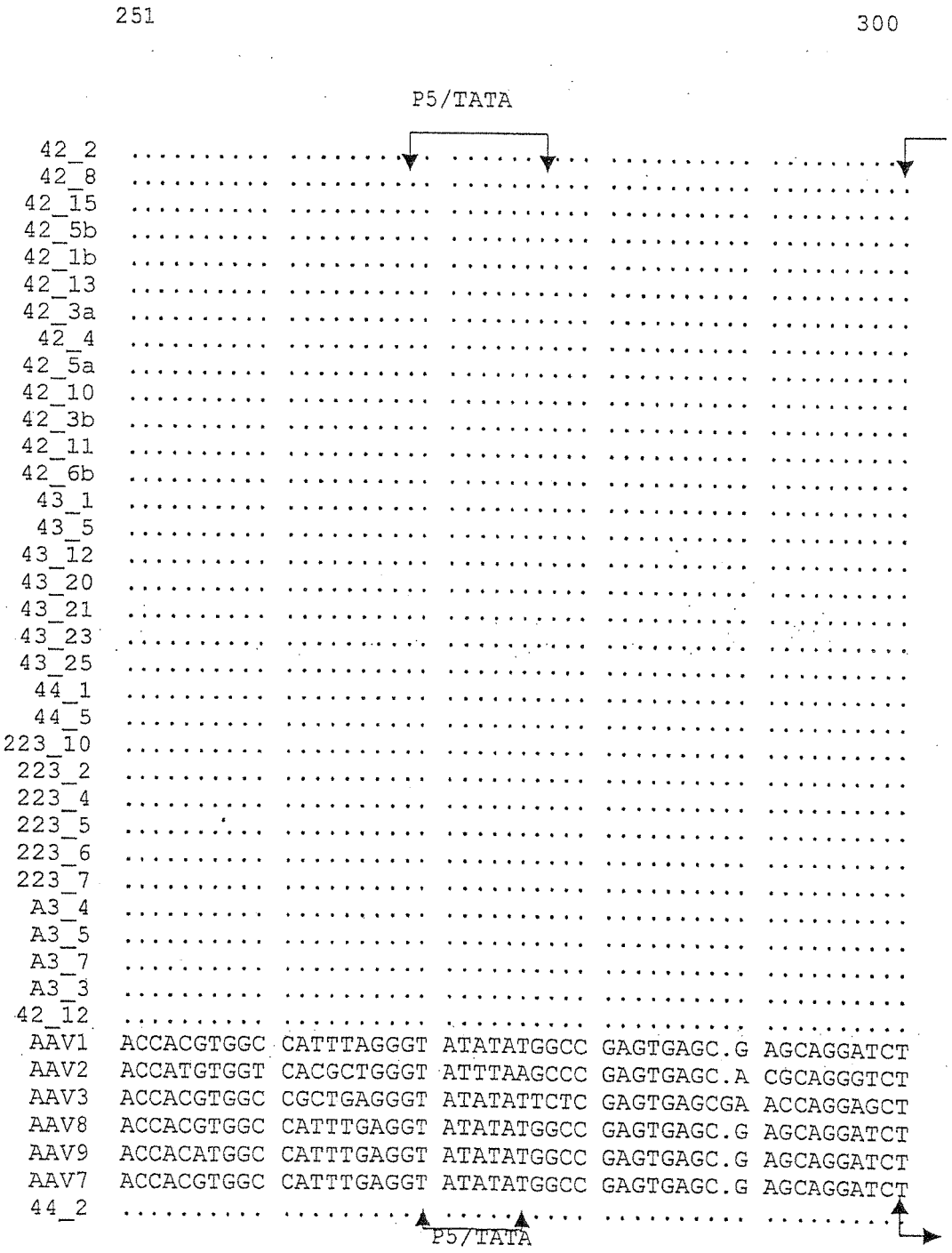

251
300
P5/TATA
42_2
42_8
42_15
42_5b
42_1b
42_13
42_3a
42_4
42_5a
42_10
42_3b
42_11
42_6b
43_1
43_5
43_12
43_20
43_21
43_23
43_25
44_1
44_5
223_10
223_2
223_4
223_5
223_6
223_7
A3_4
A3_5
A3_7
A3_3
42_12
AAV1 ACCACGTGGC CATTTAGGGT ATATATGGCC GAGTGAGC.G AGCAGGATCT
AAV2 ACCATGTGGT CACGCTGGGT ATTTAAGCCC GAGTGAGC.A CGCAGGGTCT
AAV3 ACCACGTGGC CGCTGAGGGT ATATATTCTC GAGTGAGCGA ACCAGGAGCT
AAV8 ACCACGTGGC CATTTGAGGT ATATATGGCC GAGTGAGC.G AGCAGGATCT
AAV9 ACCACATGGC CATTTGAGGT ATATATGGCC GAGTGAGC.G AGCAGGATCT
AAV7 ACCACGTGGC CATTTGAGGT ATATATGGCC GAGTGAGC.G AGCAGGATCT
44_2
P5/TATA

Fig. 1G

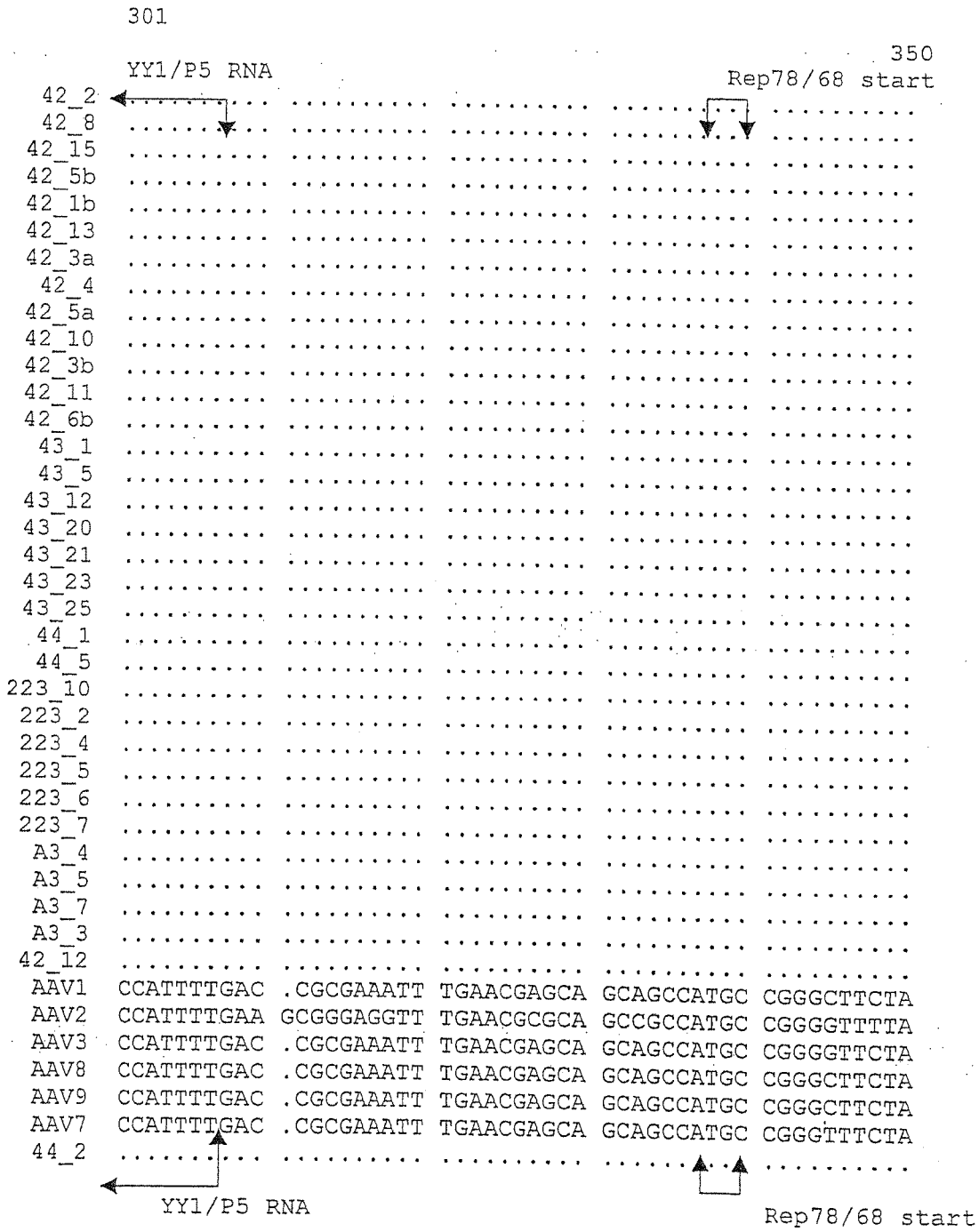

301
350
YY1/P5 RNA
Rep78/68 start
42_2
42_8
42_15
42_5b
42_1b
42_13
42_3a
42_4
42_5a
42_10
42_3b
42_11
42_6b
43_1
43_5
43_12
43_20
43_21
43_23
43_25
44_1
44_5
223_10
223_2
223_4
223_5
223_6
223_7
A3_4
A3_5
A3_7
A3_3
42_12
AAV1 CCATTTTGAC .CGCGAAATT TGAACGAGCA GCAGCCATGC CGGGCTTCTA
AAV2 CCATTTTGAA GCGGGAGGTT TGAACGCGCA GCCGCCATGC CGGGGTTTTA
AAV3 CCATTTTGAC .CGCGAAATT TGAACGAGCA GCAGCCATGC CGGGGTTCTA
AAV8 CCATTTTGAC .CGCGAAATT TGAACGAGCA GCAGCCATGC CGGGCTTCTA
AAV9 CCATTTTGAC .CGCGAAATT TGAACGAGCA GCAGCCATGC CGGGCTTCTA
AAV7 CCATTTTGAC .CGCGAAATT TGAACGAGCA GCAGCCATGC CGGGTTTCTA
44_2
YY1/P5 RNA
Rep78/68 start

Fig. 1H

```
          351                                                       400
 42_2     .......... .......... .......... .......... ..........
 42_8     .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
 42_4     .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... .......... .......... ..........
 43_1     .......... .......... .......... .......... ..........
 43_5     .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
 44_1     .......... .......... .......... .......... ..........
 44_5     .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     .......... .......... .......... .......... ..........
 A3_5     .......... .......... .......... .......... ..........
 A3_7     .......... .......... .......... .......... ..........
 A3_3     .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
 AAV1     CGAGATCGTG ATCAAGGTGC CGAGCGACCT GGACGAGCAC CTGCCGGGCA
 AAV2     CGAGATTGTG ATTAAGGTCC CCAGCGACCT TGACGGGCAT CTGCCCGGCA
 AAV3     CGAGATTGTC CTGAAGGTCC CGAGTGACCT GGACGAGCGC CTGCCGGGCA
 AAV8     CGAGATCGTG ATCAAGGTGC CGAGCGACCT GGACGAGCAC CTGCCGGGCA
 AAV9     CGAGATTGTG ATCAAGGTGC CGAGCGACCT GGACGAGCAC CTGCCGGGCA
 AAV7     CGAGATCGTG ATCAAGGTGC CGAGCGACCT GGACGAGCAC CTGCCGGGCA
 44_2     .......... .......... .......... .......... ..........
```

Fig. 1I

```
          401                                                       450
 42_2     .......... .......... .......... .......... ..........
 42_8     .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
 42_4     .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... .......... .......... ..........
 43_1     .......... .......... .......... .......... ..........
 43_5     .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
 44_1     .......... .......... .......... .......... ..........
 44_5     .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     .......... .......... .......... .......... ..........
 A3_5     .......... .......... .......... .......... ..........
 A3_7     .......... .......... .......... .......... ..........
 A3_3     .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
 AAV1     TTTCTGACTC GTTTGTGAGC TGGGTGGCCG AGAAGGAATG GGAGCTGCCC
 AAV2     TTTCTGACAG CTTTGTGAAC TGGGTGGCCG AGAAGGAATG GGAGTTGCCG
 AAV3     TTTCTAACTC GTTTGTTAAC TGGGTGGCCG AGAAGGAATG GGACGTGCCG
 AAV8     TTTCTGACTC GTTTGTGAAC TGGGTGGCCG AGAAGGAATG GGAGCTGCCC
 AAV9     TTTCTGACTC TTTTGTGAAC TGGGTGGCCG AGAAGGAATG GGAGCTGCCC
 AAV7     TTTCTGACTC GTTTGTGAAC TGGGTGGCCG AGAAGGAATG GGAGCTGCCC
 44_2     .......... .......... .......... .......... ..........
```

Fig. 1J

```
          451                                                        500
42_2      .......... .......... .......... .......... ..........
42_8      .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
42_4      .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... .......... .......... ..........
43_1      .......... .......... .......... .......... ..........
43_5      .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
44_1      .......... .......... .......... .......... ..........
44_5      .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
A3_4      .......... .......... .......... .......... ..........
A3_5      .......... .......... .......... .......... ..........
A3_7      .......... .......... .......... .......... ..........
A3_3      .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
AAV1      CCGGATTCTG ACATGGATCT GAATCTGATT GAGCAGGCAC CCCTGACCGT
AAV2      CCAGATTCTG ACATGGATCT GAATCTGATT GAGCAGGCAC CCCTGACCGT
AAV3      CCGGATTCTG ACATGGATCC GAATCTGATT GAGCAGGCAC CCCTGACCGT
AAV8      CCGGATTCTG ACATGGATCG GAATCTGATC GAGCAGGCAC CCCTGACCGT
AAV9      CCGGATTCTG ACATGGATCG GAATCTGATC GAGCAGGCAC CCCTGACCGT
AAV7      CCGGATTCTG ACATGGATCT GAATCTGATC GAGCAGGCAC CCCTGACCGT
44_2      .......... .......... .......... .......... ..........
```

Fig. 1K

```
          501                                                        550
 42_2     .......... .......... .......... .......... ..........
 42_8     .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
 42_4     .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... .......... .......... ..........
 43_1     .......... .......... .......... .......... ..........
 43_5     .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
 44_1     .......... .......... .......... .......... ..........
 44_5     .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     .......... .......... .......... .......... ..........
 A3_5     .......... .......... .......... .......... ..........
 A3_7     .......... .......... .......... .......... ..........
 A3_3     .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
 AAV1     GGCCGAGAAG CTGCAGCGCG ACTTCCTGGT CCAATGGCGC CGCGTGAGTA
 AAV2     GGCCGAGAAG CTGCAGCGCG ACTTTCTGAC GGAATGGCGC CGTGTGAGTA
 AAV3     GGCCGAAAAG CTTCAGCGCG AGTTCCTGGT GGAGTGGCGC CGCGTGAGTA
 AAV8     GGCCGAGAAG CTGCAGCGCG ACTTCCTGGT CCAATGGCGC CGCGTGAGTA
 AAV9     GGCCGAGAAG CTGTAGCGCG ACTTCCTGGT CCAATGGCGC CGCGTGAGTA
 AAV7     GGCCGAGAAG CTGCAGCGCG ACTTCCTGGT CCAATGGCGC CGCGTGAGTA
 44_2     .......... .......... .......... .......... ..........
```

Fig. 1L

```
          551                                                        600
 42_2     .......... .......... .......... .......... ..........
 42_8     .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
 42_4     .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... .......... .......... ..........
 43_1     .......... .......... .......... .......... ..........
 43_5     .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
 44_1     .......... .......... .......... .......... ..........
 44_5     .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     .......... .......... .......... .......... ..........
 A3_5     .......... .......... .......... .......... ..........
 A3_7     .......... .......... .......... .......... ..........
 A3_3     .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
 AAV1     AGGCCCCGGA GGCCCTCTTC TTTGTTCAGT TCGAGAAGGG CGAGTCCTAC
 AAV2     AGGCCCCGGA GGCCCTTTTC TTTGTGCAAT TTGAGAAGGG AGAGAGCTAC
 AAV3     AGGCCCCGGA GGCCCTCTTT TTTGTCCAGT TCGAAAAGGG GGAGACCTAC
 AAV8     AGGCCCCGGA GGCCCTCTTC TTTGTTCAGT TCGAGAAGGG CGAGAGCTAC
 AAV9     AGGCCCCGGA GGCCCTCTTC TTTGTTCAGT TCGAGAAGGG CGAGAGCTAC
 AAV7     AGGCCCCGGA GGCCCTGTTC TTTGTTCAGT TCGAGAAGGG CGAGAGCTAC
 44_2     .......... .......... .......... .......... ..........
```

Fig. 1M

```
          601                                                        650
42_2      .......... .......... .......... .......... ..........
42_8      .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
42_4      .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... .......... .......... ..........
43_1      .......... .......... .......... .......... ..........
43_5      .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
44_1      .......... .......... .......... .......... ..........
44_5      .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
A3_4      .......... .......... .......... .......... ..........
A3_5      .......... .......... .......... .......... ..........
A3_7      .......... .......... .......... .......... ..........
A3_3      .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
AAV1      TTCCACCTCC ATATTCTGGT GGAGACCACG GGGGTCAAAT CCATGGTGCT
AAV2      TTCCACATGC ACGTGCTCGT GGAAACCACC GGGGTGAAAT CCATGGTTTT
AAV3      TTCCACCTGC ACGTGCTGAT TGAGACCATC GGGGTCAAAT CCATGGTGGT
AAV8      TTTCACCTGC ACGTTCTGGT CGAGACCACG GGGGTCAAGT CCATGGTGCT
AAV9      TTTCACCTGC ACGTTCTGGT CGAGACCACG GGGGTCAAGT CCATGGTGCT
AAV7      TTCCACCTTC ACGTTCTGGT GGAGACCACG GGGGTCAAGT CCATGGTGCT
44_2      .......... .......... .......... .......... ..........
```

Fig. 1N

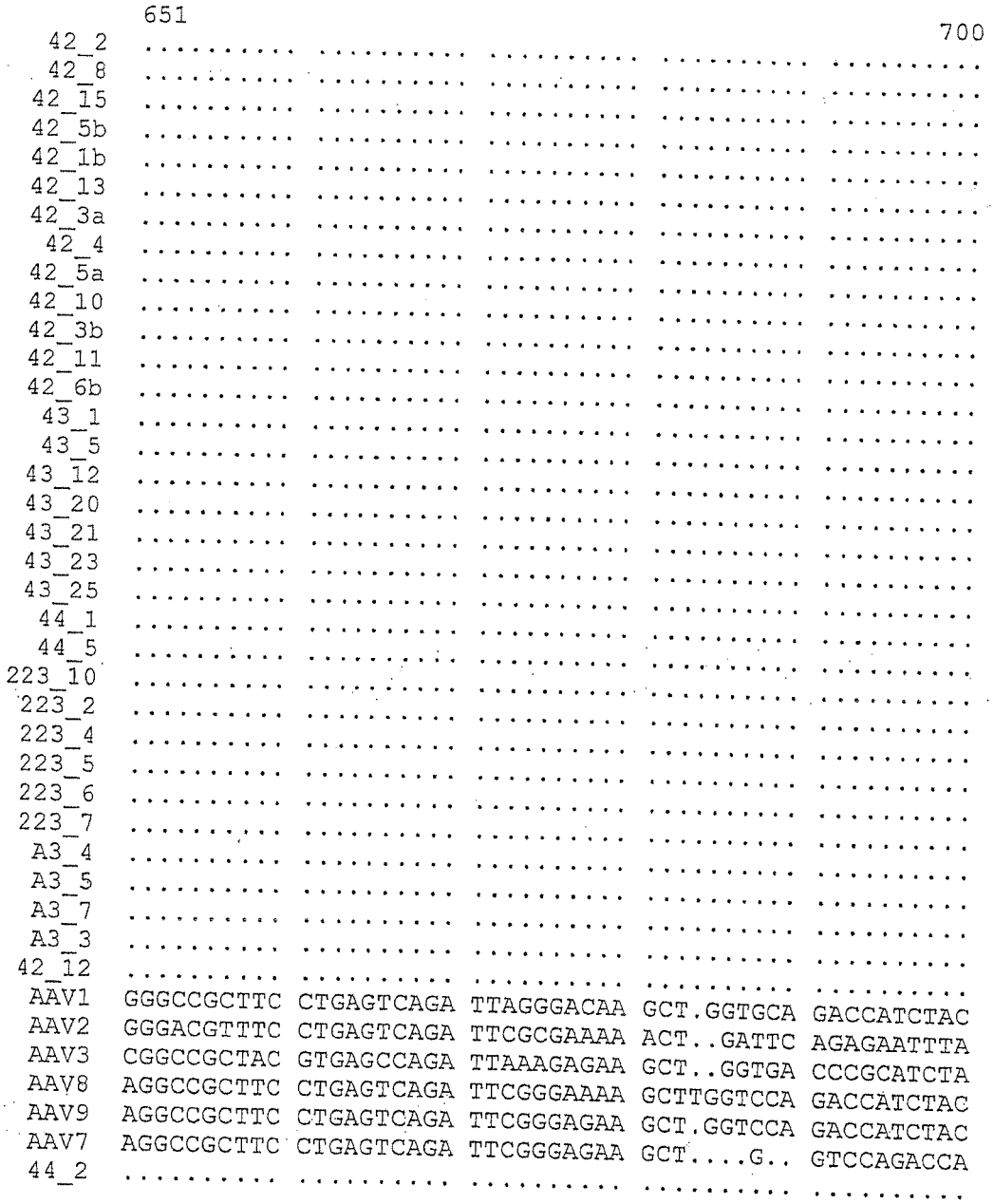

651
700
42_2 ....
42_8 ....
42_15 ....
42_5b ....
42_1b ....
42_13 ....
42_3a ....
42_4 ....
42_5a ....
42_10 ....
42_3b ....
42_11 ....
42_6b ....
43_1 ....
43_5 ....
43_12 ....
43_20 ....
43_21 ....
43_23 ....
43_25 ....
44_1 ....
44_5 ....
223_10 ....
223_2 ....
223_4 ....
223_5 ....
223_6 ....
223_7 ....
A3_4 ....
A3_5 ....
A3_7 ....
A3_3 ....
42_12 ....
AAV1 GGGCCGCTTC CTGAGTCAGA TTAGGGACAA GCT.GGTGCA GACCATCTAC
AAV2 GGGACGTTTC CTGAGTCAGA TTCGCGAAAA ACT..GATTC AGAGAATTTA
AAV3 CGGCCGCTAC GTGAGCCAGA TTAAAGAGAA GCT..GGTGA CCCGCATCTA
AAV8 AGGCCGCTTC CTGAGTCAGA TTCGGGAAAA GCTTGGTCCA GACCATCTAC
AAV9 AGGCCGCTTC CTGAGTCAGA TTCGGGAGAA GCT.GGTCCA GACCATCTAC
AAV7 AGGCCGCTTC CTGAGTCAGA TTCGGGAGAA GCT....G.. GTCCAGACCA
44_2 ....

Fig. 10

```
          701                                                        750
  42_2    .......... .......... .......... .......... ..........
  42_8    .......... .......... .......... .......... ..........
 42_15    .......... .......... .......... .......... ..........
 42_5b    .......... .......... .......... .......... ..........
 42_1b    .......... .......... .......... .......... ..........
 42_13    .......... .......... .......... .......... ..........
 42_3a    .......... .......... .......... .......... ..........
  42_4    .......... .......... .......... .......... ..........
 42_5a    .......... .......... .......... .......... ..........
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    .......... .......... .......... .......... ..........
 42_6b    .......... .......... .......... .......... ..........
  43_1    .......... .......... .......... .......... ..........
  43_5    .......... .......... .......... .......... ..........
 43_12    .......... .......... .......... .......... ..........
 43_20    .......... .......... .......... .......... ..........
 43_21    .......... .......... .......... .......... ..........
 43_23    .......... .......... .......... .......... ..........
 43_25    .......... .......... .......... .......... ..........
  44_1    .......... .......... .......... .......... ..........
  44_5    .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    .......... .......... .......... .......... ..........
  A3_5    .......... .......... .......... .......... ..........
  A3_7    .......... .......... .......... .......... ..........
  A3_3    .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
  AAV1    C.GCGGGATC GAGCCG.ACC CTGCCCAACT GGTTCGCGGT GACCAA.GAC
  AAV2    CCGCGGGATC GAGCCG.ACT TTGCCAAACT GGTTCGCGGT GACCAA.GAC
  AAV3    CCGCGGGGTC GAGCCG.CAG CTTCCGAACT GGTTCGCGGT CACAAA...G
  AAV8    CCGCGGGGTC GAGCCCCACC TTGCCCAACT GGTTCGCGGT GACCAA...A
  AAV9    C.GCGGGATC GAGCCG.ACC CTGCCCAACT GGTTCGCGGT GACCAAAGAC
  AAV7    TCTACCGCGG GGTCGAGCCC ACGCTGCCCA ACTGGTTCGC GGTGACCAAG
  44_2    .......... .......... .......... .......... ..........
```

Fig. 1P

```
          751                                                       800
  42_2    .......... .......... .......... .......... ..........
  42_8    .......... .......... .......... .......... ..........
 42_15    .......... .......... .......... .......... ..........
 42_5b    .......... .......... .......... .......... ..........
 42_1b    .......... .......... .......... .......... ..........
 42_13    .......... .......... .......... .......... ..........
 42_3a    .......... .......... .......... .......... ..........
  42_4    .......... .......... .......... .......... ..........
 42_5a    .......... .......... .......... .......... ..........
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    .......... .......... .......... .......... ..........
 42_6b    .......... .......... .......... .......... ..........
  43_1    .......... .......... .......... .......... ..........
  43_5    .......... .......... .......... .......... ..........
 43_12    .......... .......... .......... .......... ..........
 43_20    .......... .......... .......... .......... ..........
 43_21    .......... .......... .......... .......... ..........
 43_23    .......... .......... .......... .......... ..........
 43_25    .......... .......... .......... .......... ..........
  44_1    .......... .......... .......... .......... ..........
  44_5    .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    .......... .......... .......... .......... ..........
  A3_5    .......... .......... .......... .......... ..........
  A3_7    .......... .......... .......... .......... ..........
  A3_3    .......... .......... .......... .......... ..........
 42_12    .......... .......... .......... .......... ..........
  AAV1    GCG.TAATGG CGCCGGAGGG GGG.AACAAG GTGGTGGACG AGTGCTACAT
  AAV2    ACCAGAAATG GCGCCGGAGG CGGGAACAAG GTGGTGGATG AGTGCTACAT
  AAV3    ACGCGAAATG GCGCCGGGGG CGGGAACAAG GTGGTGGACG ACTGCTACAT
  AAV8    GCGGTAATGG CGCCGGCGGG GGGGAACAAG GTGGTGGACG AGTGCTACAT
  AAV9    GCG.TAATGG CGCCGGCGGG GGG.AACAAG GTGGTGGACG AGTGCTACAT
  AAV7    ACGCGTAATG GCGCCGGCGG GGGGAACAAG GTGGTGGACG AGTGCTACAT
  44_2    .......... .......... .......... .......... ..........
```

Fig. 1Q

```
          801                                                       850
 42_2     .......... .......... .......... .......... ..........
 42_8     .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
 42_4     .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... .......... .......... ..........
 43_1     .......... .......... .......... .......... ..........
 43_5     .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
 44_1     .......... .......... .......... .......... ..........
 44_5     .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     .......... .......... .......... .......... ..........
 A3_5     .......... .......... .......... .......... ..........
 A3_7     .......... .......... .......... .......... ..........
 A3_3     .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
 AAV1     CCCCAACTAC CTCCTGCCCA AGACTCAGCC CGAGCTGCAG TGGGCGTGGA
 AAV2     CCCCAATTAC TTGCTCCCCA AAACCCAGCC TGAGCTCCAG TGGGCGTGGA
 AAV3     CCCCAACTAC CTGCTCCCCA AGACCCAGCC CGAGCTCCAG TGGGCGTGGA
 AAV8     CCCCAACTAC CTCCTGCCCA AGACTCAGCC CGAGCTGCAG TGGGCGTGGA
 AAV9     CCCCAACTAC CTCCTGCCCA AGACTCAGCC CGAGCTGCAG TGGGCGTGGA
 AAV7     CCCCAACTAC CTCCTGCCCA AGACCCAGCC CGAGCTGCAG TGGGCGTGGA
 44_2     .......... .......... .......... .......... ..........
```

Fig. 1R

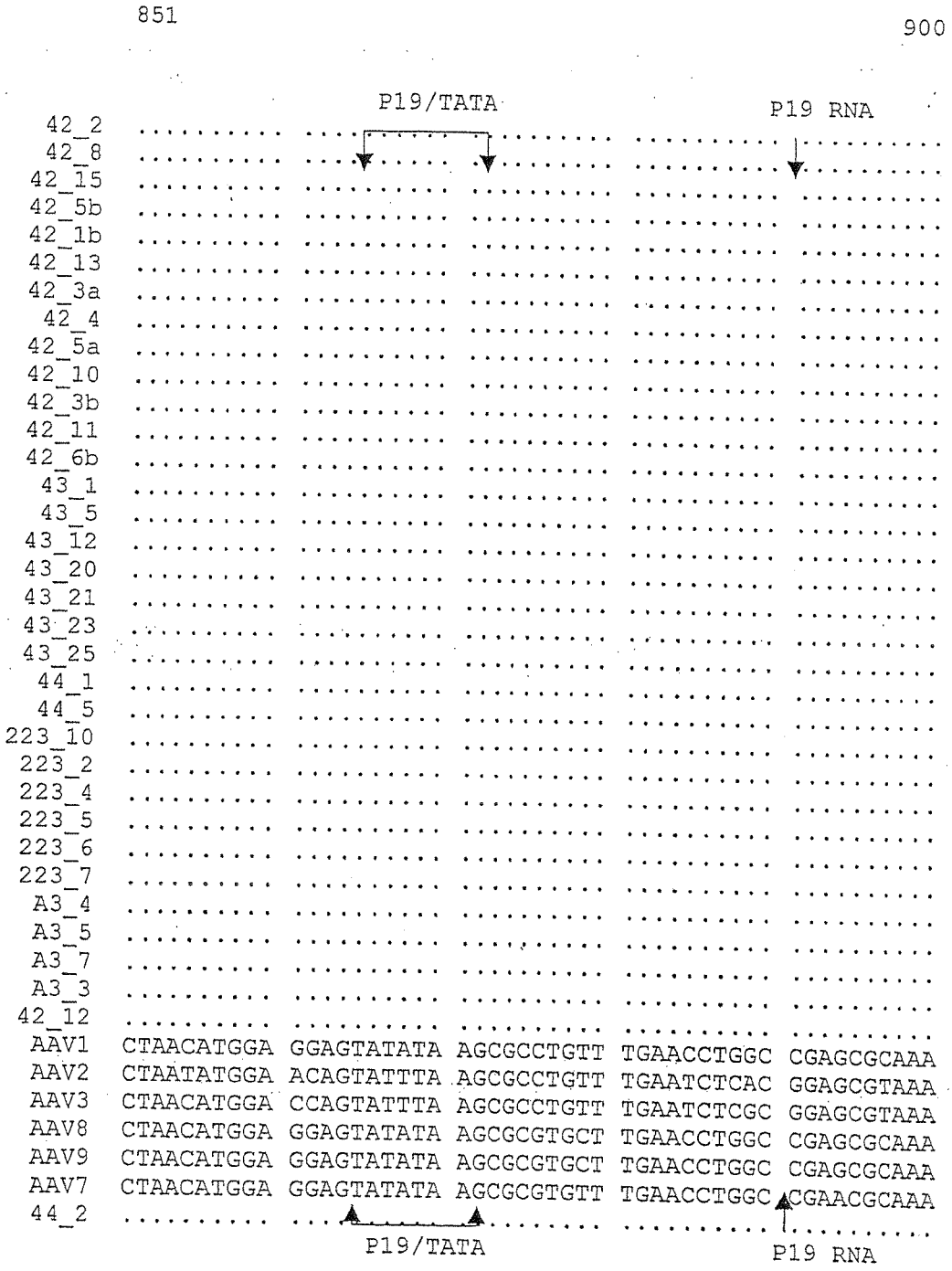

851
900
P19/TATA
P19 RNA
42_2
42_8
42_15
42_5b
42_1b
42_13
42_3a
42_4
42_5a
42_10
42_3b
42_11
42_6b
43_1
43_5
43_12
43_20
43_21
43_23
43_25
44_1
44_5
223_10
223_2
223_4
223_5
223_6
223_7
A3_4
A3_5
A3_7
A3_3
42_12
AAV1 CTAACATGGA GGAGTATATA AGCGCCTGTT TGAACCTGGC CGAGCGCAAA
AAV2 CTAATATGGA ACAGTATTTA AGCGCCTGTT TGAATCTCAC GGAGCGTAAA
AAV3 CTAACATGGA CCAGTATTTA AGCGCCTGTT TGAATCTCGC GGAGCGTAAA
AAV8 CTAACATGGA GGAGTATATA AGCGCGTGCT TGAACCTGGC CGAGCGCAAA
AAV9 CTAACATGGA GGAGTATATA AGCGCGTGCT TGAACCTGGC CGAGCGCAAA
AAV7 CTAACATGGA GGAGTATATA AGCGCGTGTT TGAACCTGGC CGAACGCAAA
44_2
P19/TATA
P19 RNA

Fig. 1S

```
          901                                                        950
 42_2     .......... .......... .......... .......... ..........
 42_8     .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
 42_4     .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... .......... .......... ..........
 43_1     .......... .......... .......... .......... ..........
 43_5     .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
 44_1     .......... .......... .......... .......... ..........
 44_5     .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     .......... .......... .......... .......... ..........
 A3_5     .......... .......... .......... .......... ..........
 A3_7     .......... .......... .......... .......... ..........
 A3_3     .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
 AAV1     CGGCTCGTGG CGCAGCACCT GACCCACGTC AGCCAGACCC AGGAGCAGAA
 AAV2     CGGTTGGTGG CGCAGCATCT GACGCACGTG TCGCAGACGC AGGAGCAGAA
 AAV3     CGGCTGGTGG CGCAGCATCT GACGCACGTG TCGCAGACGC AGGAGCAGAA
 AAV8     CGGCTCGTGG CGCAGCACCT GACCCACGTC AGCCAGACGC AGGAGCAGAA
 AAV9     CGGCTCGTGG CGCAGCACCT GACCCACGTC AGCCAGACGC AGGAGCAGAA
 AAV7     CGGCTCGTGG CGCAGCACCT GACCCACGTC AGCCAGACGC AGGAGCAGAA
 44_2     .......... .......... .......... .......... ..........
```

Fig. 1T

```
          951                                                        1000
  42_2    .......... .......... .......... .......... ..........
  42_8    .......... .......... .......... .......... ..........
 42_15    .......... .......... .......... .......... ..........
 42_5b    .......... .......... .......... .......... ..........
 42_1b    .......... .......... .......... .......... ..........
 42_13    .......... .......... .......... .......... ..........
 42_3a    .......... .......... .......... .......... ..........
  42_4    .......... .......... .......... .......... ..........
 42_5a    .......... .......... .......... .......... ..........
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    .......... .......... .......... .......... ..........
 42_6b    .......... .......... .......... .......... ..........
  43_1    .......... .......... .......... .......... ..........
  43_5    .......... .......... .......... .......... ..........
 43_12    .......... .......... .......... .......... ..........
 43_20    .......... .......... .......... .......... ..........
 43_21    .......... .......... .......... .......... ..........
 43_23    .......... .......... .......... .......... ..........
 43_25    .......... .......... .......... .......... ..........
  44_1    .......... .......... .......... .......... ..........
  44_5    .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    .......... .......... .......... .......... ..........
  A3_5    .......... .......... .......... .......... ..........
  A3_7    .......... .......... .......... .......... ..........
  A3_3    .......... .......... .......... .......... ..........
 42_12    .......... .......... .......... .......... ..........
  AAV1    CAAGGAGAAT CTGAACCCCA ATTCTGACGC GCCTGTCATC CGGTCAAAAA
  AAV2    CAAAGAGAAT CAGAATCCCA ATTCTGATGC GCCGGTGATC AGATCAAAAA
  AAV3    CAAAGAGAAT CAGAACCCCA ATTCTGACGC GCCGGTCATC AGGTCAAAAA
  AAV8    CAAGGAGAAT CTGAACCCCA ATTCTGACGC GCCCGTGATC AGGTCAAAAA
  AAV9    CAAGGAGAAT CTGAACCCCA ATTCTGACGC GCCCGTGATC AGGTCAAAAA
  AAV7    CAAGGAGAAT CTGAACCCCA ATTCTGACGC GCCCGTGATC AGGTCAAAAA
  44_2    .......... .......... .......... .......... ..........
```

Fig. 1U

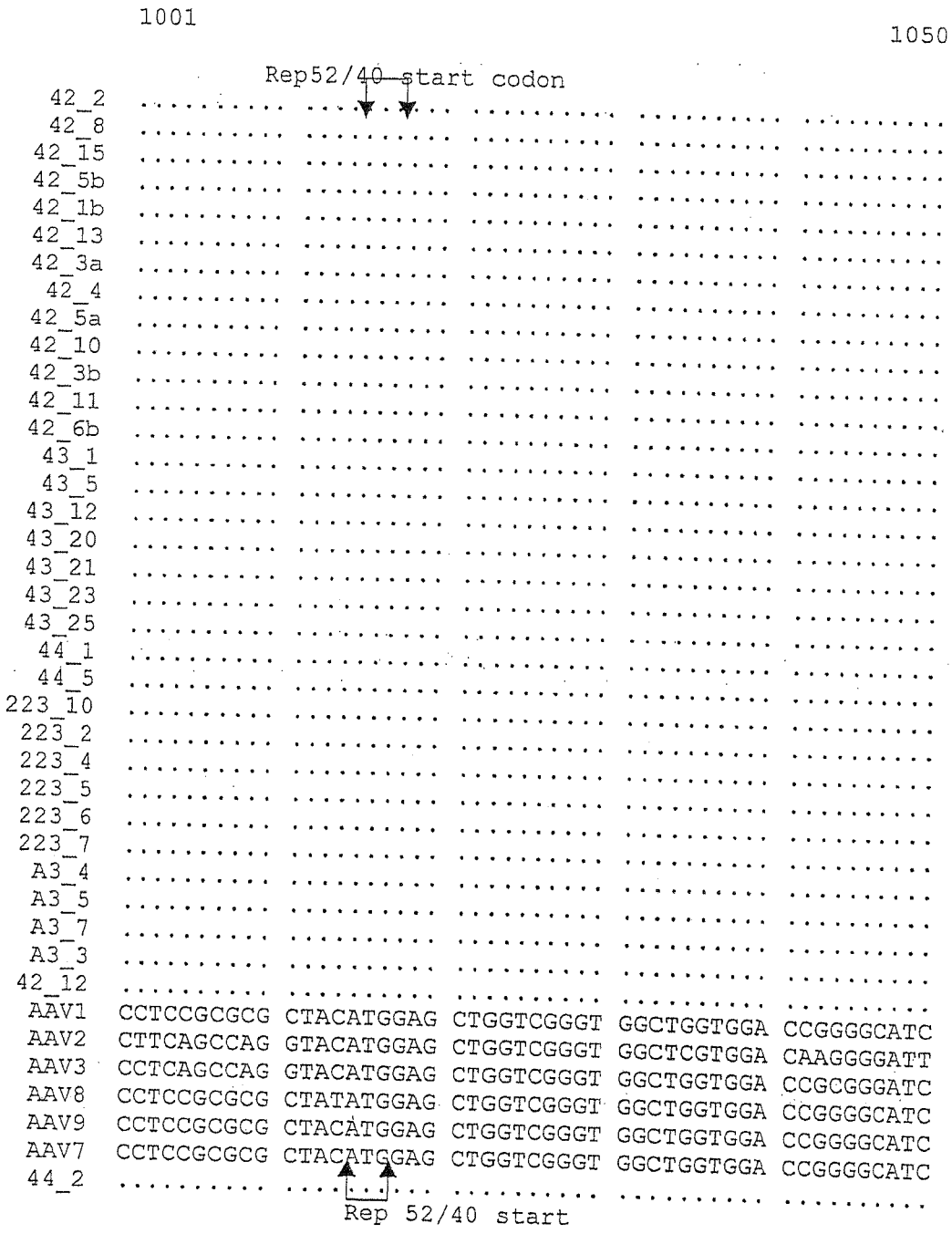

1001
1050
Rep52/40 start codon
42_2
42_8
42_15
42_5b
42_1b
42_13
42_3a
42_4
42_5a
42_10
42_3b
42_11
42_6b
43_1
43_5
43_12
43_20
43_21
43_23
43_25
44_1
44_5
223_10
223_2
223_4
223_5
223_6
223_7
A3_4
A3_5
A3_7
A3_3
42_12
AAV1 CCTCCGCGCG CTACATGGAG CTGGTCGGGT GGCTGGTGGA CCGGGGCATC
AAV2 CTTCAGCCAG GTACATGGAG CTGGTCGGGT GGCTCGTGGA CAAGGGGATT
AAV3 CCTCAGCCAG GTACATGGAG CTGGTCGGGT GGCTGGTGGA CCGCGGGATC
AAV8 CCTCCGCGCG CTATATGGAG CTGGTCGGGT GGCTGGTGGA CCGGGGCATC
AAV9 CCTCCGCGCG CTACATGGAG CTGGTCGGGT GGCTGGTGGA CCGGGGCATC
AAV7 CCTCCGCGCG CTACATGGAG CTGGTCGGGT GGCTGGTGGA CCGGGGCATC
44_2
Rep 52/40 start

Fig. 1V

```
          1051                                                        1100
  42_2    .......... .......... .......... .......... ..........
  42_8    .......... .......... .......... .......... ..........
 42_15    .......... .......... .......... .......... ..........
 42_5b    .......... .......... .......... .......... ..........
 42_1b    .......... .......... .......... .......... ..........
 42_13    .......... .......... .......... .......... ..........
 42_3a    .......... .......... .......... .......... ..........
  42_4    .......... .......... .......... .......... ..........
 42_5a    .......... .......... .......... .......... ..........
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    .......... .......... .......... .......... ..........
 42_6b    .......... .......... .......... .......... ..........
  43_1    .......... .......... .......... .......... ..........
  43_5    .......... .......... .......... .......... ..........
 43_12    .......... .......... .......... .......... ..........
 43_20    .......... .......... .......... .......... ..........
 43_21    .......... .......... .......... .......... ..........
 43_23    .......... .......... .......... .......... ..........
 43_25    .......... .......... .......... .......... ..........
  44_1    .......... .......... .......... .......... ..........
  44_5    .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    .......... .......... .......... .......... ..........
  A3_5    .......... .......... .......... .......... ..........
  A3_7    .......... .......... .......... .......... ..........
  A3_3    .......... .......... .......... .......... ..........
 42_12    .......... .......... .......... .......... ..........
  AAV1    ACCTCCGAGA AGCAGTGGAT CCAGGAGGAC CAGGCCTCGT ACATCTCCTT
  AAV2    ACCTCGGAGA AGCAGTGGAT CCAGGAGGAC CAGGCCTCAT ACATCTCCTT
  AAV3    ACGTCAGAAA AGCAATGGAT TCAGGAGGAC CAGGCCTCGT ACATCTCCTT
  AAV8    ACCTCCGAGA AGCAGTGGAT CCAGGAGGAC CAGGCCTCGT ACATCTCCTT
  AAV9    ACCTCCGAGA AGCAGTGGAT CCAGGAGGAC CAGGCCTCGT ACATCTCCTT
  AAV7    ACCTCCGAGA AGCAGTGGAT CCAGGAGGAC CAGGCCTCGT ACATCTCCTT
  44_2    .......... .......... .......... .......... ..........
```

Fig. 1W

```
          1101                                                          1150
  42_2    .......... .......... .......... .......... ..........
  42_8    .......... .......... .......... .......... ..........
 42_15    .......... .......... .......... .......... ..........
 42_5b    .......... .......... .......... .......... ..........
 42_1b    .......... .......... .......... .......... ..........
 42_13    .......... .......... .......... .......... ..........
 42_3a    .......... .......... .......... .......... ..........
  42_4    .......... .......... .......... .......... ..........
 42_5a    .......... .......... .......... .......... ..........
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    .......... .......... .......... .......... ..........
 42_6b    .......... .......... .......... .......... ..........
  43_1    .......... .......... .......... .......... ..........
  43_5    .......... .......... .......... .......... ..........
 43_12    .......... .......... .......... .......... ..........
 43_20    .......... .......... .......... .......... ..........
 43_21    .......... .......... .......... .......... ..........
 43_23    .......... .......... .......... .......... ..........
 43_25    .......... .......... .......... .......... ..........
  44_1    .......... .......... .......... .......... ..........
  44_5    .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    .......... .......... .......... .......... ..........
  A3_5    .......... .......... .......... .......... ..........
  A3_7    .......... .......... .......... .......... ..........
  A3_3    .......... .......... .......... .......... ..........
 42_12    .......... .......... .......... .......... ..........
  AAV1    CAACGCCGCT TCCAACTCGC GGTCCCAGAT CAAGGCCGCT CTGGACAATG
  AAV2    CAATGCGGCC TCCAACTCGC GGTCCCAAAT CAAGGCTGCC TTGGACAATG
  AAV3    CAACGCCGCC TCCAACTCGC GGTCCCAGAT CAAGGCCGCG CTGGACAATG
  AAV8    CAACGCCGCC TCCAACTCGC GGTCCCAGAT CAAGGCCGCG CTGGACAATG
  AAV9    CAACGCCGCC TCCAACTCGC GGTCCCAGAT CAAGGCCGCG CTGGACAATG
  AAV7    CAACGCCGCC TCCAACTCGC GGTCCCAGAT CAAGGCCGCG CTGGACAATG
  44_2    .......... .......... .......... .......... ..........
```

Fig. 1X

```
          1151                                                        1200
  42_2    .......... .......... .......... .......... ..........
  42_8    .......... .......... .......... .......... ..........
 42_15    .......... .......... .......... .......... ..........
 42_5b    .......... .......... .......... .......... ..........
 42_1b    .......... .......... .......... .......... ..........
 42_13    .......... .......... .......... .......... ..........
 42_3a    .......... .......... .......... .......... ..........
  42_4    .......... .......... .......... .......... ..........
 42_5a    .......... .......... .......... .......... ..........
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    .......... .......... .......... .......... ..........
 42_6b    .......... .......... .......... .......... ..........
  43_1    .......... .......... .......... .......... ..........
  43_5    .......... .......... .......... .......... ..........
 43_12    .......... .......... .......... .......... ..........
 43_20    .......... .......... .......... .......... ..........
 43_21    .......... .......... .......... .......... ..........
 43_23    .......... .......... .......... .......... ..........
 43_25    .......... .......... .......... .......... ..........
  44_1    .......... .......... .......... .......... ..........
  44_5    .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    .......... .......... .......... .......... ..........
  A3_5    .......... .......... .......... .......... ..........
  A3_7    .......... .......... .......... .......... ..........
  A3_3    .......... .......... .......... .......... ..........
 42_12    .......... .......... .......... .......... ..........
  AAV1    CCGGCAAGAT CATGGCGCTG ACCAAATCCG CGCCCGACTA CCTGGTAGGC
  AAV2    CGGGAAAGAT TATGAGCCTG ACTAAAACCG CCCCCGACTA CCTGGTGGGC
  AAV3    CCTCCAAGAT CATGAGCCTG ACAAAGACGG CTCCGGACTA CCTGGTGGGC
  AAV8    CCGGCAAGAT CATGGCGCTG ACCAAATCCG CGCCCGACTA CCTGGTGGGG
  AAV9    CCGGCAAGAT CATGGCGCTG ACCAAATCCG CGCCCGACTA CCTGGTAGGC
  AAV7    CCGGCAAGAT CATGGCGCTG ACCAAATCCG CGCCCGACTA CCTGGTGGGG
  44_2    .......... .......... .......... .......... ..........
```

Fig. 1Y

```
          1201                                                      1250
 42_2     .......... .......... .......... .......... ..........
 42_8     .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
 42_4     .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... ........GA ATTCGCCCTT TCTACGGCTG
 43_1     .......... .......... .......... .......... ..........
 43_5     .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
 44_1     .......... .......... .......... .......... ..........
 44_5     .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     .......... .......... .......... .......... ..........
 A3_5     .......... .......... .......... .......... ..........
 A3_7     .......... .......... .......... .......... ..........
 A3_3     .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
 AAV1     CCCGCTCCGC CCGCGGACAT TAAAACCAAC CGCATCTACC GCATCCTGGA
 AAV2     CAGCAGCCCG TGGAGGACAT TTCCAGCAAT CGGATTTATA AAATTTTGGA
 AAV3     AGCAACCCGC CGGAGGACAT TACCAAAAAT CGGATCTACC AAATCCTGGA
 AAV8     CCCTCGCTGC CCGCGGACAT TACCCAGAAC CGCATCTACC GCATCCTCGC
 AAV9     CCTTCACTTC CGGTGGACAT TACGCAGAAC CGCATCTACC GCATCCTGCA
 AAV7     CCCTCGCTGC CCGCGGACAT TAAAACCAAC CGCATCTACC GCATCCTGGA
 44_2     .......... .......... .......... .......... ..........
```

Fig. 1Z

```
          1251                                                      1300
  42_2    .......... .......... .......... .......... ..........
  42_8    .......... .......... .......... .......... ..........
 42_15    .......... .......... .......... .......... ..........
 42_5b    .......... .......... .......... .......... ..........
 42_1b    .......... .......... .......... .......... ..........
 42_13    .......... .......... .......... .......... ..........
 42_3a    .......... .......... .......... .......... ..........
  42_4    .......... .......... .......... .......... ..........
 42_5a    .......... .......... .......... .......... ..........
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    .......... .......... .......... .......... ..........
 42_6b    CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC GTCGACAAGA
  43_1    .......... .......... .......... .......... ..........
  43_5    .......... .......... .......... .......... ..........
 43_12    .......... .......... .......... .......... ..........
 43_20    .......... .......... .......... .......... ..........
 43_21    .......... .......... .......... .......... ..........
 43_23    .......... .......... .......... .......... ..........
 43_25    .......... .......... .......... .......... ..........
  44_1    .......... .......... .......... .......... ..........
  44_5    .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    .......... .......... .......... .......... ..........
  A3_5    .......... .......... .......... .......... ..........
  A3_7    .......... .......... .......... .......... ..........
  A3_3    .......... .......... .......... .......... ..........
 42_12    .......... .......... .......... .......... ..........
  AAV1    GCTGAACGGC TACGAACCTG CCTACGCCGG CTCCGTCTTT CTCGGCTGGG
  AAV2    ACTAAACGGG TACGATCCCC AATATGCGGC TTCCGTCTTT CTGGGATGGG
  AAV3    GCTGAACGGG TACGATCCGC AGTACGCGGC CTCCGTCTTC CTGGGCTGGG
  AAV8    TCTCAACGGC TACGACCCTG CCTACGCCGG CTCCGTCTTT CTCGGCTGGG
  AAV9    GCTCAACGGC TACGACCCTG CCTACGCCGG CTCCGTCTTT CTCGGCTGGG
  AAV7    GCTGAACGGG TACGATCCTG CCTACGCCGG CTCCGTCTTT CTCGGCTGGG
  44_2    .......... .......... .......... .......... ..........
```

Fig. 1AA

```
          1301                                                      1350
  42_2    .......... .......... .......... .......... ..........
  42_8    .......... .......... .......... .......... ..........
 42_15    .......... .......... .......... .......... ..........
 42_5b    .......... .......... .......... .......... ..........
 42_1b    .......... .......... .......... .......... ..........
 42_13    .......... .......... .......... .......... ..........
 42_3a    .......... .......... .......... .......... ..........
  42_4    .......... .......... .......... .......... ..........
 42_5a    .......... .......... .......... .......... ..........
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    .......... .......... .......... .......... ..........
 42_6b    TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT CGTGGAGTCC
  43_1    .......... .......... .......... .......... ..........
  43_5    .......... .......... .......... .......... ..........
 43_12    .......... .......... .......... .......... ..........
 43_20    .......... .......... .......... .......... ..........
 43_21    .......... .......... .......... .......... ..........
 43_23    .......... .......... .......... .......... ..........
 43_25    .......... .......... .......... .......... ..........
  44_1    .......... .......... .......... .......... ..........
  44_5    .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    .......... .......... .......... .......... ..........
  A3_5    .......... .......... .......... .......... ..........
  A3_7    .......... .......... .......... .......... ..........
  A3_3    .......... .......... .......... .......... ..........
 42_12    .......... .......... .......... .......... ..........
  AAV1    CCCAGAAAAG GTTCGGGAAG CGCAACACCA TCTGGCTGTT TGGGCCGGCC
  AAV2    CCACGAAAAA GTTCGGCAAG AGGAACACCA TCTGGCTGTT TGGGCCTGCA
  AAV3    CGCAAAAGAA GTTCGGGAAG AGGAACACCA TCTGGCTCTT TGGGCCGGCC
  AAV8    CTCAGAAAAA GTTCGGGAAA CGCAACACCA TCTGGCTGTT TGGACCCGCC
  AAV9    CACAAAAGAA GTTCGGGAAA CGCAACACCA TCTGGCTGTT TGGGCCGGCC
  AAV7    CCCAGAAAAA GTTCGGGAAG CGCAACACCA TCTGGCTGTT TGGGCCCGCC
  44_2    .......... .......... .......... .......... ..........
```

Fig. 1AB

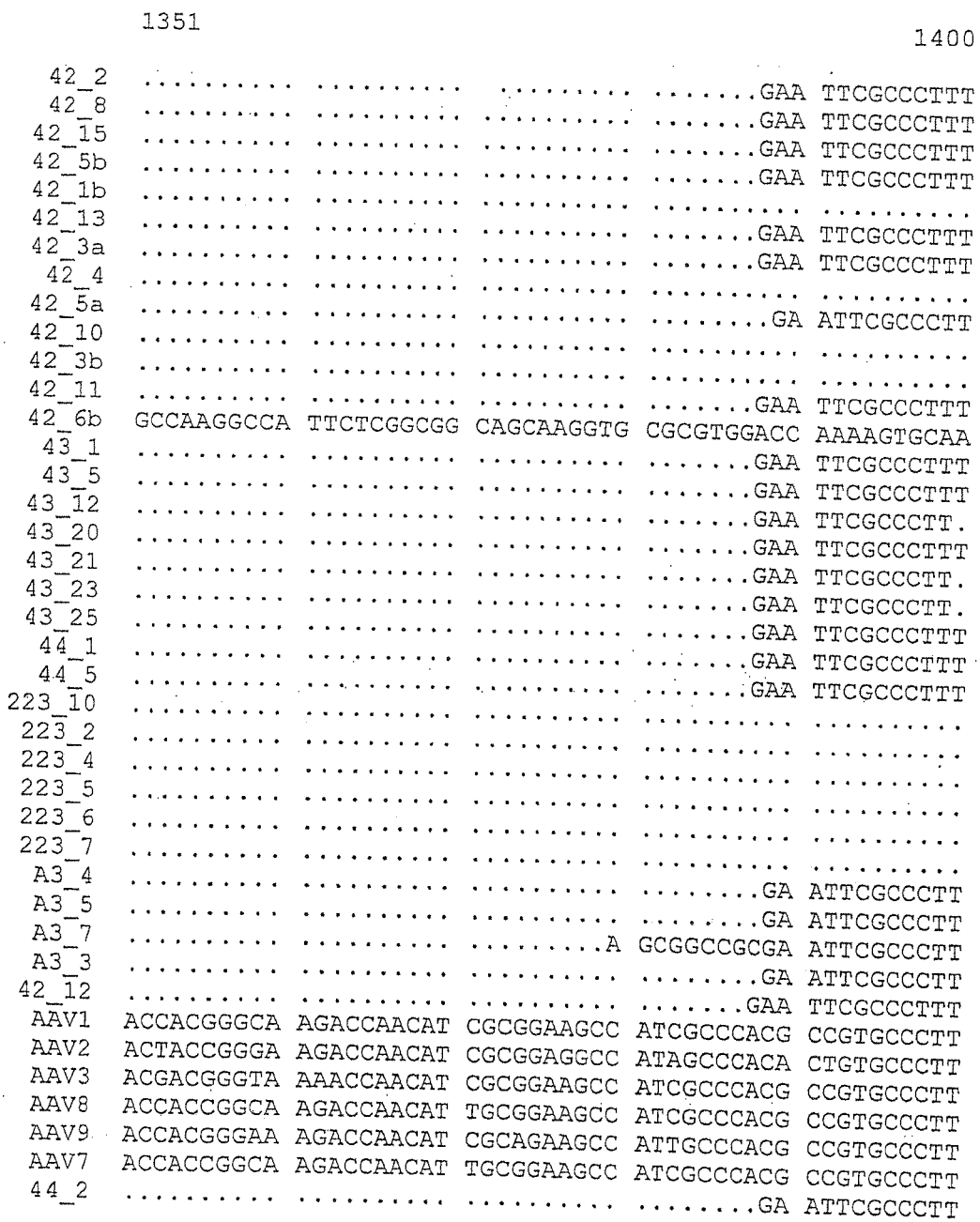

1351
1400
42_2 ....GAA TTCGCCCTTT
42_8 ....GAA TTCGCCCTTT
42_15 ....GAA TTCGCCCTTT
42_5b ....GAA TTCGCCCTTT
42_1b ....
42_13 ....GAA TTCGCCCTTT
42_3a ....GAA TTCGCCCTTT
42_4 ....
42_5a ....GA ATTCGCCCTT
42_10 ....
42_3b ....
42_11 ....GAA TTCGCCCTTT
42_6b GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC AAAAGTGCAA
43_1 ....GAA TTCGCCCTTT
43_5 ....GAA TTCGCCCTTT
43_12 ....GAA TTCGCCCTT.
43_20 ....GAA TTCGCCCTTT
43_21 ....GAA TTCGCCCTT.
43_23 ....GAA TTCGCCCTT.
43_25 ....GAA TTCGCCCTTT
44_1 ....GAA TTCGCCCTTT
44_5 ....GAA TTCGCCCTTT
223_10 ....
223_2 ....
223_4 ....
223_5 ....
223_6 ....
223_7 ....
A3_4 ....GA ATTCGCCCTT
A3_5 ....GA ATTCGCCCTT
A3_7 ....A GCGGCCGCGA ATTCGCCCTT
A3_3 ....GA ATTCGCCCTT
42_12 ....GAA TTCGCCCTTT
AAV1 ACCACGGGCA AGACCAACAT CGCGGAAGCC ATCGCCCACG CCGTGCCCTT
AAV2 ACTACCGGGA AGACCAACAT CGCGGAGGCC ATAGCCCACA CTGTGCCCTT
AAV3 ACGACGGGTA AAACCAACAT CGCGGAAGCC ATCGCCCACG CCGTGCCCTT
AAV8 ACCACCGGCA AGACCAACAT TGCGGAAGCC ATCGCCCACG CCGTGCCCTT
AAV9 ACCACGGGAA AGACCAACAT CGCAGAAGCC ATTGCCCACG CCGTGCCCTT
AAV7 ACCACCGGCA AGACCAACAT TGCGGAAGCC ATCGCCCACG CCGTGCCCTT
44_2 ....GA ATTCGCCCTT

Fig. 1AC

```
         1401                                                        1450
 42_2    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
 42_8    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
42_15    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
42_5b    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
42_1b    .......... .......... .......... .......... ..........
42_13    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
42_3a    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
 42_4    .......... .......... .......... .......... ..........
42_5a    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
42_10    .......... .......... .......... .......... ..........
42_3b    .......... .......... .......... .......... ..........
42_11    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
42_6b    .GTCTTCCGC CCAGATCGAT CCCACCCCCG TGATCGTCAC TTCCAACACC
 43_1    .CTACGGCTG CATCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
 43_5    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
43_12    .....GGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
43_20    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
43_21    .....GGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
43_23    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
43_25    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
 44_1    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
 44_5    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
223_10   .......... .......... .......... .......... ..........
223_2    .......... .......... .......... .......... ..........
223_4    .......... .......... .......... .......... ..........
223_5    .......... .......... .......... .......... ..........
223_6    .......... .......... .......... .......... ..........
223_7    .......... .......... .......... .......... ..........
 A3_4    TCTACGGCTG CGTCAACTGG ACCAATGAAA ACTTTCCCTT CAACGATTGC
 A3_5    TCTACGGCTG CGTCAACTGG ACCAATGAAA ACTTTCCCTT CAACGATTGC
 A3_7    TCTACGGCTG CGTCAACTGG ACCAATGAAA ACTTTCCCTT CAACGATTGC
 A3_3    TCTACGGCTG CGTCAACTGG ACCAATGAAA ACTTTCCCTT CAACGATTGC
42_12    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
 AAV1    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
 AAV2    .CTACGGGTG CGTAAACTGG ACCAATGAGA ACTTTCCCTT CAATGATTGC
 AAV3    .CTACGGCTG CGTAAACTGG ACCAATGAGA ACTTTCCCTT CAACGACTGT
 AAV8    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
 AAV9    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAATGATTGC
 AAV7    .CTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
 44_2    TCTACGGCTG CGTCAACTGG ACCAATGAGA ACTTTCCCTT CAACGATTGC
```

Fig. 1AD

```
          1451                                                        1500
  42_2    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  42_8    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 42_15    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 42_5b    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 42_1b    .......... .......... .......... .......... ..........
 42_13    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 42_3a    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  42_4    .......... .......... .......... .......... ..........
 42_5a    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 42_6b    AACATGTGCG CCGTGATTGA CGGGAACAGC ACCACCTTCG AGCACCAGCA
  43_1    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  43_5    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 43_12    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 43_20    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 43_21    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 43_23    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
 43_25    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  44_1    GTCGACAAGA TGTTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  44_5    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGAAAGATGA CCGCCAAGGT
  A3_5    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGAAAGATGA CCGCCAAGGT
  A3_7    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGAAAGATGA CCGCCAAGGT
  A3_3    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGAAAGATGA CCGCCAAGGT
 42_12    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  AAV1    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  AAV2    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGGAAGATGA CCGCCAAGGT
  AAV3    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  AAV8    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  AAV9    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  AAV7    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
  44_2    GTCGACAAGA TGGTGATCTG GTGGGAGGAG GGCAAGATGA CGGCCAAGGT
```

Fig. 1AE

```
          1501                                                        1550
  42_2    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
  42_8    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
 42_15    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
 42_5b    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
 42_1b    .......... .......... .......... .......... ..........
 42_13    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
 42_3a    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
  42_4    .......... .......... .......... .......... ..........
 42_5a    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
 42_6b    GCCGTTGCAG GACCGGATGT TCAAATTTGA ACTCACCCGC CGTCTGGAGC
  43_1    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
  43_5    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
 43_12    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
 43_20    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGTGTGGACC
 43_21    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGTGTGGACC
 43_23    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGTGTGGACC
 43_25    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGTGTGGACC
  44_1    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAAGTG CGCGTGGACC
  44_5    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAAGTG CGCGTGGACC
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    CGTGGAATCT GCCAAAGCCA TTCTGGGTGG AAGCAAGGTT CGTGTGGACC
  A3_5    CGTGGAATCT GCCAAAGCCA TTCTGGGTGG AAGCAAGGTT CGTGTGGACC
  A3_7    CGTGGAATCT GCCAAAGCCA TTCTGGGTGG AAGCAAGGTT CGTGTGGACC
  A3_3    CGTGGAATCT GCCAAAGCCA TTCTGGGTGG AGGCAAGGTT CGTGTGGACC
 42_12    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
  AAV1    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
  AAV2    CGTGGAGTCG GCCAAAGCCA TTCTCGGAGG AAGCAAGGTG CGCGTGGACC
  AAV3    CGTGGAGAGC GCCAAGGCCA TTCTGGGCGG AAGCAAGGTG CGCGTGGACC
  AAV8    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
  AAV9    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
  AAV7    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAGGTG CGCGTGGACC
  44_2    CGTGGAGTCC GCCAAGGCCA TTCTCGGCGG CAGCAAAGTG CGCGTGGACC
```

Fig. 1AF

```
          1551                                                        1600
  42_2    AAAAGTGCAA GTCTTCCGCC CAGATCGATC CCACCCCCGT GATCGTCACT
  42_8    AAAAGTGCAA GTCTTCCGCC CAGATCGATC CCACCCCCGT GATCGTCACT
 42_15    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
 42_5b    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
 42_1b    .......... .......... .......... .......... ..........
 42_13    AAAAGTGCAA GTCGTCCGCC CAGATCGATC CCACCCCCGT GATCGTCACT
 42_3a    AAAAGTGCAA GTCGTCCGCC CAGATCGATC CCACCCCCGT GATCGTCACT
  42_4    .......... .......... .......... .......... ..........
 42_5a    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    AAAAGTGCAA GTCTTCCGCC CAGATCGATC CCACCCCCGT GATCGTCACT
 42_6b    ATGACTTTGG CAAGGTGACA AAGCAGGAAG TCAAAGAGTT CTTCCGCTGG
  43_1    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
  43_5    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
 43_12    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
 43_20    AAAAGTGCAA GTCTTCCGCC CAGATCGATC CCACCCCCGT GATCGTCACC
 43_21    AAAAGTGCAA GTCTTCCGCC CAGATCGATC CCACCCCCGT GATCGTCACC
 43_23    AAAAGTGCAA GTCTTCCGCC CAGATCGATC CCACCCCCGT GATCGTCACC
 43_25    AAAAGTGCAA GTCTTCCGCC CAGATCGATC CCACCCCCGT GATCGTCACC
  44_1    AAAAGTGCAA GCCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
  44_5    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    AGAAATGCAA GTCTTCGGCC CAGATCGACC CGACTCCGGT GATTGTCACC
  A3_5    AGAAATGCAA GTCTTCGGCC CAGATCGACC CGACTCCGGT GATTGTCACC
  A3_7    AGAAATGCAG GTCTTCGGCC CAGATCGACC CGACTCCGGT GATTGTCACC
  A3_3    AGAAATGCAA GTCTTCGGCC CAGATCGACC CGACTCCGGT GATTGTCACC
 42_12    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
  AAV1    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
  AAV2    AGAAATGCAA GTCCTCGGCC CAGATAGACC CGACTCCCGT GATCGTCACC
  AAV3    AAAAGTGCAA GTCATCGGCC CAGATCGAAC CCACTCCCGT GATCGTCACC
  AAV8    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
  AAV9    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACTCCCGT GATCGTCACC
  AAV7    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
  44_2    AAAAGTGCAA GTCGTCCGCC CAGATCGACC CCACCCCCGT GATCGTCACC
```

Fig. 1AG

```
          1601                                                      1650
  42_2    TCCAACACCA ACATGTGCGC TGTGATTGAC GGGAACAGCA CCACCTTCGA
  42_8    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
 42_15    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
 42_5b    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
 42_1b    .......... .......... .......... .......... ..........
 42_13    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
 42_3a    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
  42_4    .......... .......... .......... .......... ..........
 42_5a    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
 42_6b    GCGCAGGATC ACGTGACCGA GGTGGCGCAT GAGTTCTACG TCAGAAAGGG
  43_1    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
  43_5    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
 43_12    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
 43_20    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
 43_21    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCG CCACCTTCGA
 43_23    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
 43_25    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
  44_1    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
  44_5    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    TCTAACACCA ACATGTGCGC CGTGATTGAC GGAAACTCGA CCACCTTCGA
  A3_5    TCTAACACCA ACATGTGCGC CGTGATTGAC GGAAACTCGA CCACCTTCGA
  A3_7    TCTAACACCA ACATGTGCGC CGTGATTGAC GGAAACTCGA CCACCTTCGA
  A3_3    TCTAACACCA ACATGTGCGC CGTGATTGAC GGAAACTCGA CCACCTTCGA
 42_12    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
  AAV1    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
  AAV2    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACTCAA CGACCTTCGA
  AAV3    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
  AAV8    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
  AAV9    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
  AAV7    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
  44_2    TCCAACACCA ACATGTGCGC CGTGATTGAC GGGAACAGCA CCACCTTCGA
```

Fig. 1AH

```
          1651                                                        1700
  42_2    GCACCAGCAG CCGTTACAAG ACCGGATGTT CAAATTTGAA CTCACCCGCC
  42_8    GCACCAGCAG CCGTTACAAG ACCGGATGTT CAAATTTGAA CTCACCCGCC
 42_15    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAATTTGAA CTCACCCGCC
 42_5b    GCACCAGCAG CCGTTACAAG ACCGGATGTT CAAATTTGAA CTCACCCGCC
 42_1b    .......... .......... .......... .......... ..........
 42_13    GCACCAGCAG CCGTTACAAG ACCGGATGTT CAAATTTGAA CTCACCCGCC
 42_3a    GCACCAGCAG CCGTTACAAG ACCGGATGTT CAAATTTGAA CTCACCCGCC
  42_4    .......... .......... .......... .......... ..........
 42_5a    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAATTTGAA CTCACCCGCC
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    GCACCAGCAG CCGTTACAAG ACCGGATGTT CAAATTTGAA CTCACCCGCC
 42_6b    TGGAGCCAAC AAGAGACCCG CCCCCGATGA CGCGGATAAA AGCGAGCCCA
  43_1    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAGTTCGAA CTCACCCGCC
  43_5    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAGTTCGAA CTCACCCGCC
 43_12    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAGTTCGAA CTCACCCGCC
 43_20    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAATTTGAA CTCACCCGCC
 43_21    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAATTTGAA CTCACCCGCC
 43_23    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAATTTGAA CTCACCCGCC
 43_25    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAATTTGAA CTCACCCGCC
  44_1    GCACCAGCAG CCGTTGCGGG ACCGGATGTT CAAGTTTGAA CTCACCCGCC
  44_5    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAGTTTGAA CTCACCCGCC
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    GCACCAGCAG CCGTTGCAAG ACCGGATGTT CAAATTTGAA CTTACCCGCC
  A3_5    GCACCAGCAG CCGTTGCAAG ACCGGATGTT CAAATTTGAA CTTACCCGCC
  A3_7    GCACCAGCAG CCGTTGCAAG ACCGGATGTT CAAATTTGAA CTTACCCGCC
  A3_3    GCACCAGCAG CCGTTGCAAG ACCGGATGTT CAAATTTGAA CTTACCCGCC
 42_12    GCACCAGCAG CCGTTACAAG ACCGGATGTT CAAATTTGAA CTCACCCGCC
  AAV1    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAATTTGAA CTCACCCGCC
  AAV2    ACACCAGCAG CCGTTGCAAG ACCGGATGTT CAAATTTGAA CTCACCCGCC
  AAV3    GCATCAGCAG CCGCTGCAGG ACCGGATGTT TGAATTTGAA CTTACCCGCC
  AAV8    GCACCAGCAG CCTCTCCAGG ACCGGATGTT TAAGTTCGAA CTCACCCGCC
  AAV9    GCACCAGCAG CCTCTCCAGG ACCGGATGTT TAAGTTCGAA CTCACCCGCC
  AAV7    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAATTTGAA CTCACCCGCC
  44_2    GCACCAGCAG CCGTTGCAGG ACCGGATGTT CAAGTTTGAA CTCACCCGCC
```

Fig. 1AI

```
          1701                                                      1750
  42_2    GTCTGGAGCA CGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
  42_8    GTCTGGAGCA CGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
 42_15    GTCTGGAGCA TGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
 42_5b    GTCTGGAGCA CGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
 42_1b    .......... .......... .......... .......... ..........
 42_13    GTCTGGAGCA TGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
 42_3a    GTCTGGAGCA TGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
  42_4    .......... .......... .......... .......... ..........
 42_5a    GTCTGGAGCA TGACTTTGGC AAGGCGACAA AGCAGGAAGT CAAAGAGTTC
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    GTCTGGAGCA CGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
 42_6b    AGCGGGCCTG CCCCTCAGTC GCGGATCCAT CGACGTCAGA CGCGGAAGGA
  43_1    GTCTGGAGCA CGACTTTGGC AAGGTGACCA AGCAGGAAGT CAAAGAGTTC
  43_5    GTCTGGAGCA CGACTTTGGC AAGGTGACCA AGCAGGAAGT CAAAGAGTTC
 43_12    GTCTGGAGCA CGACTTTGGC AAGGTGACCA AGCAGGAAGT CAAAGAGTTC
 43_20    GTCTGGAGCA TGACTTTGGC AAGGTGACGA AGCAGGAAGT CAAAGAGTTC
 43_21    GTCTGGAGCA TGACTTTGGC AAGGTGACGA AGCAGGAAGT CAAAGAGTTC
 43_23    GTCTGGAGCA TGACTTTGGC AAGGTGACGA AGCAGGAAGT CAAAGAGTTC
 43_25    GTCTGGAGCA TGACTTTGGC AAGGTGACGA AGCAGGAAGT CAAAGGGTTC
  44_1    GTCTGGAGCA CGACTTTGGC AAGGTGACAA AGCAGGAAGT CAGAGAGTTC
  44_5    GTCTGGAGCA CGACTTTGGC AAGGTGACAA AGCAGGAAGT CAGAGAGTTC
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    GTTTGGATCA TGACTTTGGG AAGGTCACCA AGCAGGAAGT CAAAGACTTT
  A3_5    GTTTGGATCA TGACTTTGGG AAGGTCACCA AGCAGGAAGT CAAAGACTTT
  A3_7    GTTTGGATCA TGACTTTGGG AAGGTCACCA AGCAGGAAGT CAAAGACTTT
  A3_3    GTTTGGATCA TGACTTTGGG AAGGTCACCA AGCAGGAAGT CAAAGACTTT
 42_12    GTCTGGAGCA CGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
  AAV1    GTCTGGAGCA TGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
  AAV2    GTCTGGATCA TGACTTTGGG AAGGTCACCA AGCAGGAAGT CAAAGACTTT
  AAV3    GTTTGGACCA TGACTTTGGG AAGGTCACCA AACAGGAAGT AAAGGACTTT
  AAV8    GTCTGGAGCA CGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
  AAV9    GTCTGGAGCA CGACTTTGGC AAGGTGACAA AGCAGGAAGT CAAAGAGTTC
  AAV7    GTCTGGAGCA CGACTTTGGC AAGGTGACGA AGCAGGAAGT CAAAGAGTTC
  44_2    GTCTGGAGCA CGACTTTGGC AAGGTGACAA AGCAGGAAGT CAGAGAGTTC
```

Fig. 1AJ

```
          1751                                                        1800
  42_2    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
  42_8    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
 42_15    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
 42_5b    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
 42_1b    .......... .......... .......... .......... ..........
 42_13    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
 42_3a    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
  42_4    .......... .......... .......... .......... ..........
 42_5a    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
 42_6b    GCTCCGGTGG ACTTTGCCGA CAGGTACCAA AACAAATGTT CTCGTCACGC
  43_1    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
  43_5    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
 43_12    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
 43_20    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCCACGT
 43_21    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCCACGT
 43_23    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCCACGT
 43_25    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCCACGT
  44_1    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCACG AGTTCTACGT
  44_5    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCACG AGTTCTACGT
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    TTCCGGTGGG CTCAAGATCA CGTGACTGAG GTGGAGCATG AGTTCTACGT
  A3_5    TTCCGGTGGG CTCAAGATCA CGTGACTGAG GTGGAGCATG AGTTCTACGT
  A3_7    TTCCGGTGGG CTCAAGATCA CGTGACTGAG GTGGAGCATG AGTTCTACGT
  A3_3    TTCCGGTGGG CTCAAGATCA CGTGACTGAG GTGGAGCATG AGTTCTACGT
 42_12    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
  AAV1    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
  AAV2    TTCCGGTGGG CAAAGGATCA CGTGGTTGAG GTGGAGCATG AATTCTACGT
  AAV3    TTCCGGTGGG CTTCCGATCA CGTGACTGAC GTGGCTCATG AGTTCTACGT
  AAV8    TTCCGCTGGG CCAGTGATCA CGTGACCGAG GTGGCGCATG AGTTTTACGT
  AAV9    TTCCGCTGGG CCAGTGATCA CGTGACCGAG GTGGCGCATG AGTTTTACGT
  AAV7    TTCCGCTGGG CCAGTGATCA CGTGACCGAG GTGGCGCATG AGTTCTACGT
  44_2    TTCCGCTGGG CGCAGGATCA CGTGACCGAG GTGGCGCACG AGTTCTACGT
```

Fig. 1AK

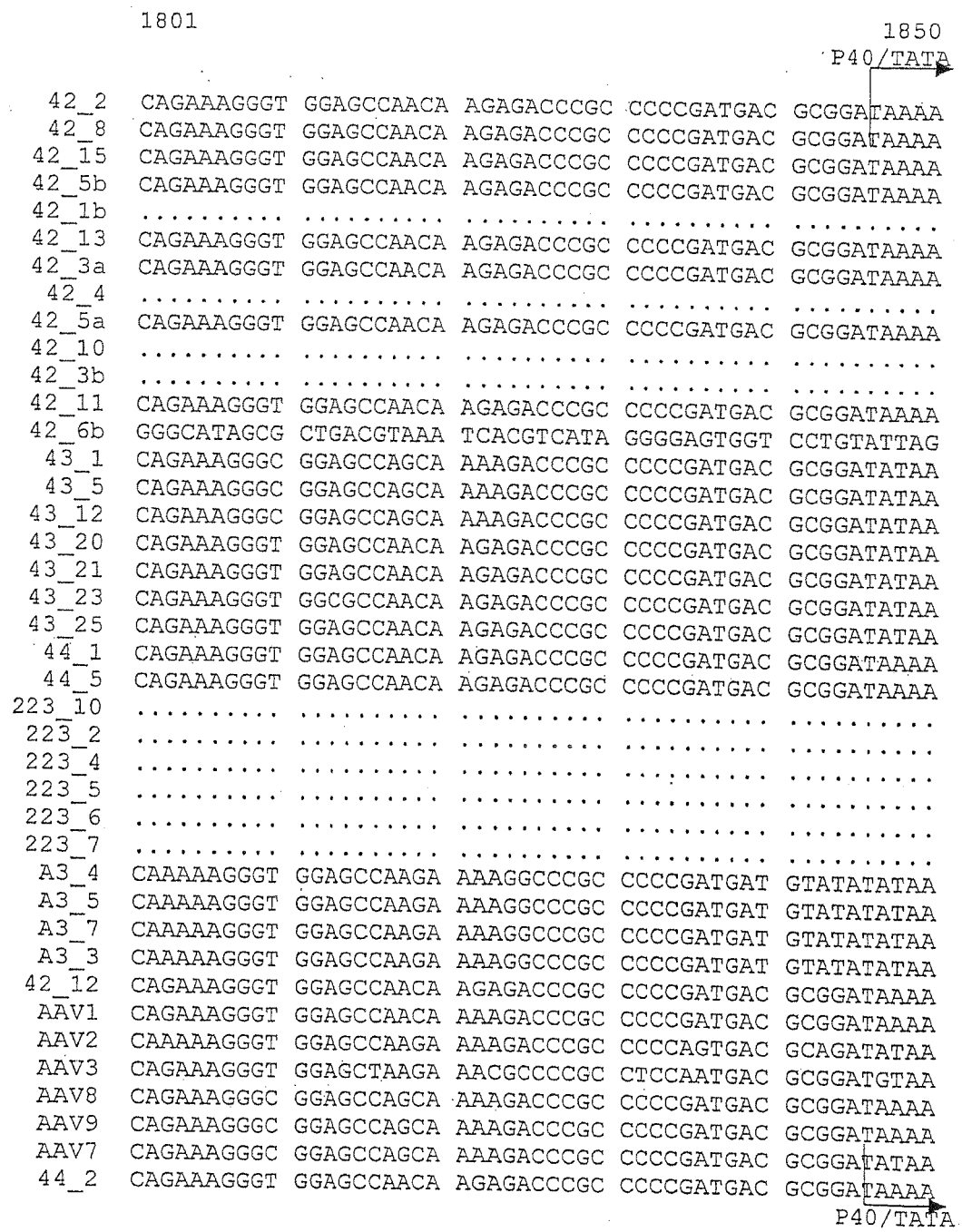

1801
1850
P40/TATA
42_2 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
42_8 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
42_15 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
42_5b CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
42_1b ....
42_13 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
42_3a CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
42_4 ....
42_5a CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
42_10 ....
42_3b ....
42_11 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
42_6b GGGCATAGCG CTGACGTAAA TCACGTCATA GGGGAGTGGT CCTGTATTAG
43_1 CAGAAAGGGC GGAGCCAGCA AAAGACCCGC CCCCGATGAC GCGGATATAA
43_5 CAGAAAGGGC GGAGCCAGCA AAAGACCCGC CCCCGATGAC GCGGATATAA
43_12 CAGAAAGGGC GGAGCCAGCA AAAGACCCGC CCCCGATGAC GCGGATATAA
43_20 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATATAA
43_21 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATATAA
43_23 CAGAAAGGGT GGCGCCAACA AGAGACCCGC CCCCGATGAC GCGGATATAA
43_25 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATATAA
44_1 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATATAA
44_5 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
223_10 ....
223_2 ....
223_4 ....
223_5 ....
223_6 ....
223_7 ....
A3_4 CAAAAAGGGT GGAGCCAAGA AAAGGCCCGC CCCCGATGAT GTATATATAA
A3_5 CAAAAAGGGT GGAGCCAAGA AAAGGCCCGC CCCCGATGAT GTATATATAA
A3_7 CAAAAAGGGT GGAGCCAAGA AAAGGCCCGC CCCCGATGAT GTATATATAA
A3_3 CAAAAAGGGT GGAGCCAAGA AAAGGCCCGC CCCCGATGAT GTATATATAA
42_12 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
AAV1 CAGAAAGGGT GGAGCCAACA AAAGACCCGC CCCCGATGAC GCGGATAAAA
AAV2 CAAAAAGGGT GGAGCCAAGA AAAGACCCGC CCCCAGTGAC GCAGATATAA
AAV3 CAGAAAGGGT GGAGCTAAGA AACGCCCCGC CTCCAATGAC GCGGATGTAA
AAV8 CAGAAAGGGC GGAGCCAGCA AAAGACCCGC CCCCGATGAC GCGGATAAAA
AAV9 CAGAAAGGGC GGAGCCAGCA AAAGACCCGC CCCCGATGAC GCGGATAAAA
AAV7 CAGAAAGGGC GGAGCCAGCA AAAGACCCGC CCCCGATGAC GCGGATATAA
44_2 CAGAAAGGGT GGAGCCAACA AGAGACCCGC CCCCGATGAC GCGGATAAAA
P40/TATA

Fig. 1AL

```
          1851                                                                1900
                                                                P40 RNA
  42_2    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
  42_8    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 42_15    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 42_5b    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 42_1b    .......... .......... .......... .......... ..........
 42_13    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 42_3a    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
  42_4    .......... .......... .......... .......... ..........
 42_5a    GCGAGCCCAA GCGGGCCCGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 42_6b    CTGTCACGTG AGTGCTTTTG CGACATTTTG C..ATCCATC GACGTCAGAC
  43_1    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
  43_5    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 43_12    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 43_20    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 43_21    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 43_23    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
 43_25    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
  44_1    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
  44_5    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    ATGAGCCCAA GCGGGCGCGC GAGTCAGTTG CGCAGCCATC GACGTCAGAC
  A3_5    ATGAGCCCAA GCGGGCGCGC GAGTCAGTTG CGCAGCCATC GACGTCAGAC
  A3_7    ATGAGCCCAA GCGGGCGCGC GAGTCAGTTG CGCAGCCATC GACGTCAGAC
  A3_3    ATGAGCCCAA GCGGGCGCGC GAGTCAGTTG CGCAGCCATC GACGTCAGAC
 42_12    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
  AAV1    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
  AAV2    GTGAGCCCAA ACGGGTGCGC GAGTCAGTTG CGCAGCCATC GACGTCAGAC
  AAV3    GCGAGCCAAA ACGGGAGTGC ACGTCACTTG CGCAGCCGAC AACGTCAGAC
  AAV8    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
  AAV9    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
  AAV7    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
  44_2    GCGAGCCCAA GCGGGCCTGC CCCTCAGTCG CGGATCCATC GACGTCAGAC
                                                  P40 RNA
```

Fig. 1AM

```
          1901                                                      1950
 42_2     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
 42_8     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
42_15     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
42_5b     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
42_1b     .......... .......... .......... .......... ..........
42_13     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
42_3a     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
 42_4     .......... .......... .......... .......... ..........
42_5a     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
42_6b     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAGTGTTC
 43_1     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
 43_5     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
43_12     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
43_20     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
43_21     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
43_23     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
43_25     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
 44_1     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
 44_5     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     GCGGA...AG CTTCGATAAA CTACGCGGGC AGGTACCAAA ACAAATGTTC
 A3_5     GCGGA...AG CTTCGATAAA CTACGCGGAC AGGTACCAAA ACAAATGTTC
 A3_7     GCGGA...AG CTTCGATAAA CTACGCGGAC AGGTACCAAA ACAAATGTTC
 A3_3     GCGGA...AG CTTCGATAAA CTACGCGGAC AGGTACCAAA ACAAATGTTC
42_12     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
 AAV1     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
 AAV2     GCGGA...AG CTTCGATCAA CTACGCAGAC AGGTACCAAA ACAAATGTTC
 AAV3     GCGGA...AG CACCGGCGGA CTACGCGGAC AGGTACCAAA ACAAATGTTC
 AAV8     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
 AAV9     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
 AAV7     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
 44_2     GCGGAAGGAG CTCCGGTGGA CTTTGCCGAC AGGTACCAAA ACAAATGTTC
```

Fig. 1AN

```
          1951                                                                2000
 42_2     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
 42_8     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
42_15     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
42_5b     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
42_1b     .......... .......... ....GAATTC GCCCTT.... .GGCTGCGTC
42_13     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
42_3a     TCGTCACGCG GGCATGCTTC AGATGCTGCT TCCCTG.CAA GACATGCGAG
 42_4     .......... .......... ....GAATTC GCCCTTTCTA CGGCTGCGTC
42_5a     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA AACATGCGAG
42_10     .......... .......... ....GAATTC GCCCTTTCTA CGGCTGCGTC
42_3b     .......... .......... ....GAATTC GCCCTTTCTA CGGCTGCGTC
42_11     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
42_6b     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
 43_1     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA AACGTGCGAG
 43_5     TCGTCACGCG GGCATGCTTC AGACGCTGTT TCCCTG.CAA AACGTGCGAG
43_12     TCGTCACGCG GGCATGCTCC AGATGCTGTT TCCCTG.CAA AACGTGCGAG
43_20     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
43_21     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
43_23     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
43_25     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
 44_1     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
 44_5     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA AACATGCGAG
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     TCGTCACGTG GGCATGAATC TGATGCTGTT TCCCTG.TCG ACAATGCGAA
 A3_5     TCGTCACGTG GGCATGAATC TGATGCTGTT TCCCTG.TCG ACAATGCGAA
 A3_7     TCGTCACGTG GGCATGAATC TGATGCTGTT TCCCTG.TCG ACAATGCGAA
 A3_3     TCGTCACGTG GGCATGAATC TGATGCTGTT TCCCTG.TCG ACAATGCGAA
42_12     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
 AAV1     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA GACATGCGAG
 AAV2     TCGTCACGTG GGCATGAATC TGATGCTGTT TCCCTG.CAG ACAATGCGAG
 AAV3     TCGTCACGTG GGCATGAATC TGATGCTTTT TCCCTG.TAA AACATGCGAG
 AAV8     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA AACGTGCGAG
 AAV9     TCGTCACGCG GGCATGCTTC AGATGCTGCT TCCCTG.CAA AACGTGCGAG
 AAV7     TCGTCACGCG GGCATGATTC AGATGCTGTT TCCCTG.CAA AACGTGCGAG
 44_2     TCGTCACGCG GGCATGCTTC AGATGCTGTT TCCCTG.CAA AACATGCGAG
```

Fig. 1AO

```
          2001                                                                2050
  42_2    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
  42_8    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
 42_15    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCGCGGGA CCAGAGACTG
 42_5b    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
 42_1b    A.ACTGGACC A..ATGAGAA CTTTCCCTTC A........A CGATTGCGTC
 42_13    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
 42_3a    AGAATGAATC AGAATTTCAG CATTTGCTTC ACGCACGGGA CCAGAGACTG
  42_4    A.ACTGGACC A..ATGAGAA CTTTCCCTTC A........A CGATTGCGTC
 42_5a    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
 42_10    A.ACTGGACC A..ATGAGAA CTTTCCCTTC A........A CGATTGCGTC
 42_3b    A.ACTAGACC A..ATGAGAA CTTTCCCTTC A........A CGATTGCGTC
 42_11    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCGGAGACTG
 42_6b    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
  43_1    AAAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGG TCAGAGACTG
  43_5    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGG TCAGAGACTG
 43_12    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGG TCAGAGACTG
 43_20    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
 43_21    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
 43_23    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
 43_25    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
  44_1    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
  44_5    AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    AGAATGAATC AGAATTCAAA TATCTGCTTC ACACACGGGC AAAAAGACTG
  A3_5    AGAATGAATC AGAATTCAAA TATCTGCTTC ACACACGGGC AAAAAGACTG
  A3_7    AGAATGAATC AGAATTCAAA TATCTGCTTC ACACACGGGC AAAAAGACTG
  A3_3    AGAATGAATC AGAATTCAAA TATCTGCTTC ACACACGGGC AAAAAGACTG
42_12     AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGC AAAAAGACTG
 AAV1     AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
 AAV2     AGAATGAATC AGAATTCAAA TATCTGCTTC ACGCACGGGA CGAGAGACTG
 AAV3     AGAATGAATC AAATTTCCAA TGTCTGTTTT ACTCACGGAC AGAAAGACTG
 AAV8     AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCATGGTC AAAGAGACTG
 AAV9     AGAATGAATC AGAATTTCAA CATTTGCTTC ACACACGGGG TCAGAGACTG
 AAV7     AGAATGAATC AGAATTTCAA CATTTGCTTC ACACACGGGG TCAGAGACTG
 44_2     AGAATGAATC AGAATTTCAA CATTTGCTTC ACACACGGGG TCAGAGACTG
 44_2     AGAATGAATC AGAATTTCAA CATTTGCTTC ACGCACGGGA CCAGAGACTG
```

Fig. 1AP

```
          2051                                                      2100
 42_2     TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA

 42_8     TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 42_15    TTCAGAATGT TTCCCGGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 42_5b    TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 42_1b    GACAAGATGG TGATCTGGTG GG..AGGAGG GCAAGA.... ..TGACGGCC
 42_13    TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 42_3a    TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 42_4     GACAAGATGG TGATCTGGTG GG..AGGAGG GCAAGA.... ..TGACGGCC
 42_5a    TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 42_10    GACAAGATGG TGATCTGGTG GG..AGGAGG GCAAGA.... ..TGACGGCC
 42_3b    GACAAGATGG TGATCTGGTG GG..AGGAGG GCAAGA.... ..TGACGGCC
 42_11    TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 42_6b    TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 43_1     CTCAGAATGT TTCCCCGGTG CATCAGAATC TCAACC.... ..GGTCGTCA
 43_5     CTCAGAATGT TTCCCCGGTG CATCAGAATC TCAACC.... ..GGTCGTCA
 43_12    CTCAGAATGT TTCCCCGGTG CATCAGAATC TCAACC.... ..GGTCGTCA
 43_20    TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 43_21    TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 43_23    TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 43_25    TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 44_1     TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 44_5     TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTTGTCA
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     TTTGGAATGC TTTCCCG... TGTCAGAATC TCAACCCGTT TCTGTCGTCA
 A3_5     TTTGGAATGC TTTCCCG... TGTCAGAATC TCAACCCGTT CCTGTCGTCA
 A3_7     TTTGGAATGC TTTCCCG... TGTCAGAATC TCAACCCGTT TCTGTCGTCA
 A3_3     TTTGGAATGC TTTCCCG... TGTCAGAATC TCAACCCGTT TCTGTCGTCA
42_12     TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 AAV1     TTCAGAGTGC TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 AAV2     TTTAGAGTGC TTTCCCG... TGTCAGAATC TCAACCCGTT TCTGTCGTCA
 AAV3     TGGGGAATGC TTCCCTGGAA TGTCAGAATC TCAACCCGTT TCTGTCGTCA
 AAV8     CTCAGAGTGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 AAV9     CTCAGAGTGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 AAV7     TTTAGAGTGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
 44_2     TTCAGAATGT TTCCCCGGCG TGTCAGAATC TCAACC.... ..GGTCGTCA
```

Fig. 1AQ

```
        2101                                                        2150
 42_2   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTGGGG.CG

 42_8   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTAGGG.CG
42_15   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTGGGG.CG
42_5b   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTGGGG.CG
42_1b   .AAGGTCGTG GAGTCCGCCA AG....GCCA TTCATCATCT GCTGGGG.CG
42_13   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTGGGG.CG
42_3a   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTGGGG.CG
 42_4   .AAGGTCGTG GAGTCCGCCA AG....GCCA TTCATCATCT GCTGGGG.CG
42_5a   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTGGGG.CG
42_10   AA....GGTC GTGAAGTCCG CCAAG.GCCA TTCATCATCT GCTGGGG.CG
42_3b   AA....GGTC GTGGAGTCCG CCAAG.GCCA TTCATCATCT GCTGGGG.CG
42_11   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTGGGG.CG
42_6b   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTGGGG.CG
 43_1   GAAAAAAAAC GTATCAGAAA CTGTGTGCCA TTCATCATCT GCTGGGG.CG
 43_5   GAAAAAAAAC GTATCAGAAA CTGTGTGCCA TTCATCATCT GCTGGGG.CG
43_12   GAAAAAAAAC GTATCAGAAA CTGTGTGCCA TTCATCATCT GCTGGGG.CG
43_20   GAAAGAGGAC GTATCGGAAA CTCTGTGCGA TTCATCATCT GCTGGGG.CG
43_21   GAAAGAGGAC GTATCGGAAA CTCTGTGCGA TTCATCATCT GCTGGGG.CG
43_23   GAAAGAGGAC GTATCGGAAA CTCTGTGCGA TTCATCATCT GCTGGGG.CG
43_25   GAAAGAGGAC GTATCGGAAA CTCTGTGCGA TTCATCATCT GCTGGGG.CG
 44_1   GAAAAAAGAC GTATCGGAAA CTCTGTGCGA TTCATCATCT GCTGGGG.CG
 44_5   GAAAAAAGAC GTATCGGAAA CTCTGTGCGA TTCATCATCT GCTGGGG.CG
223_10  .......... .......... .......... .......... ..........
223_2   .......... .......... .......... .......... ..........
223_4   .......... .......... .......... .......... ..........
223_5   .......... .......... .......... .......... ..........
223_6   .......... .......... .......... .......... ..........
223_7   .......... .......... .......... .......... ..........
 A3_4   GAAAAACG.. .TATCAGAAA CTTTGTTACA TTCATCATAT CATGGGA.AA
 A3_5   GAAAAACG.. .TATCAGAAA CTTTGTTACA TTCATCATAT CATGGGA.AA
 A3_7   GAAAAACG.. .TATCAGAAA CTTTGTTACA TTCATCATAT CATGGGA.AA
 A3_3   GAAAAACG.. .TATCAGAAA CTTTGTTACA TTCATCATAT CATGGGA.AA
42_12   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTGGGG.CG
 AAV1   GAAAGAGGAC GTATCGGAAA CTCTGTGCCA TTCATCATCT GCTGGGG.CG
 AAV2   AAAAGGCG.. .TATCAGAAA CTGTGCTACA TTCATCATAT CATGGGA.AA
 AAV3   AAAAGAAGAC TTATCAGAAA CTGTGTCCAA TTCATCATAT CCTGGGA.AG
 AAV8   GAAAGAGGAC GTATCGGAAA CTCTGTGCGA TTCATCATCT GCTGGGG.CG
 AAV9   GAAAGAGGAC GTATCGGAAA CTCTGTGCGA TTCATCATCT GCTGGGG.CG
 AAV7   GAAAAAAGAC GTATCGGAAA CTCTGCGCGA TTCATCATCT GCTGGGG.CG
 44_2   GAAAAAAGAC GTATCGGAAA CTCTGTGCGA TTCATCATCT GCTGGGGGCG
```

Fig. 1AR

```
          2151                                                                2200
  42_2    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
  42_8    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 42_15    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 42_5b    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 42_1b    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 42_13    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 42_3a    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
  42_4    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 42_5a    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 42_10    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 42_3b    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 42_11    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 42_6b    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
  43_1    GGCACCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
  43_5    GGCACCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 43_12    GGCACCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 43_20    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 43_21    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 43_23    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
 43_25    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
  44_1    GGCACCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTAG
  44_5    GGCACCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTAG
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    AGAACCAGAC ...GCCTGCA CTGCCTGCGA CCTGGTAAAT GTGGACTTGG
  A3_5    AGTACCAGAC ...GCCTGCA CTGCCTGCGA CCTGGTAAAT GTGGACTTGG
  A3_7    AGTACCAGAC ...GCCTGCA CTGCCTGCGA CCTGGTAAAT GTGGACTTGG
  A3_3    AGTACCAGAC ...GCCTGCA CTGCCTGCGA CCTGGTAAAT GTGGACTTGG
 42_12    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
  AAV1    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
  AAV2    GGTGCCAGAC ...GCTTGCA CTGCCTGCGA TCTGGTCAAT GTGGATTTGG
  AAV3    GGCACCCGAG ATTGCCTGTT CGGCCTGCGA TTTGGCCAAT GTGGACTTGG
  AAV8    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
  AAV9    GGCTCCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTGG
  AAV7    GGCGCCCGAG ATTGCTTGCT CGGCCTGCGA CCTGGTCAAC GTGGACCTGG
  44_2    GGCACCCGAG ATTGCTTGCT CGGCCTGCGA TCTGGTCAAC GTGGACCTAG
```

Fig. 1AS

```
          2201                                                    2250

                                        Rep 78 stop                 vp1 start
  42_2    ATGACCGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  42_8    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 42_15    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 42_5b    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 42_1b    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 42_13    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 42_3a    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  42_4    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 42_5a    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 42_10    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 42_3b    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 42_11    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 42_6b    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  43_1    ACGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  43_5    ACGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 43_12    ACGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 43_20    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 43_21    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 43_23    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
 43_25    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  44_1    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  44_5    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    ATGACTGTAT TTCTGAGCAA TAAATGACTT AAATCAGGTA TGGCTGCTGA
  A3_5    ATGACTGTAT TTCTGAGCAA TAAATGACTT AAATCAGGTA TGGCTGCTGA
  A3_7    ATGACTGTAT TTCTGAGCAA TAAATGACTT AAATCAGGTA TGGCTGCTGA
  A3_3    ATGACTGTAT TTCTGAGCAA TAAATGACTT AAATCAGGTA TGGCTGCTGA
 42_12    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  AAV1    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  AAV2    ATGACTGCAT CTTTGAACAA TAAATGATTT AAATCAGGTA TGGCTGCCGA
  AAV3    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCTGA
  AAV8    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  AAV9    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  AAV7    ACGACTGCGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
  44_2    ATGACTGTGT TTCTGAGCAA TAAATGACTT AAACCAGGTA TGGCTGCCGA
                                Rep78 stop                  vp1 start
```

Fig. 1AT

```
          2251                                                    2300
                                                          Rep68 stop
  42_2    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
  42_8    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 42_15    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 42_5b    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 42_1b    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 42_13    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 42_3a    TGGTCATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
  42_4    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 42_5a    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 42_10    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 42_3b    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 42_11    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 42_6b    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
  43_1    TGGTTATCTT CCAGATTGGC TTGAGGACAA CCTCTCTGAG GGCATTCGCG
  43_5    TGGTTATCTT CCAGATTGGC TTGAGGACAA CCTCTCTGAG GGCATTCGCG
 43_12    TGGTTATCTT CCAGATTGGC TTGAGGACAA CCTCTCTGAG GGCATTCGCG
 43_20    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 43_21    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 43_23    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
 43_25    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
  44_1    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
  44_5    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    CGGTTATCTT CCAGATTGGC TCGAGGACAC TCTCTCTGAA GGAATCAGAC
  A3_5    CGGTTATCTT CCAGATTGGC TCGAGGACAC TCTCTCTGAA GGAATCAGAC
  A3_7    CGGTTATCTT CCAGATTGGC TCGAGGACAC TCTCTCTGAA GGAATCAGAC
  A3_3    CGGTTATCTT CCAGATTGGC TCGAGGACAC TCTCTCTGAA GGAATCAGAC
 42_12    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATCCGCG
  AAV1    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
  AAV2    TGGTTATCTT CCAGATTGGC TCGAGGACAC TCTCTCTGAA GGAATAAGAC
  AAV3    CGGTTATCTT CCAGATTGGC TCGAGGACAA CCTTTCTGAA GGCATTCGTG
  AAV8    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
  AAV9    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
  AAV7    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
  44_2    TGGTTATCTT CCAGATTGGC TCGAGGACAA CCTCTCTGAG GGCATTCGCG
                                                    Rep 68 stop
```

Fig. 1AU

```
          2301                                                      2350
  42_2    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA

  42_8    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 42_15    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 42_5b    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 42_1b    AGTGGTGGGA CTTGAGACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 42_13    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 42_3a    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
  42_4    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 42_5a    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 42_10    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 42_3b    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 42_11    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 42_6b    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
  43_1    AGTGGTGGGA CCTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
  43_5    AGTGGTGGGA CCTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 43_12    AGTGGTGGGA CCTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 43_20    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 43_21    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 43_23    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
 43_25    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
  44_1    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
  44_5    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    AGTGGTGGAA GCTCAAACCT GGCCCACCAC CGCCGAAACC TAACCAACAA
  A3_5    AGTGGTGGAA GCTCAAACCT GGCCCACCAC CGCCGAAACC TAACCAACAA
  A3_7    AGTGGTGGAA GCTCAAACCT GGCCCACCAC CGCCGAAACC TAACCAACAA
  A3_3    AGTGGTGGAA GCTCAAACCT GGCCCACCAC CGCCGAAACC TAACCAACAA
 42_12    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
  AAV1    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AGCCCAAAGC CAACCAGCAA
  AAV2    AGTGGTGGAA GCTCAAACCT GGCCCACCAC CACCAAAGCC CGCAGAGCGG
  AAV3    AGTGGTGGGC TCTGAAACCT GGAGTCCCTC AACCCAAAGC GAACCAACAA
  AAV8    AGTGGTGGGC GCTGAAACCT GGAGCCCCGA AGCCCAAAGC CAACCAGCAA
  AAV9    AGTGGTGGGC GCTGAAACCT GGAGCCCCGA AGCCCAAAGC CAACCAGCAA
  AAV7    AGTGGTGGGA CCTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
  44_2    AGTGGTGGGA CTTGAAACCT GGAGCCCCGA AACCCAAAGC CAACCAGCAA
```

Fig. 1AV

```
          2351                                                                2400
  42_2    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  42_8    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 42_15    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 42_5b    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 42_1b    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 42_13    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 42_3a    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  42_4    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 42_5a    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 42_10    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 42_3b    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 42_11    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 42_6b    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  43_1    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  43_5    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 43_12    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 43_20    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 43_21    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 43_23    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
 43_25    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  44_1    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  44_5    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
  A3_4    CACCGGGACG ACAGTAGGGG TCTTGTGCTT CCTGGGTACA AGTACCTCGG
  A3_5    CACCGGGACG ACAGTAGGGG TCTTGTGCTT CCTGGGTACA AGTACCTCGG
  A3_7    CACCGGGACG ACAGTAGGGG TCTTGTGCTT CCTGGGTACA AGTACCTCGG
  A3_3    CACCGGGACG ACAGTAGGGG TCTTGTGCTT CCTGGGTACA AGTACCTCGG
 42_12    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  AAV1    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  AAV2    CATAAGGACG ACAGCAGGGG TCTTGTGCTT CCTGGGTACA AGTACCTCGG
  AAV3    CACCAGGACA ACCGTCGGGG TCTTGTGCTT CCGGGTTACA AATACCTCGG
  AAV8    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  AAV9    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  AAV7    AAGCAGGACA ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
  44_2    AAGCAGGACG ACGGCCGGGG TCTGGTGCTT CCTGGCTACA AGTACCTCGG
```

Fig. 1AW

```
        2401                                                        2450
 42_2   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGAG GCAGACGCCG
 42_8   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
42_15   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
42_5b   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGAG GCAGACGCCG
42_1b   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGAG GCAGACGCCG
42_13   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
42_3a   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
 42_4   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGAG GCAGACGCCG
42_5a   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGAG GCAGACGCCG
42_10   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGAG GCAGACGCCG
42_3b   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGAG GCAGACGCCG
42_11   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGCG GCGGACGCAG
42_6b   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGAG GCAGACGCCG
 43_1   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
 43_5   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
43_12   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
43_20   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
43_21   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
43_23   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
43_25   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
 44_1   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
 44_5   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
223_10  .......... .......... .......... .......... ..........
223_2   .......... .......... .......... .......... ..........
223_4   .......... .......... .......... .......... ..........
223_5   .......... .......... .......... .......... ..........
223_6   .......... .......... .......... .......... ..........
223_7   .......... .......... .......... .......... ..........
 A3_4   ACCCTTCAAC GGACTCGACA AAGGAGAGCC GGTCAACGAG GCAGACGCCG
 A3_5   ACCCTTCAAC GGACTCGACA AAGGAGAGCC GGTCAACGAG GCAGACGCCG
 A3_7   ACCCTTCAAC GGACTCGACA AAGGAGAGCC GGTCAACGAG GCAGACGCCG
 A3_3   ACCCTTCAAC GGACTCGACA AAGGAGAGCC GGTCAACGAG GCAGACGCCG
42_12   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGAG GCAGACGCCG
 AAV1   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
 AAV2   ACCCTTCAAC GGACTCGACA AGGGAGAGCC GGTCAACGAG GCAGACGCCG
 AAV3   ACCCGGTAAC GGACTCGACA AAGGAGAGCC GGTCAACGAG GCGGACGCGG
 AAV8   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
 AAV9   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
 AAV7   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
 44_2   ACCCTTCAAC GGACTCGACA AGGGGGAGCC CGTCAACGCG GCGGACGCAG
```

Fig. 1AX

```
          2451                                                      2500
  42_2    CGGCCCTCGA GCACG.ACAA GGCCTACGAC AAGCAGCTCG AGCAGGGGGA
  42_8    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 42_15    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 42_5b    CGGCCCTCGA GCACG.ACAA GGCCTACGAC AAGCAGCTCG AGCAGGGGGA
 42_1b    CGGCCCTCGA GCACG.ACAA GGCCTACGAC AAGCAGCTCG AGCAGGGGGA
 42_13    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 42_3a    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
  42_4    CGGCCCTCGA GCACG.ACAA GGCCTACGAC AAGCAGCTCG AGCAGGGGGA
 42_5a    CGGCCCTCGA GCACG.ACAA GGCCTACGAC AAGCAGCTCG AGCAGGGGGA
 42_10    CGGCCCTCGA GCACG.ACAA GGCCTACGAC AAGCAGCTCG AGCAGGGGGA
 42_3b    CGGCCCTCGA GCACG.ACAA GGCCTACGAC AAGCAGCTCG AGCAGGGGGA
 42_11    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 42_6b    CGGCCCTCGA GCACG.ACAA GGCCTACGAC AAGCAGCTCG AGCAGGGGGA
  43_1    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
  43_5    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 43_12    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 43_20    CGGCCCTCGA GCACG.ACAA AGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 43_21    CGGCCCTCGA GCACG.ACAA AGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 43_23    CGGCCCTCGA GCACG.ACAA AGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 43_25    CGGCCCTCGA GCACG.ACAA AGCCTACGAC CAGCAGCTCA AAGCGGGTGA
  44_1    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
  44_5    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
223_10    .......... .......CAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 223_2    .......... .......CAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 223_4    .......... .......CAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 223_5    .......... .......CAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 223_6    .......... .......CAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
 223_7    .......... .......CAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
  A3_4    CGGCCCTCGA GCACG.ACAA AGCCTACGAC CACCAGCTCA AGCAAGGGGA
  A3_5    CGGCCCTCGA GCACG.ACAA AGCCTACGAC CACCAGCTCA AGCAAGGGGA
  A3_7    CGGCCCTCGA GCACG.ACAA AGCCTACGAC CACCAGCTCA AGCAAGGGGA
  A3_3    CGGCCCTCGA GCACG.ACAA AGCCTACGAC CACCAGCTCA AGCAAGGGGA
 42_12    CGGCCCTCGA GCACG.ACAA GGCCTACGAC AAGCAGCTCG AGCAGGGGGA
  AAV1    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
  AAV2    CGGCCCTCGA GCACGTACAA AGCCTACGAC CGGCAGCTCG ACAGCGGAGA
  AAV3    CAGCCCTCGA ACACG.ACAA AGCTTACGAC CAGCAGCTCA AGGCCGGTGA
  AAV8    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTGC AGGCGGGTGA
  AAV9    CGGCCCTCGA GCACG.GCAA GGCCTACGAC CAGCAGCTGC AGGCGGGTGA
  AAV7    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
  44_2    CGGCCCTCGA GCACG.ACAA GGCCTACGAC CAGCAGCTCA AAGCGGGTGA
```

Fig. 1AY

```
          2501                                                      2550
  42_2    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  42_8    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 42_15    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 42_5b    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 42_1b    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 42_13    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 42_3a    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  42_4    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 42_5a    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 42_10    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 42_3b    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 42_11    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 42_6b    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  43_1    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  43_5    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 43_12    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 43_20    CAATCCGTAC CTGCGGTATA ATCACGCCGA CGCCGAGTTT CAGGAGCGTC
 43_21    CAATCCGTAC CTGCGGTATA ATCACGCCGA CGCCGAGTTT CAGGAGCGTC
 43_23    CAATCCGTAC CTGCGGTATA ATCACGCCGA CGCCGAGTTT CAGGAGCGTC
 43_25    CAATCCGTAC CTGCGGTATA ATCACGCCGA CGCCGAGTTT CAGGAGCGTC
  44_1    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  44_5    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
223_10    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 223_2    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGTGTC
 223_4    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 223_5    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 223_6    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
 223_7    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  A3_4    CAACCCGTAC CTCAAATACA ACCACGCGGA CGCTGAATTT CAGGAGCGTC
  A3_5    CAACCCGTAC CTCAAATACA ACCACGCGGA CGCTGAATTT CAGGAGCGTC
  A3_7    CAACCCGTAC CTCAAATACA ACCACGCGGA CGCTGAATTT CAGGAGCGTC
  A3_3    CAACCCGTAC CTCAAATACA ACCACGCGGA CGCTGAATTT CAGGAGCGTC
 42_12    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  AAV1    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  AAV2    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCGGAGTTT CAGGAGCGCC
  AAV3    CAACCCGTAC CTCAAGTACA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  AAV8    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  AAV9    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  AAV7    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
  44_2    CAATCCGTAC CTGCGGTATA ACCACGCCGA CGCCGAGTTT CAGGAGCGTC
```

Fig. 1AZ

```
          2551                                                      2600
  42_2    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  42_8    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 42_15    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 42_5b    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 42_1b    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 42_13    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 42_3a    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  42_4    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 42_5a    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCGG
 42_10    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 42_3b    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 42_11    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 42_6b    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  43_1    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  43_5    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 43_12    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 43_20    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 43_21    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 43_23    TGCAAGAAGA TACGTCCTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 43_25    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  44_1    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  44_5    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
223_10    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 223_2    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 223_4    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 223_5    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 223_6    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 223_7    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  A3_4    TTCAAGAAGA TACGTCTTTC GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  A3_5    TTCAAGAAGA TACGTCTTTC GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  A3_7    TTCAAGAAGA TACGTCTTTC GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  A3_3    TTCAAGAAGA TACGTCTTTC GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
 42_12    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
   AAV1    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
   AAV2    TTAAAGAAGA TACGTCTTTT GGGGGCAACC TCGGACGAGC AGTCTTCCAG
   AAV3    TTCAAGAAGA TACGTCTTTT GGGGGCAACC TTGGCAGAGC AGTCTTCCAG
   AAV8    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
   AAV9    TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
   AAV7    TGCAAGAAGA TACGTCATTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
  44_2     TGCAAGAAGA TACGTCTTTT GGGGGCAACC TCGGGCGAGC AGTCTTCCAG
```

Fig. 1AAA

```
          2601                                                  2650
  42_2    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  42_8    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 42_15    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 42_5b    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 42_1b    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 42_13    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 42_3a    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  42_4    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 42_5a    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 42_10    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 42_3b    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 42_11    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 42_6b    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  43_1    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  43_5    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 43_12    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 43_20    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 43_21    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 43_23    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
 43_25    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  44_1    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  44_5    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
223_10    GCCAAAAAGC GGGTTCTCGA ACCTCTTGGT CTGGTTGAGA CGCCAGCTAA
 223_2    GCCAAAAAGC GGGTTCTCGA ACCTCTTGGT CTGGTTGAGA CGCCAGCTAA
 223_4    GCCAAAAAGC GGGTTCTCGA ACCTCTTGGT CTGGTTGAGA CGCCAGCTAA
 223_5    GCCAAAAAGC GGGTTCTCGA ACCTCTTGGT CTGGTTGAGA CGCCAGCTAA
 223_6    GCCAAAAAGC GGGTTCTCGA ACCTCTTGGT CTGGTTGAGA CGCCAGCTAA
 223_7    GCCAAAAAGC GGGTTCTCGA ACCTCTTGGT CTGGTTGAGA CGCCAGCTAA
  A3_4    GCCAAAAAGA GGGTACTCGA GCCTCTTGGT CTGGTTGAGG AAGCTGTTAA
  A3_5    GCCAAAAAGA GGGTACTCGA GCCTCTTGGT CTGGTTGAGG AAGCTGTTAA
  A3_7    GCCAAAAAGA GGGTACTCGA GCCTCTTGGT CTGGTTGAGG AAGCTGTTAA
  A3_3    GCCAAAAAGA GGGTACTCGA GCCTCTTGGT CTGGTTGAGG AAGCTGTTAA
 42_12    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  AAV1    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  AAV2    GCGAAAAAGA GGGTTCTTGA ACCTCTGGGC CTGGTTGAGG AACCTGTTAA
  AAV3    GCCAAAAAGA GGATCCTTGA GCCTCTTGGT CTGGTTGAGG AAGCAGCTAA
  AAV8    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  AAV9    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  AAV7    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
  44_2    GCCAAGAAGC GGGTTCTCGA ACCTCTCGGT CTGGTTGAGG AAGGCGCTAA
```

Fig. 1AAB

```
          2651                                                    2700

          vp2 start
  42_2    GACGGCTCCT GGAAAGAAGA GACCCATAGA ...ATCCCCC .........
  42_8    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCC CAGCGTTCTC
 42_15    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCC CAGCGTTCTC
 42_5b    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCC CAGCGTTCTC
 42_1b    GACGGCTCCT GGAAAGAAGA GACCCATAGA ...ATCCCCC .........
 42_13    GACGGCTCCT GGAAAGAAGA GACCCATAGA ...ATCCCCC .........
 42_3a    GACGGCTCCT GGAAAGAAGA GACCCATAGA ...ATCCCCC .........
  42_4    GACGGCTCCT GGAAAGAAGA GACCCATAGA ...ATCCCCC .........
 42_5a    GACGGCTCCT GGAAAGAAGA GACCCATAGA ...ATCCCCC .........
 42_10    GACGGCTCCT GGAAAGAAGA GACCCATAGA ...ATCCCCC .........
 42_3b    GACGGCTCCT GGAAAGAAGA GACCCATAGA ...ATCCCCC .........
 42_11    GACGGCTCCT GGAAAGAAGA GACCCATAGA ...ATCCCCC .........
 42_6b    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCC CAGCGTTCTC
  43_1    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCT CAGCGTTCCC
  43_5    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCT CAGCGTTCCC
 43_12    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCT CAGCGTTCCC
 43_20    GACGGCTCCT GGAAAGAAGA GACTGGTAGA GCAGTCGCCA CAAGAG...C
 43_21    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCAGTCGCCA CAAGAG...C
 43_23    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCAGTCGCCA CAAGAG...C
 43_25    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCAGTCGCCA CAAGAG...C
  44_1    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCC CAGCGTTCTC
  44_5    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCC CAGCGTTCTC
223_10    GACGGCACCT GGAAAGAAGC GACCGGTAGA CTCGCCA... .........
 223_2    GACGGCACCT GGAAAGAAGC GACCGGTAGA CTCGCCA... .........
 223_4    GACGGCACCT GGAAAGAAGC GACCGGTAGA CTCGCCA... .........
 223_5    GACGGCACCT GGAAAGAAGC GACCGGTAGA CTCGCCA... .........
 223_6    GACGGCACCT GGAAAGAAGC GACCGGTAGA CTCGCCA... .........
 223_7    GACGGCACCT GGAAAGAAGC GACCGGTAGA CTCGCCA... .........
  A3_4    GACGGCTCCT GGAAAAAAGA GACCTATAGA GCAGTCTCCT GCAGAA...C
  A3_5    GACGGCTCCT GGAAAAAAGA GACCTATAGA GCAGTCTCCT GCAGAA...C
  A3_7    GACGGCTCCT GGAAAAAAGA GACCTATAGA GCAGTCTCCT GCAGAA...C
  A3_3    GACGGCTCCT GGAAAAAAGA GACCTATAGA GCAGTCTCCT GCAGAA...C
 42_12    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCC CAGCGTTCTC
  AAV1    GACGGCTCCT GGAAAGAAAC GTCCGGTAGA GCAGTCGCCA CAAGAG...C
  AAV2    GACGGCTCCG GGAAAAAAGA GGCCGGTAGA GCACTCTCCT GTGGAG...C
  AAV3    AACGGCTCCT GGAAAGAAGG GGGCTGTAGA TCAGTCTCCT CAGGAA...C
  AAV8    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCC CAGCGTTCTC
  AAV9    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCC CAGCGTTCTC
  AAV7    GACGGCTCCT GCAAAGAAGA GACCGGTAGA GCCGTCACCT CAGCGTTCCC
  44_2    GACGGCTCCT GGAAAGAAGA GACCGGTAGA GCCATCACCC CAGCGTTCTC
          vp2 start
```

Fig. 1AAC

```
          2701                                                      2750
  42_2    ..GACTCCTC CACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCTAAAAAG
  42_8    CAGACTCCTC TACGGGCATC GGCAAGACAG GCCAGCAGCC CGCGAAAAAG
 42_15    CAGACTCCTC TACGGGCATC GGCAAGACAG GCCAGCAGCC CGCGAAAAAG
 42_5b    CAGACTCCTC TACGGGCATC GGCAAGACAG GCCAGCAGCC CGCGAAAAAG
 42_1b    ..GACTCCTC CACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCTAAAAAG
 42_13    ..GACTCCTC CACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCTAAAAAG
 42_3a    ..GACTCCTC CACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCTAAAAAG
  42_4    ..GACTCCTC CACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCTAAAAAG
 42_5a    ..GACTCCTC CACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCTAAAAAG
 42_10    ..GACTCCTC CACGGGCATC GGCAGGAAAG GCCAGCAGCC CGCTAAAAAG
 42_3b    ..GACTCCTC CACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCTAAAAAG
 42_11    ..GACTCCTC CACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCTAAAAAG
 42_6b    CAGACTCCTC TACGGGCATC GGCAAGACAG GCCAGCAGCC CGCGAAAAAG
  43_1    CCGACTCCTC CACGGGCATC GGCAAGAAAG GCCACCAGCC CGCGAGAAAG
  43_5    CCGACTCCTC CACGGGCATC GGCAAGAAAG GCCACCAGCC CGCGAGAAAG
 43_12    CCGACTCCTC CACGGGCATC GGCAAGAAAG GCCACCAGCC CGCGAGAAAG
 43_20    CAGACTCCTC CTCGGGCATC GGCAAGACAG GCCAGCAGCC CGCTAAAAAG
 43_21    CAGACTCCTC CTCGGGCATC GGCAAGACAG GCCAGCAGCC CGCTAAAAAG
 43_23    CAGACTCCTC CTCGGGCATC GGCAAGACAG GCCAGCAGCC CGCTAAAAAG
 43_25    CAGACTCCTC CTCGGGCATC GGCAAGACAG GCCAGCAGCC CGCTAAAAAG
  44_1    CAGACTCCTC TACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCGAAAAAG
  44_5    CAGACTCCTC TACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCGAAAAAG
223_10    ..GACTCCAC CTCGGGCATC GGCAAGAAAG GCCAGCAGCC CGCGAAAAAG
 223_2    ..GACTCCAC CTCGGGCATC GGCAAGAAAG GCCAGCAGCC CGCGAAAAAG
 223_4    ..GACTCCAC CTCGGGCATC GGCAAGAAAG GCCAGCAGCC CGCGAAAAAG
 223_5    ..GACTCCAC CTCGGGCATC GGCAAGAAAG GCCAGCAGCC CGCGAAAAAG
 223_6    ..GACTCCAC CTCGGGCATC GGCAAGAAAG GCCAGCAGCC CGCGAAAAAG
 223_7    ..GACTCCAC CTCGGGCATC GGCAAGAAAG GCCAGCAGCC CGCGAAAAAG
  A3_4    CGGACTCTTC CTCGGGCATC GGCGAATCAG GCCAGCAGCC CGCTAAGAAA
  A3_5    CGGACTCTTC CTCGGGCATC GGCAAATCAG GCCAGCAGCC CGCTAAGAAA
  A3_7    CGGACTCTTC CTCGGGCATC GGCAAATCAG GCCAGCAGCC CGCTAAGAAA
  A3_3    CGGACTCTTC CTCGGGCATC GGCAAATCAG GCCAGCAGCC CGCTAAGAAA
 42_12    CAGACTCCTC TACGGGCATC GGCAAGACAG GCCAGCAGCC CGCGAAAAAG
  AAV1    CAGACTCCTC CTCGGGCATC GGCAAGACAG GCCAGCAGCC CGCTAAAAAG
  AAV2    CAGACTCCTC CTCGGGAACC GGAAAGGCGG GCCAGCAGCC TGCAAGAAAA
  AAV3    CGGACTCATC ATCTGGTGTT GGCAAATCGG GCAAACAGCC TGCCAGAAAA
  AAV8    CAGACTCCTC TACGGGCATC GGCAAGAAAG GCCAACAGCC CGCCAGAAAA
  AAV9    CAGACTCCTC TACGGGCATC GGCAAGAAAG GCCAACAGCC CGCCAGAAAA
  AAV7    CCGACTCCTC CACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCCAGAAAG
  44_2    CAGACTCCTC TACGGGCATC GGCAAGAAAG GCCAGCAGCC CGCGAAAAAG
```

Fig. 1AAD

```
          2751                                                      2800
  42_2    AAGCTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCCCA
  42_8    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
 42_15    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
 42_5b    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
 42_1b    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
 42_13    AAGCTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
 42_3a    AAGCTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
  42_4    AAGCTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
 42_5a    AAGCTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCCCA
 42_10    AAGCTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
 42_3b    AAGCTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
 42_11    AAGCTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
 42_6b    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
  43_1    AGACTGAACT TTGGGCAGAC TGGCGACTCG GAGTCAGTCC CCGACCCTCA
  43_5    AGACTGAACT TTGGGCAGAC TGGCGACTCG GAGTCAGTCC CCGACCCTCA
 43_12    AGACTGAACT TTGGGCAGAC TGGCGACTCG GAGTCAGTCC CCGACCCTCA
 43_20    AGACTCAATT TTGGTCAGAC TGGCGACTCA GAGTCAGTCC CCGACCCACA
 43_21    AGACTCAATT TTGGTCAGAC TGGCGACTCA GAGTCAGTCC CCGACCCACA
 43_23    AGACTCAATT TTGGTCAGAC TGGCGACTCA GAGTCAGTCC CCGACCCACA
 43_25    AGACTCAATT TTGGTCAGAC TGGCGACTCA GAGTCAGTCC CCGACCCACA
  44_1    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
  44_5    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
223_10    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTCC CCGACCCTCA
 223_2    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTCC CCGACCCTCA
 223_4    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGCCAGTCC CCGACCCTCA
 223_5    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGCCAGTCC CCGACCCTCA
 223_6    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTCC CCGACCCTCA
 223_7    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTCC CCGACCCTCA
  A3_4    AGACTCAATT TTGGTCAGAC TGGCGACACA GAGTCAGTCC CAGACCCTCA
  A3_5    AGACTCAATT TTGGTCAGAC TGGCGACACA GAGTCAGTCC CAGACCCTCA
  A3_7    AGACTCAATT TTGGTCAGAC TGGCGACACA GAGTCAGTCC CAGACCCTCA
  A3_3    AGACTCAATT TTGGTCAGAC TGGCGACACA GAGTCAGTCC CAGGCCCTCA
 42_12    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
   AAV1   AGACTCAATT TTGGTCAGAC TGGCGACTCA GAGTCAGTCC CCGATCCACA
   AAV2   AGATTGAATT TTGGTCAGAC TGGAGACGCA GACTCAGTAC CTGACCCCCA
   AAV3   AGACTAAATT TCGGTCAGAC TGGAGACTCA GAGTCAGTCC CAGACCCTCA
   AAV8   AGACTCAATT TTGGTCAGAC TGGCGACTCA GAGTCAGTTC CAGACCCTCA
   AAV9   AGACTCAATT TTGGTCAGAC TGGCGACTCA GAGTCAGTTC CAGACCCTCA
   AAV7   AGACTCAATT TCGGTCAGAC TGGCGACTCA GAGTCAGTCC CCGACCCTCA
  44_2    AGACTCAACT TTGGGCAGAC TGGCGACTCA GAGTCAGTGC CCGACCCTCA
```

Fig. 1AAE

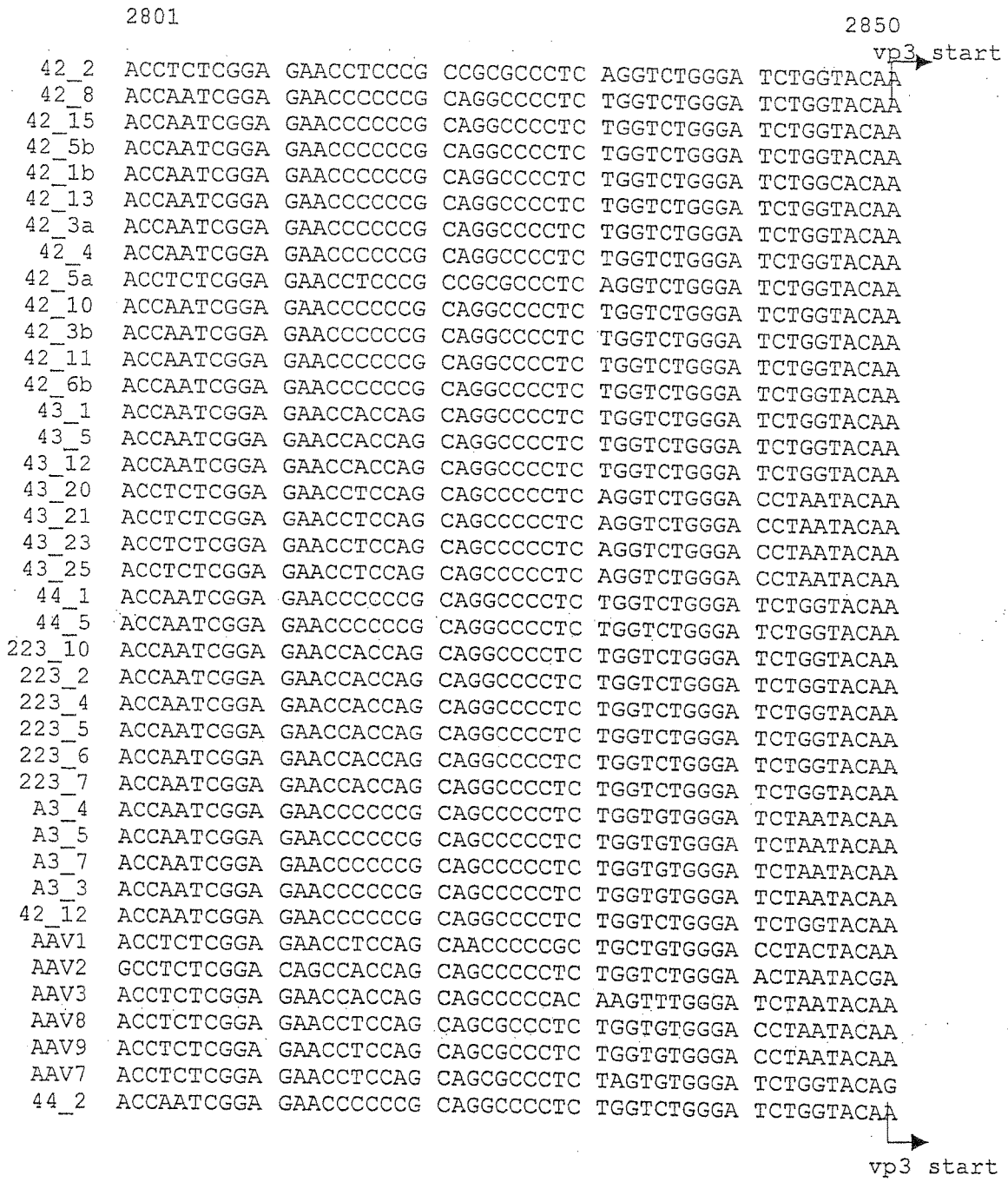

2801
2850
vp3 start
42_2 ACCTCTCGGA GAACCTCCCG CCGCGCCCTC AGGTCTGGGA TCTGGTACAA
42_8 ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
42_15 ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
42_5b ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
42_1b ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGCACAA
42_13 ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
42_3a ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
42_4 ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
42_5a ACCTCTCGGA GAACCTCCCG CCGCGCCCTC AGGTCTGGGA TCTGGTACAA
42_10 ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
42_3b ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
42_11 ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
42_6b ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
43_1 ACCAATCGGA GAACCACCAG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
43_5 ACCAATCGGA GAACCACCAG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
43_12 ACCAATCGGA GAACCACCAG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
43_20 ACCTCTCGGA GAACCTCCAG CAGCCCCCTC AGGTCTGGGA CCTAATACAA
43_21 ACCTCTCGGA GAACCTCCAG CAGCCCCCTC AGGTCTGGGA CCTAATACAA
43_23 ACCTCTCGGA GAACCTCCAG CAGCCCCCTC AGGTCTGGGA CCTAATACAA
43_25 ACCTCTCGGA GAACCTCCAG CAGCCCCCTC AGGTCTGGGA CCTAATACAA
44_1 ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
44_5 ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
223_10 ACCAATCGGA GAACCACCAG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
223_2 ACCAATCGGA GAACCACCAG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
223_4 ACCAATCGGA GAACCACCAG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
223_5 ACCAATCGGA GAACCACCAG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
223_6 ACCAATCGGA GAACCACCAG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
223_7 ACCAATCGGA GAACCACCAG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
A3_4 ACCAATCGGA GAACCCCCCG CAGCCCCCTC TGGTGTGGGA TCTAATACAA
A3_5 ACCAATCGGA GAACCCCCCG CAGCCCCCTC TGGTGTGGGA TCTAATACAA
A3_7 ACCAATCGGA GAACCCCCCG CAGCCCCCTC TGGTGTGGGA TCTAATACAA
A3_3 ACCAATCGGA GAACCCCCCG CAGCCCCCTC TGGTGTGGGA TCTAATACAA
42_12 ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
AAV1 ACCTCTCGGA GAACCTCCAG CAACCCCCGC TGCTGTGGGA CCTACTACAA
AAV2 GCCTCTCGGA CAGCCACCAG CAGCCCCCTC TGGTCTGGGA ACTAATACGA
AAV3 ACCTCTCGGA GAACCACCAG CAGCCCCCAC AAGTTTGGGA TCTAATACAA
AAV8 ACCTCTCGGA GAACCTCCAG CAGCGCCCTC TGGTGTGGGA CCTAATACAA
AAV9 ACCTCTCGGA GAACCTCCAG CAGCGCCCTC TGGTGTGGGA CCTAATACAA
AAV7 ACCTCTCGGA GAACCTCCAG CAGCGCCCTC TAGTGTGGGA TCTGGTACAG
44_2 ACCAATCGGA GAACCCCCCG CAGGCCCCTC TGGTCTGGGA TCTGGTACAA
vp3 start

Fig. 1AAF

```
          2851                                                    2900
          vp3 start codon
   42_2   TGGCTGCAGG CGGTGGCGCA CCAATGGCAG ACAATAACGA AGGCGCCGAC
   42_8   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_15   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_5b   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_1b   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_13   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_3a   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
   42_4   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_5a   TGGCTGCAGG CGGTGGCGCA CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_10   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_3b   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_11   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_6b   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
   43_1   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
   43_5   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  43_12   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  43_20   TGGCTTCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  43_21   TGGCTTCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  43_23   TGGCTTCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
  43_25   TGGCTTCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
   44_1   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
   44_5   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
 223_10   TGGCTGCAGG CGGTGGCGCA CCAATGGCTG ACAATAACGA GGGCGCCGAC
  223_2   TGGTTGCAGG CGGTGGCGCA CCAATGGCTG ACAATAACGA GGGCGCCGAC
  223_4   TGGCTGCAGG CGGTGGCGCA CCAATGGCTG ACAATAACGA GGGCGCCGAC
  223_5   TGGCTGCAGG CGGTGGCGCA CCAATGGCTG ACAATAACGA GGGCGCCGAC
  223_6   TGGCTGCAGG CGGTGGCGCA CCAATGGCTG ACAATAGCGA GGGCGCCGAC
  223_7   TGGCTGCAGG CGGTGGCGCA CCAATGGCTG ACAATAACGA GGGCGCCGAC
   A3_4   TGGCTTCAGG CGGTGGGGCA CCAATGGCAG ACGATAACGA AGGCGCCGAC
   A3_5   TGGCTTCAGG CGGTGGGGCA CCAATGGCAG ACAATAACGA AGGCGCCGAC
   A3_7   TGGCTTCAGG CGGTGGGGCA CCAATGGCAG ACAATAACGA AGGCGCCGAC
   A3_3   TGGCTTCAGG CGGTGGGGCA CCAATGGCAG ACAATAACGA AGGCGCCGAC
  42_12   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
   AAV1   TGGCTTCAGG CGGTGGCGCA CCAATGGCAG ACAATAACGA AGGCGCCGAC
   AAV2   TGGCTACAGG CAGTGGCGCA CCAATGGCAG ACAATAACGA GGGCGCCGAC
   AAV3   TGGCTTCAGG CGGTGGCGCA CCAATGGCAG ACAATAACGA GGGTGCCGAT
   AAV8   TGGCTGCAGG CGGTGGCGCA CCAATGGCAG ACAATAACGA AGGCGCCGAC
   AAV9   TGGCTGCAGG CGGTGGCGCA CCAATGGCAG ACAATAACGA AGGCGCCGAC
   AAV7   TGGCTGCAGG CGGTGGCGCA CCAATGGCAG ACAATAACGA AGGTGCCGAC
   44_2   TGGCTGCAGG CGGTGGCGCT CCAATGGCAG ACAATAACGA AGGCGCCGAC
          vp3 start codon (cont'd)
```

Fig. 1AAG

```
          2901                                                    2950
  42_2    GGAGTGGGTA ATGCCTCCGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  42_8    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 42_15    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 42_5b    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 42_1b    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 42_13    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 42_3a    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATAGCTGGG
  42_4    GGAGTGGGTA ATGCCTCCGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 42_5a    GGAGTGGGTA ATGCCTCCGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 42_10    GGAGTGGGTA ATGCCTCCGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 42_3b    GGAGTGGGTA ATGCCTCCGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 42_11    GGAGTGGGTA ATGCCTCCGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 42_6b    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  43_1    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  43_5    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 43_12    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 43_20    GGAGTGGGTA ATTCCTCGGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 43_21    GGAGTGGGTA ATTCCTCGGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 43_23    GGAGTGGGTA ATTCCTCGGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 43_25    GGAGTGGGTA ATTCCTCGGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  44_1    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  44_5    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
223_10    GGAGTGGGTA ATGCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 223_2    GGAGTGGGTA ATGCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 223_4    GGAGTGGGTA ATGCCTCAGG AAATTGGCAT TGCGATTCCA CACGGCTGGG
 223_5    GGAGTGGGTA ATGCCTCAGG AAATTGGCAT TGCGATTCCA CACGGCTGGG
 223_6    GGAGTGGGTA ATGCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 223_7    GGAGTGGGTA ATGCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  A3_4    GGAGTGGGTA ATTCCTCGGG AAATTGGCAT TGCGATTCCA CATGGATGGG
  A3_5    GGAGTGGGTA ATTCCTCGGG AAATTGGCAT TGCGATTCCA CATGGATGGG
  A3_7    GGAGTGGGTA ATTCCTCGGG AAATTGGCAT TGCGATTCCA CATGGATGGG
  A3_3    GGAGTGGGTA ATTCCTCGGG AAATTGGCAT TGCGATTCCA CATGGATGGG
 42_12    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  AAV1    GGAGTGGGTA ATGCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  AAV2    GGAGTGGGTA ATTCCTCCGG AAATTGGCAT TGCGATTCCA CATGGATGGG
  AAV3    GGAGTGGGTA ATTCCTCAGG AAATTGGCAT TGCGATTCCC AATGGCTGGG
  AAV8    GGAGTGGGTA GTTCCTCGGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  AAV9    GGAGTGGGTA ATTCCTCGGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  AAV7    GGAGTGGGTA ATGCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 AAV10          GGTA ATTCCTCCGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 AAV11          GGTA ATTCCTCCGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
 AAV12          GGTA ATTCCTCCGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
  44_2    GGAGTGGGTA GTTCCTCAGG AAATTGGCAT TGCGATTCCA CATGGCTGGG
```

FIG. 1AAH

```
          2951                                                      3000
  42_2    CGACAGAGTC ATCACCACCA GCACCCGCAC CTGGGCCCTG CCCACCTACA
  42_8    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
 42_15    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
 42_5b    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
 42_1b    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
 42_13    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
 42_3a    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
  42_4    CGACAGAGTC ATCACCACCA GCACCCGCAC CTGGGCCCTG CCCACCTACA
 42_5a    CGACAGAGTC ATCACCACCA GCACCCGCAC CTGGGCCCTG CCCACCTACA
 42_10    CGACAGAGTC ATCACCACCA GCACCCGCAC CTGGGCCCTG CCCACCTACA
 42_3b    CGACAGAGTC ATCACCACCA GCACCCGCAC CTGGGCCCTG CCCACCTACA
 42_11    CGACAGAGTC ATCACCACCA GCACCCGCAC CTGGGCCCTG CCCACCTACA
 42_6b    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
  43_1    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
  43_5    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 43_12    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 43_20    GGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 43_21    GGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 43_23    GGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 43_25    GGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
  44_1    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
  44_5    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
223_10    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 223_2    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 223_4    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 223_5    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 223_6    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 223_7    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
  A3_4    CGACAGAGTT ATCACCACCA GCACAAGAAC CTGGGCCCTC CCCACCTACA
  A3_5    CGACAGAGTT ATCACCACCA GCACAAGAAC CTGGGCCCTC CCCACCTACA
  A3_7    CGACAGAGTT ATCACCACCA GCACAAGAAC CTGGGCCCTC CCCACCTACA
  A3_3    CGACAGAGTT ATCACCACCA GCACAAGAAC CTGGGCCCTC CCCACCTACA
 42_12    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
  AAV1    CGACAGAGTC ATCACCACCA GCACCCGCAC CTGGGCCTTG CCCACCTACA
  AAV2    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
  AAV3    CGACAGAGTC ATCACCACCA GCACCAGAAC CTGGGCCCTG CCCACTTACA
  AAV8    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
  AAV9    GGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCATTG CCCACCTACA
  AAV7    CGACAGAGTC ATTACCACCA GCACCCGAAC CTGGGCCCTG CCCACCTACA
 AAV10    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGTCCTG CCCACCTACA
 AAV11    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTG CCAACCTACA
 AAV12    CGACCGAGTC ATTACCACCA GCACCCGGAC TTGGGCCCTG CCCACCTACA
  44_2    CGACAGAGTC ATCACCACCA GCACCCGAAC CTGGGCCCTC CCCACCTACA
```

Fig. 1AAI

```
         3001                                                    3050
  42_2   ACAACCACCT CTACAAGCAG ATATCAA..G TCAGAGCGGG GCT....ACC
  42_8   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACC
 42_15   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACC
 42_5b   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACC
 42_1b   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACC
 42_13   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACC
 42_3a   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACC
  42_4   ACAACCACCT CTACAAGCAG ATATCAA... .GTCAGAGCG GGGC..TACC
 42_5a   ACAACCACCT CTACAAGCAG ATATCAA... .GTCAGAGCG GGGC..TACC
 42_10   ACAACCACCT CTACAAGCAG ATATCAA..G TCAGAGCGGG GCTA....CC
 42_3b   ACAACCACCT CTACAAGCAG ATATCAA..G TCAGAGCGGG GCTA....CC
 42_11   ACAACCACCT CTACAAGCAG ATATCAA..G TCAGAGCGGG GCTA....CC
 42_6b   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACC
  43_1   ACAACCATCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACT
  43_5   ACAACCATCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACT
 43_12   ACAACCATCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACT
 43_20   ACAACCACCT CTACAAGCAA ATCTCCAACG GCACCTCGGG AGGAAGCACC
 43_21   ACAACCACCT CTACAAGCAA ATCTCCAACG GCACCTCGGG AGGAAGCACC
 43_23   ACAACCACCT CTACAAGCAA ATCTCCAACG GCACCTCGGG AGGAAGCACC
 43_25   ACAACCACCT CTACAAGCAA ATCTCCAACG GCACCTCGGG AGGAAGCACC
  44_1   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACTTCGGG AGGAAGCACC
  44_5   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACTTCGGG AGGAAGCACC
223_10   ACAACCACCT CTACAAGCAA ATCTCCAGTC AGTCAGCAGG GAG...CACC
 223_2   ACAACCACCT CTACAAGCAA ATCTCCAGTC AGTCAGCAGG GAG...CACC
 223_4   ACAACCACCT CTACAAGCAA ATCTCCAGTC AGTCAGCAGG GAG...CACC
 223_5   ACAACCACCT CTACAAGCAA ATCTCCAGTC AGTCAGCAGG GAG...CACC
 223_6   ACAACCACCT CTACAAGCAA ATCTCCAGTC AGTCAGCAGG GAG...CACC
 223_7   ACAACCACCT CTACAAGCAA ATCTCCAGTC AGTCAGCAGG GAG...CACC
  A3_4   ATAATCACCT CTACAAGCAA ATCTCCA... GCGAATCGGG AGC...CACC
  A3_5   ATAATCACCT CTACAAGCAA ATCTCCA... GCGAATCGGG AGC...CACC
  A3_7   ATAATCGCCT CTACAAGCAA ATCTCCA... GCGAATCGGG AGC...CACC
  A3_3   ATAATCACCT CTACAAGCAA ATCTCCA... GCGAATCGGG AGC...CACC
 42_12   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAAGCACC
  AAV1   ATAACCACCT CTACAAGCAA ATCTCCAGTG CTTCAACGGG .GG..CCAGC
  AAV2   ACAACCACCT CTACAAACAA ATTTCCA... GCCAATCAGG AGC...CTCG
  AAV3   ACAACCATCT CTACAAGCAA ATCTCCA... GCCAATCAGG AGC...TTCA
  AAV8   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACATCGGG AGGAGCCACC
  AAV9   ACAACCACCT CTACAAGCAA ATCTCCAATG GAACATCGGG AGGAAGCACC
  AAV7   ACAACCACCT CTACAAGCAA ATCTCCAGTG AAACTGCAGG TAG...TACC
 AAV10   ACAACCACAT CTACAAGCAA ATCTCCAGCG AGACAGGAGC CACCAACGAC
 AAV11   ACAACCACCT CTACAAACAA ATCTCCAGCG CTTCAACGGG GGCCAGCAAC
 AAV12   ACAACCACCT CTACAAGCAA ATCTCCAGCC AATCGGGTGC CACCAACGAC
  44_2   ACAACCACCT CTACAAGCAA ATCTCCAACG GGACTTCGGG AGGAAGCACC
```

Fig. 1AAJ

```
          3051                                                      3100
  42_2    AACGACAACC ACTTCTTCGG CTACAGCACC CCCTGGGGCT ATTTTGACTT
  42_8    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 42_15    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 42_5b    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 42_1b    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 42_13    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 42_3a    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  42_4    AACGACAACC ACTTCTTCGG CTACAGCACC CCCTGGGGCT ATTTTGACTT
 42_5a    AACGACAACC ACTTCTTCGG CTACAGCACC CCCTGGGGCT ATTTTGACTT
 42_10    AACGACAACC ACTTCTTCGG CTACAGCACC CCCTGGGGCT ATTTTGACTT
 42_3b    AACGACAACC ACTTCTTCGG CTACAGCACC CCCTGGGGCT ATTTTGACTT
 42_11    AACGACAACC ACTTCTTCGG CTACAGCACC CCCTGGGGCT ATTTTGACTT
 42_6b    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  43_1    AACGACAACA CCTACTTTGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  43_5    AACGACAACA CCTACTTTGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 43_12    AACGACAACA CCTACTTTGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 43_20    AACGACAACA CCTATTTTGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 43_21    AACGACAACA CCTATTTTGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 43_23    AACGACAACA CCTATTTTGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 43_25    AACGACAACA CCTATTTTGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  44_1    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  44_5    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
223_10    AACGATAACG TCTATTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 223_2    AACGATAACG TCTATTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 223_4    AACGATAACG TCTATTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 223_5    AACGATAACG TCTATTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 223_6    AACGATAACG TCTATTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 223_7    AACGATAACG TCTATTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  A3_4    AACGACAACC ACTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  A3_5    AACGACAACC ACTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  A3_7    AACGACAACC ACTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  A3_3    AACGACAACC ACTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 42_12    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  AAV1    AACGACAACC ACTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGATTT
  AAV2    AACGACAATC ACTACTTTGG CTACAGCACC CCTTGGGGGT ATTTTGACTT
  AAV3    AACGACAACC ACTACTTTGG CTACAGCACC CCTTGGGGGT ATTTTGACTT
  AAV8    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  AAV9    AACGACAACA CCTACTTTGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
  AAV7    AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 AAV10    AACCACTACT TCGGCTACAG C......ACC CCCTGGGGGT ATTTTGACTT
 AAV11    ...GACAACC ACTACTTTGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
 AAV12    AACCACTACT TCGGCTA... ...CAGCACC CCTTGGGGGT ATTTTGATTT
 44_2     AACGACAACA CCTACTTCGG CTACAGCACC CCCTGGGGGT ATTTTGACTT
```

Fig. 1AAK

```
          3101                                                      3150
  42_2    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
  42_8    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 42_15    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 42_5b    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 42_1b    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 42_13    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 42_3a    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
  42_4    CAACAGATTC CACTGCCACT TCTCATCACG TGACTGGCAG CGACTCATCA
 42_5a    CAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 42_10    CAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 42_3b    CAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 42_11    CAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 42_6b    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
  43_1    CAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
  43_5    CAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 43_12    CAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 43_20    CAACAGATTC CACTGTCACT TTTCACCACG TGACTGGCAA CGACTCATCA
 43_21    CAACAGATTC CACTGTCACT TTTCACCACG TGACTGGCAA CGACTCATCA
 43_23    CAACAGATTC CACTGTCACT TTTCACCACG TGACTGGCAA CGACTCATCA
 43_25    CAACAGATTC CACTGTCACT TTTCACCACG TGACTGGCAA CGACTCATCA
  44_1    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
  44_5    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
223_10    CAACAGATTC CATTGCCACT TCTCACCACG TGACTGGCAG CGACTTATCA
223_2     CAACAGATTC CATTGCCACT TCTCACCACG TGACTGGCAG CGACTTATCA
223_4     CAACAGATTC CATTGCCACT TCTCACCACG TGACTGGCAG CGACTTATCA
223_5     CAACAGATTC CATTGCCACT TCTCACCACG TGACTGGCAG CGACTTATCA
223_6     CAACAGATTC CATTGCCACT TCTCACCACG TGACTGGCAG CGACTTATCA
223_7     CAACAGATTC CATTGCCACT TCTCACCACG TGACTGGCAG CGACTTATCA
 A3_4     TAACAGATTC CACTGTCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 A3_5     TAACAGATTC CACTGTCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 A3_7     TAACAGATTC CACTGTCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 A3_3     TAACAGATTC CACTGTCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 42_12    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
  AAV1    CAACAGATTC CACTGCCACT TTTCACCACG TGACTGGCAG CGACTCATCA
  AAV2    CAACAGATTC CACTGCCACT TTTCACCACG TGACTGGCAA AGACTCATCA
  AAV3    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATTA
  AAV8    TAACAGATTC CACTGCCACT TTTCACCACG TGACTGGCAG CGACTCATCA
  AAV9    CAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
  AAV7    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 AAV10    TAACAGATTC CACTGCCACT TTTCACCACG TGACTGGCAG CGACTCATCA
 AAV11    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
 AAV12    CAACAGATTC CACTGCCATT TCTCACCACG TGACTGGCAG CGACTCATCA
  44_2    TAACAGATTC CACTGCCACT TCTCACCACG TGACTGGCAG CGACTCATCA
```

Fig. 1AAL

```
          3151                                                        3200
 42_2     ACAACAACTG GGGATTCCGG CCCAGAAAGC TGCGGTTCAA GTTGTTCAAC
 42_8     ACAACAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
42_15     ACAACAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
42_5b     ACAACAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
42_1b     ACAACAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
42_13     ACAACAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
42_3a     ACAACAGCTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
 42_4     ACAACAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
42_5a     ACAACAACCG GGGATTCCGG CCCAGAAAGC TGCGGTTCAA GTTGTTCAAC
42_10     ACAACAACTG GGGATTCCGG CCCAGAAAGC TGCGGTTCAA GTTGTTCAAC
42_3b     ACAACAACTG GGGATTCCGG CCCAGAAAGC TGCGGTTCAA GTTGTTCAAC
42_11     ACAACAACTG GGGATTCCGG CCCAGAAAGC TGCGGTTCAA GTTGTTCAAC
42_6b     ACAACAACTG GGGATTCCGG CCCAGAAAGC TGCGGTTCAA GTTGTTCAAC
 43_1     ACAATAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
 43_5     ACAATAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
43_12     ACAATAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
43_20     ACAACAATTG GGGATTCCGG CCCAAAAGAC TCAACTTCAA GCTGTTCAAC
43_21     ACAACAATTG GGGATTCCGG CCCAAAAGAC TCAACTTCAA GCTGTTCAAC
43_23     ACAACAATTG GGGATTCCGG CCCAAAAGAC TCAACTTCAA GCTGTTCAAC
43_25     ACAACAATTG GGGATTCCGG CCCAAAAGAC TCAACTTCAA GCTGTTCAAC
 44_1     ACAACAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
 44_5     ACAACAACTG GGGATTCCGG CCCAAGAGAC CCAACTTCAA GCTCTTCAAC
223_10    ACAACAACTG GGGATTCCGG CCCAAGAAGC TCAACTTCAA GCTCTTCAAC
223_2     ACAACAACTG GGGATTCCGG CCCAAGAAGC TCAACTTCAA GCTCTTCAAC
223_4     ACAACAACTG GGGATTCCGG CCCAAGAAGC TCAACTTCAA GCTCTTCAAC
223_5     ACAACAACTG GGGATTCCGG CCCAAGAAGC TCAACTTCAA GCTCTTCAAC
223_6     ACAACAACTG GGGATTCCGG CCCAAGAAGC TCAACTTCAA GCTCTTCAAC
223_7     ACAACAACTG GGGATTCCGG CCCAAGAAGC TCAACTTCAA GCTCTTCAAC
 A3_4     ACAACAACTG GGGATTTAGA CCCAAGAAAC TCAATTTCAA GCTCTTCAAC
 A3_5     ATAACAACTG GGGATTTAGA CCCAAGAAAC TCAATTTCAA GCTCTTCAAC
 A3_7     ACAACAACTG GGGATTTAGA CCCAAGAAAC TCAATTTCAA GCTCTTCAAC
 A3_3     ACAACAACTG GGGATTTAGA CCCAAGAAAC TCAATTTCAA GCTCTTCAAC
42_12     ACAACAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
 AAV1     ACAACAATTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA ACTCTTCAAC
 AAV2     ACAACAACTG GGGATTCCGA CCCAAGAGAC TCAACTTCAA GCTCTTTAAC
 AAV3     ACAACAACTG GGGATTCCGG CCCAAGAAAC TCAGCTTCAA GCTCTTCAAC
 AAV8     ACAACAACTG GGGATTCCGG CCCAAGAGAC TCAGCTTCAA GCTCTTCAAC
 AAV9     ACAACAACTG GGGATTCCGG CCAAAGAGAC TCAACTTCAA GCTGTTCAAC
 AAV7     ACAACAACTG GGGATTCCGG CCCAAGAAGC TGCGGTTCAA GCTCTTCAAC
AAV10     ACAACAACTG GGGATTC
AAV11     ACAACAACTG GGGATTC
AAV12     ACAACAACTG GGGATTC
 44_2     ACAACAACTG GGGATTCCGG CCCAAGAGAC TCAACTTCAA GCTCTTCAAC
```

Fig. 1AAM

```
          3201                                                    3250
 42_2     ATCCAGGTCA AGGAGGTCAC GACGAACGAC GGCGTTACGA CCATCGCTAA
 42_8     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
42_15     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
42_5b     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
42_1b     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
42_13     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
42_3a     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
 42_4     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
42_5a     ATCCAGGTCA AGGAGGTCAC GACGAACGAC GGCGTTACGA CCATCGCTAA
42_10     ATCCAGGTCA AGGAGGTCAC GACGAACGAC GGCGTTACGA CCATCGCCAA
42_3b     ATCCAGGTCA AGGAGGTCAC GACGAACGAC GGCGTTACGA CCATCGCTAA
42_11     ATCCAGGTCA AGGAGGTCAC GACGAACGAC GGCGTTACGA CCATCGCTAA
42_6b     ATCCAGGTCA AGGAGGTCAC GACGGACGAC GGCGTTACGA CCATCGCTAA
 43_1     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
 43_5     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
43_12     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
43_20     ATCCAGGTCA AGGAAGTCAC GACGAACGAA GGCACCAAGA CCATCGCCAA
43_21     ATCCAGGTCA AGGAAGTCAC GACGAACGAA GGCACCAAGA CCATCGCCAA
43_23     ATCCAGGTCA AGGAAGTCAC GACGAACGAA GGCACCAAGA CCATCGCCAA
43_25     ATCCAGGTCA AGGAAGTCAC GACGAACGAA GGCACCAAGA CCATCGCCAA
 44_1     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
 44_5     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
223_10    ATCCAGGTCA AGGAGGTCAC GACGAATGAC GGTGTCACAA CCATCGCTAA
223_2     ATCCAGGTCA AGGAGGTCAC GACGAATGAC GGTGTCACAA CCATCGCTAA
223_4     ATCCAGGTCA AGGAGGTCAC GACGAATGAC GGCGTCACAA CCATCGCTAA
223_5     ATCCAGGTCA AGGAGGTCAC GACGAATGAC GGCGTCACAA CCATCGCTAA
223_6     ATCCAGGTCA AGGAGGTCAC GACGAATGAC GGTGTCACAA CCATCGCTAA
223_7     ATCCAGGTCA AGGAGGTCAC GACGAATGAC GGCGTCACAA CCATCGCTAA
 A3_4     ATCCAAGTCA AGGAGGTCAC GCAGAATGAT GGAACCACGA CCATCGCCAA
 A3_5     ATCCAAGTCA AGGAGGTCAC GCAGAATGAT GGAACCACGA CCATCGCCAA
 A3_7     ATCCAAGTCA AGGAGGTCAC GCAGAATGAT GGAACCACGA CCATCGCCAA
 A3_3     ATCCAAGTCA AGGAGGTCAC GCAGAATGAT GGAACCACGA CCATCGCCAA
42_12     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
 AAV1     ATCCAAGTCA AGGAGGTCAC GACGAATGAT GGCGTCACAA CCATCGCTAA
 AAV2     ATTCAAGTCA AAGAGGTCAC GCAGAATGAC GGTACGACGA CGATTGCCAA
 AAV3     ATCCAAGTTA GAGGGGTCAC GCAGAACGAT GGCACGACGA CTATTGCCAA
 AAV8     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
 AAV9     ATCCAGGTCA AGGAGGTTAC GACGAACGAA GGCACCAAGA CCATCGCCAA
 AAV7     ATCCAGGTCA AGGAGGTCAC GACGAATGAC GGCGTTACGA CCATCGCTAA
 44_2     ATCCAGGTCA AGGAGGTCAC GCAGAATGAA GGCACCAAGA CCATCGCCAA
```

Fig. 1AAN

```
          3251                                                      3300
 42_2     TAACCTTACC AGCACGATTC AGGTCTTCTC GGACTCGGAG TACCAACTGC
 42_8     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCAGCTCC
42_15     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCAGCTCC
42_5b     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCAGCTCC
42_1b     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCAGCTCC
42_13     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCAGCTCC
42_3a     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCAGCTCC
 42_4     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCGGCTCC
42_5a     TAACCTTACC AGCACGATTC AGGTCTTCTC GGACTCGGAG TACCAACTGC
42_10     TAACCTTACC AGCACGATTC AGGTCTTCTC GGACTCGGAG TACCAACTGC
42_3b     TAACCTTACC AGCACGATTC AGGTCTTCTC GGACTCGGAG TACCAACTGC
42_11     TAACCTTACC AGCACGATTC AGGTCTTCTC GGACTCGGAG TACCAACTGC
42_6b     TAACCTTACC AGCACGATTC AGGTCTTCTC GGACTCGGAG TACCAACTGC
 43_1     TAACCTTACC AGCACGATTC AGGTGTTTAC GGACTCGGAA TACCAGCTCC
 43_5     TAACCTTACC AGCACGATTC AGGTGTTTAC GGACTCGGAA TACCAGCTCC
43_12     TAACCTTACC AGCACGATTC AGGTGTTTAC GGACTCGGAA TACCAGCTCC
43_20     TAATCTCACC AGCACCGTGC AGGTCTTTAC GGACTCGGAG TACCAGTTAC
43_21     TAATCTCACC AGCACCGTGC GGGTCTTTAC GGACTCGGAG TACCAGTTAC
43_23     TAATCTCACC AGCACCGTGC AGGTCTTTAC GGACTTGGAG TACCAGTTAC
43_25     TAATCTCACC AGCACCGTGC AGGTCTTTAC GGACTCGGAG TACCAGTTAC
 44_1     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCAGCTCC
 44_5     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCAGCTCC
223_10    TAACCTTACC AGCACGGTTC AGGTCTTTTC GGACTCGGAA TATCAACTGC
223_2     TAACCTTACC AGCACGGTTC AGGTCTTTTC GGACTCGGAA TATCAACTGC
223_4     TAACCTTACC AGCACGGTTC AGGTCTTTTC GGACTCGGAA TATCAACTGC
223_5     TAACCTTACC AGCACGGTTC AGGTCTTTTC GGACTCGGAA TATCAACTGC
223_6     TAACCTTACC AGCACGGTTC AGGTCTTTTC GGACTCGGAA TATCAACTGC
223_7     TAACCTTACC AGCACGGTTC AGGTCTTTTC GGACCCGGAA TATCAACTGC
 A3_4     TAACCTTACC AGCACGGTGC AGGTCTTCAC AGACTCTGAG TACCAGCTGC
 A3_5     TAACCTTACC AGCACGGTGC AGGTCTTCAC AGACTCTGAG TACCAGCTGC
 A3_7     TAACCTTACC AGCACGGTGC AGGTCTTCAC AGACTCTGAG TACCAGCTGC
 A3_3     TAACCTTACC AGCGCGGTGC AGGTCTTCAC AGACTCTGAG TACCAGCTGC
42_12     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCAGCTCC
 AAV1     TAACCTTACC AGCACGGTTC AAGTCTTCTC GGACTCGGAG TACCAGCTTC
 AAV2     TAACCTTACC AGCACGGTTC AGGTGTTTAC TGACTCGGAG TACCAGCTCC
 AAV3     TAACCTTACC AGCACGGTTC AAGTGTTTAC GGACTCGGAG TATCAGCTCC
 AAV8     TAACCTCACC AGCACCATCC AGGTGTTTAC GGACTCGGAG TACCAGCTGC
 AAV9     TAACCTTACC AGCACCGTCC AGGTCTTTAC GGACTCGGAG TACCAGCTAC
 AAV7     TAACCTTACC AGCACGATTC AGGTATTCTC GGACTCGGAA TACCAGCTGC
 44_2     TAACCTTACC AGCACGATTC AGGTCTTTAC GGACTCGGAA TACCAGCTCC
```

Fig. 1AAO

```
          3301                                                    3350
 42_2     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTCCCTCC GTTCCCTGCG
 42_8     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
42_15     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCCGCCTCC GTTCCCGGCG
42_5b     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
42_1b     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
42_13     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
42_3a     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
 42_4     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
42_5a     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTCCCTCC GTTCCCTGCG
42_10     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTCCCTCC GTTCCCTGCG
42_3b     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTCCCTCC GTTCCCTGCG
42_1      CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTCCCTCC GTTCCCTGCG
42_6b     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTCCCTCC GTTCCCTGCG
 43_1     CGTACGTCCC CGGCTCTGCG CACCAGGGCT GCCTCCCTCC GTTCCCGGCG
 43_5     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTCCCTCC GTTCCCGGCG
43_12     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTCCCTCC GTTCCCGGCG
43_20     CGTACGTGCT AGGATCCGCT CACCAGGGAT GTCTGCCTCC GTTCCCGGCG
43_21     CGTACGTGCT AGGATCCGCT CACCAGGGAT GTCTGCCTCC GTTCCCGGCG
43_23     CGTACGTGCT AGGATCCGCT CACCAGGGAT GTCTGCCTCC GTTCCCGGCG
43_25     CGTACGTGCT AGGATCCGCT CACCAGGGAT GTCTGCCTCC GTTCCCGGCG
 44_1     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
 44_5     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
223_10    CGTACGTCCT CGGCTCCGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCA
223_2     CGTACGTCCT CGGCTCCGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCA
223_4     CGTACGTCCT CGGCTCCGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCA
223_5     CGTACGTCCT CGGCTCCGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCA
223_6     CGTACGTCCT CGGCTCCGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCA
223_7     CGTACGTCCT CGGCTCCGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCA
 A3_4     CCTACGTCCT CGGTTCGGCT CACCAGGGCT GCCTTCCGCC GTTCCCAGCA
 A3_5     CCTACGTCCT CGGTTCGGCT CACCAGGGCT GCCTTCCGCC GTTCCCAGCA
 A3_7     CCTACGTCCT CGGTTCGGCT CACCAGGGCT GCCTTCCGCC GTTCCCAGCA
 A3_3     CCTACGTCCT CGGTTCGGCT CACCAGGGCT GCCTTCCGCC GTTCCCAGCA
42_12     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
 AAV1     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTCCCTCC GTTCCCGGCG
 AAV2     CGTACGTCCT CGGCTCGGCG CATCAAGGAT GCCTCCCGCC GTTCCCAGCA
 AAV3     CGTACGTGCT CGGGTCGGCG CACCAAGGCT GTCTCCCGCC GTTTCCAGCG
 AAV8     CGTACGTTCT CGGCTCTGCC CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
 AAV9     CGTACGTCCT AGGCTCTGCC CACCAAGGAT GCCTGCCACC GTTTCCTGCA
 AAV7     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
 44_2     CGTACGTCCT CGGCTCTGCG CACCAGGGCT GCCTGCCTCC GTTCCCGGCG
```

Fig. 1AAP

```
          3351                                                      3400
  42_2    GACGTGTTCA TGATTCCTCA GTACGGATAT CTGACTCTAA ACAACGGCAG
  42_8    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAACGGCAG
 42_15    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAACGGCAG
 42_5b    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAACGGCAG
 42_1b    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAACGGCAG
 42_13    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAACGGCAG
 42_3a    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAACGGCAG
  42_4    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAACGGCAG
 42_5a    GACGTGTTCA TGATTCCTCA GTACGGATAT CTGACTCTAA ACAACGGCAG
 42_10    GACGTGTTCA TGATTCCTCA GTACGGATAT CTGACTCTAA ACAACGGCAG
 42_3b    GACGTGTTCA TGATTCCTCA GTACGGATAT CTGACTCTAA ACAACGGCAG
 42_1     GACGTGTTCA TGATTCCTCA GTACGGATAT CTGACTCTAA ACAACGGCAG
 42_6b    GACGTGTTCA TGATTCCTCA GTACGGATAT CTGACTCTAA ACAACGGCAG
  43_1    GACGTCTTCA TGATTCCTCA GTACGGGTAT CTGACCCTAA ACAATGGCAG
  43_5    GACGTCTTCA TGATTCCTCA GTACGGGTAT CTGACCCTAA ACAATGGCAG
 43_12    GACGTCTTCA TGATTCCTCA GTACGGGTAT CTGACCCTAA ACAATGGCAG
 43_20    GACGTCTTCA CGGTTCCTCA GTACGGCTAT TTAACTTTAA ACAATGGAAG
 43_21    GACGTCTTCA TGGTTCCTCA GTACGGCTAT TTAACTTTAA ACAATGGAAG
 43_23    GACGTCTTCA TGGTTCCTCA GTACGGCTAT TTAACTTTAA ACAATGGAAG
 43_25    GACGTCTTCA TGGTTCCTCA GTACGGCTAT TTAACTTTAA ACAATGGAAG
  44_1    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAATGGAAG
  44_5    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAATGGCAG
223_10    GACGTGTTCA TGATTCCGCA GTACGGATAC CTGACTCTGA ACAATGGCAG
 223_2    GACGTGTTCA TGATTCCGCA GTACGGATAC CTGACTCTGA ACAATGGCAG
 223_4    GACGTGTTCA TGATTCCGCA GTACGGATAC CTGACTCTGA ACAATGGCAG
 223_5    GACGTGTTCA TGATTCCGCA GTACGGATAC CTGACTCTGA ACAATGGCAG
 223_6    GACGTGTTCA TGATTCCGCA GTACGGATAC CTGACTCTGA ACAATGGCAG
 223_7    GACGTGTTCA TGATTCCGCA GTACGGATAC CTGACTCTGA ACAATGGCAG
  A3_4    GACGTCTTCA TGATTCCTCA GTACGGCTAC TTGACTCTGA ACAATGGCAG
  A3_5    GACGTCTTCA TGATTCCTCA GTACGGCTAC TTGACTCTGA ACAATGGCAG
  A3_7    GACGTCTTCA TGATTCCTCA GTACGGCTAC TTGACTCTGA ACAATGGCAG
  A3_3    GACGTCTTCA TGATTCCTCA GTACGGCTAC TTGACTCTGA ACAATGGCAG
 42_12    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAACGGCAG
  AAV1    GACGTGTTCA TGATTCCGCA ATACGGCTAC CTGACGCTCA ACAATGGCAG
  AAV2    GACGTCTTCA TGGTGCCACA GTATGGATAC CTCACCCTGA ACAACGGGAG
  AAV3    GACGTCTTCA TGGTCCCTCA GTATGGATAC CTCACCCTGA ACAACGGAAG
  AAV8    GACGTGTTCA TGATTCCCCA GTACGGCTAC CTAACACTCA ACAACGGTAG
  AAV9    GACGTCTTCA TGGTTCCTCA GTACGGCTAC CTGACGCTCA ACAATGGAAG
  AAV7    GACGTCTTCA TGATTCCTCA GTACGGCTAC CTGACTCTCA ACAATGGCAG
  44_2    GACGTCTTCA TGATTCCTCA GTACGGGTAC CTGACTCTGA ACAATGGCAG
```

Fig. 1AAQ

```
          3401                                                      3450
 42_2     TCAGTCTGTG GGACGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
 42_8     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
42_15     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
42_5b     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
42_1b     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
42_13     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
42_3a     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
 42_4     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
42_5a     TCAGTCTGTG GGACGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
42_10     TCAGTCTGTG GGACGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
42_3b     TCAGTCTGTG GGACGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
42_11     TCAGTCTGTG GGACGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
42_6b     TCAGTCTGTG GGACGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
 43_1     TCAGGCTGTG GGCCGTTCCT CCTTCTACTG CCTGGAATAC TTCCCTTCTC
 43_5     TCAGGCTGTG GGCCGTTCCT CCTTCTACTG CCTGGAATAC TTCCCTTCTC
43_12     TCAGGCTGTG GGCCGTTCCT CCTTCTACTG CCTGGAATAC TTCCCTTCTC
43_20     CCAAGCCCTG GGACGTTCCT CCTTCTACTG TCTGGAGTAT TTCCCATCGC
43_21     CCAAGCCCTG GGACGTTCCT CCTTCTACTG TCTGGAGTAT TTCCCATCGC
43_23     CCAAGCCCTG GGACGTTCCT CCTTCTACTG TCTGGAGTAT TTCCCATCGC
43_25     CCAAGCCCTG GGACGTTCCT CCTTCTACTG TCTGGAGTAT TTCCCATCGC
 44_1     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
 44_5     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
223_10    CCAATCGGTA GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
223_2     CCAATCGGTA GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
223_4     CCAATCGGTA GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
223_5     CCAATCGGTA GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
223_6     CCAATCGGTA GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
223_7     CCAATCGGTA GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
 A3_4     CCAAGCGGTA GGACGTTCTT CATTCTACTG TCTAGAGTAT TTTCCCTCTC
 A3_5     CCAAGCGGTA GGACGTTCTT CATTCTACTG TCTAGAGTAT TTTCCCTCTC
 A3_7     CCAAGCGGTA GGACGTTCTT CATTCTACTG TCTAGAGTAT TTTCCCTCTC
 A3_3     CCAAGCGGTA GGACGTTCTT CATTCTACTG TCTAGAGTAT TTTCCCTCTC
42_12     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
 AAV1     CCAAGCCGTG GGACGTTCAT CCTTTTACTG CCTGGAATAT TTCCCTTCTC
 AAV2     TCAGGCAGTA GGACGCTCTT CATTTTACTG CCTGGAGTAC TTTCCTTCTC
 AAV3     TCAAGCGGTG GGACGCTCAT CCTTTTACTG CCTGGAGTAC TTCCCTTCGC
 AAV8     TCAGGCCGTG GGACGCTCCT CCTTCTACTG CCTGGAATAC TTTCCTTCGC
 AAV9     TCAAGCGTTA GGACGTTCTT CTTTCTACTG TCTGGAATAC TTCCCTTCTC
 AAV7     TCAGTCTGTG GGACGTTCCT CCTTCTACTG CCTGGAGTAC TTCCCCTCTC
 44_2     TCAGGCCGTG GGCCGTTCCT CCTTCTACTG CCTGGAGTAC TTTCCTTCTC
```

Fig. 1AAR

```
          3451                                                        3500
 42_2     AGATGCTGAG AACGGGCAAT AACTTTGAAT TCAGCTACAC CTTTGAGGAA
 42_8     AAATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
42_15     AAATGCGGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
42_5b     AAATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
42_1b     AAATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
42_13     AAATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
42_3a     AAATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
 42_4     AAATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
42_5a     AGATGCTGAG AACGGGCAAT AACTTTGAAT TCAGCTACCA GTTTGAGGAC
42_10     AGATGCTGAG AACGGGCAAT AACTTTGAAT TCAGCTACAC CTTTGAGGAA
42_3b     AGATGCTGAG AACGGGCAAT AACTTTGAAT TCAGCTACAC CTTTGAGGAA
42_11     AGATGCTGAG AACGGGCAAT AACTTTGAAT TCAGCTACAC CTTTGAGGAA
42_6b     AGATGCTGAG AACGGGCAAT AACTTTGAAT TCAGCTACAC CTTTGAGGAA
 43_1     AAATGCTGAG GACGGGCAAC AACTTTGAAT TCAGCTACAC CTTCGAGGAC
 43_5     AAATGCTGAG GACGGGCAAC AACTTTGAAT TCAGCTACAC CTTCGAGGAC
43_12     AAATGCTGAG GACGGGCAAC AACTTTGAAT TCAGCTACAC CTTCGAGGAC
43_20     AGATGCTGAG AACCGGCAAC AACTTTCAGT TCAGCTACAC CTTCGAGGAC
43_21     AGATGCTGAG AACCGGCAAC AACTTTCAGT TCAGCTACAC CTTCGAGGAC
43_23     AGATGCCGAG AACCGGCAAC AACTTTCAGT TCAGCTACAC CTTCGAGGAC
43_25     AGATGCTGAG AACCGGCAAC AACTTTCAGT TCAGCTACAC CTTCGAGGAC
 44_1     AAATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
 44_5     AAATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
223_10    AGATGCTGAG AACGGGCAAC AACTTCACCT TTAGCTACAC CTTCGAGGAC
223_2     AGATGCTGAG AACGGGCAAC AACTTCACCT TTAGCTACAC CTTCGAGGAC
223_4     AGATGCTGAG AACGGGCAAC AACTTCACCT TTAGCTACAC CTTCGAGGAC
223_5     AGATGCTGAG AACGGGCAAC AACTTCACCT TTAGCTACAC CTTCGAGGAC
223_6     AGATGCTGAG AACGGGCAAC AACTTCACCT TTAGCTACAC CTTCGAGGAC
223_7     AGATGCTGAG AACGGGCAAC AACTTCACCT TTAGCTACAC CTTCGAGGAC
 A3_4     AGATGCTGAG GACGGGAAAC AACTTCACCT TCAGCTACAC TTTTGAAGAC
 A3_5     AGATGCTGAG GACGGGAAAC AACTTCACCT TCAGCTACAC TTTTGAAGAC
 A3_7     AGATGCTGAG GACGGGAAAC AACTTCACCT TCAGCTACAC TTTTGAAGAC
 A3_3     AGATGCTGAG GACGGGAAAC AACTTCACCT TCAGCTACAC TTTTGAAGAC
42_12     AAATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
 AAV1     AGATGCTGAG AACGGGCAAC AACTTTACCT TCAGCTACAC CTTTGAGGAA
 AAV2     AGATGCTGCG TACCGGAAAC AACTTTACCT TCAGCTACAC TTTTGAGGAC
 AAV3     AGATGCTAAG GACTGGAAAT AACTTCCAAT TCAGCTATAC CTTCGAGGAT
 AAV8     AGATGCTGAG AACCGGCAAC AACTTCCAGT TTACTTACAC CTTCGAGGAC
 AAV9     AGATGCTGAG AACCGGCAAC AACTTTCAGT TCAGCTACAC TTTCGAGGAC
 AAV7     AGATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACAG CTTCGAGGAC
 44_2     AAATGCTGAG AACGGGCAAC AACTTTGAGT TCAGCTACCA GTTTGAGGAC
```

Fig. 1AAS

```
          3501                                                      3550
  42_2    GTGCCTTTCC ACAGCAGCTA TGCGCACAGC CAGAGCCTGG ACCGGCTGAT
  42_8    GTGCCTTTTC ACAGCAGCTA CGCGCACAGC CAAAGCCTGG ACCGGCTGAT
 42_15    GTGCCTTTTC ACAGCAGCTA CGCGCATAGC CAAAGCCTGG ACCGGCTGAT
 42_5b    GTGCCTTTTC ACAGCAGCTA CGCGCACAGC CAAAGCCTGG ACCGGCTGAT
 42_1b    GTGCCTTTTC ACAGCAGCTA TGCGCACAGC CAAAGCCTGG ACCGGCTGAT
 42_13    GTGCCTTTTC ACAGCAGCTA TGCGCACAGC CAAAGCCTGG ACCGGCTGAT
 42_3a    GTGCCTTTTC ACAGCAGCTA CGCGCACAGC CAAAGCCTGG ACCGGCTGAT
  42_4    GTGCCTTTTC ACAGCAGCTA CGCGCACAGC CAAAGCCTGG ACCGGCTGAT
 42_5a    GTGCCCTTTC ACAGCAGCTA CGCGCACAGC CAAAGCCTGG ACCGGCTGAT
 42_10    GTGCCTTTCC ACAGCAGCTA TGCGCACAGC CAGAGCCTGG ACCGGCTGAT
 42_3b    GTGCCTTTCC ACAGCAGCTA TGCGCACAGC CAGAGCCTGG ACCGGCTGAT
 42_11    GTGCCTTTCC ACAGCAGCTA TGCGCACAGC CAGAGCCTGG ACCGGCTGAT
 42_6b    GTGCCTTTCC ACAGCAGCTA TGCGCATAGC CAGAGCCTGG ACCGGCTGAT
  43_1    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGCCTGG ACCGGCTGAT
  43_5    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGCCTGG ACCGGCTGAT
 43_12    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGCCTGG ACCGGCTGAT
 43_20    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGCCTGG ACAGGCTGAT
 43_21    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGCCTGG ACAGGCTGAT
 43_23    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGCCTGG ACAGGCTGAT
 43_25    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGCCTGG ACAGGCTGAT
  44_1    GTGCCTTTTC ACAGCAGCTA CGCGCACAGC CAAAGCCTGG ACCGGCTGAT
  44_5    GTGCCTTTTC ACAGCAGCTA CGCGCACAGC CAAAGCCTGG ACCGGCTGAT
223_10    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGTCTGG ACCGGCTGAT
 223_2    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGTCTGG ACCGGCTGAT
 223_4    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGTCTGG GCCGGCTGAT
 223_5    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGTCTGG GCCGGCTGAT
 223_6    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGTCTGG ACCGGCTGAT
 223_7    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGTCTGG ACCGGCTGAT
  A3_4    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGTCTGG ATCGGCTGAT
  A3_5    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGTCTGG ATCGGCTGAT
  A3_7    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGTCTGG ATCGGCTGAT
  A3_3    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGTCTGG ATCGGCTGAT
 42_12    GTGCCTTTTC ACAGCAGCTA CGCGCACAGC CAAAGCCTGG ACCGGCTGAC
  AAV1    GTGCCTTTCC ACAGCAGCTA CGCGCACAGC CAGAGCCTGG ACCGGCTGAT
  AAV2    GTTCCTTTCC ACAGCAGCTA CGCTCACAGC CAGAGTCTGG ACCGTCTCAT
  AAV3    GTACCTTTTC ACAGCAGCTA CGCTCACAGC CAGAGTTTGG ATCGCTTGAT
  AAV8    GTGCCTTTCC ACAGCAGCTA CGCCCACAGC CAGAGCTTGG ACCGGCTGAT
  AAV9    GTGCCTTTCC ACAGCAGCTA CGCACACAGC CAGAGTCTAG ATCGACTGAT
  AAV7    GTGCCTTTCC ACAGCAGCTA CGCACACAGC CAGAGCCTGG ACCGGCTGAT
  44_2    GTGCCTTTTC ACAGCAGCTA CGCGCACAGC CAAAGCCTGG ACCGGCTGAT
```

Fig. 1AAT

```
         3551                                                      3600
  42_2   GAATCCCCTC ATCGACCAGT ACCTGTACTA CCTGGCCCGG ACCCAGAGCA
  42_8   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
 42_15   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
 42_5b   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
 42_1b   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
 42_13   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
 42_3a   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
  42_4   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
 42_5a   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
 42_10   GAATCCCCTC ATCGACCAGT ACCTGTACTA CCTGGCCCGG ACCCAGAGCA
 42_3b   GAATCCCCTC ATCGACCAGT ACCTGTACTA CCTGGCCCGG ACCCAGAGCA
 42_11   GAATCCCCTC ATCGACCAGT ACCTGTACTA CCTGGCCCGG ACCCAGAGCA
 42_6b   GAATCCCCTC ATCGACCAGT ACCTGTACTA CCTGGCCCGG ACCCAGAGCA
  43_1   GAACCCTCTC ATCGACCAGT ACCTGTATTA CTTATCCAGA ACTCAGTCCA
  43_5   GAACCCTCTC ATCGACCAGT ACCTGTATTA CTTATCCAGA ACTCAGTCCA
 43_12   GAACCCTCTC ATCGACCAGT ACCTGTATTA CTTATCCAGA ACTCAGTCCA
 43_20   GAATCCCCTC ATCGACCAGT ACCTGTACTA CCTGGTCAGA ACGCAAACGA
 43_21   GAATCCCCTC ATCGACCAGT ACCTGTACTA CCTGGTCAGA ACGCAAACGA
 43_23   GAATCCCCTC ATCGACCAGT ACCTGTACTA CCTGGTCAGA ACGCAAACGA
 43_25   GAATCCCCTC ATCGACCAGT ACCTGTACTA CCTGGTCAGA ACGCAAACGA
  44_1   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
  44_5   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
223_10   GAATCCCCTC ATCGACCAGT ACCTGTACTA CTTGGCCAGA ACACAGAGCA
223_2    GAATCCCCTC ATCGACCAGT ACCTGTACTA CTTGGCCAGA ACACAGAGCA
223_4    GAATCCCCTC ATCGACCAGT ACCTGTACTA CTTGGCCAGA ACACAGAGCA
223_5    GAATCCCCTC ATCGACCAGT ACCTGTACTA CTTGGCCAGA ACACAGAGCA
223_6    GAATCCCCTC ATCGACCAGT ACCTGTACTA CTTGGCCAGA ACACAGAGCA
223_7    GAATCCCCTC ATCGACCAGT ACCTGTACTA CTTGGCCAGA ACACAGAGCA
  A3_4   GAATCCTCTC ATTGACCAGT ACCTGTATTA CCTGAGCAAA ACTCAGGGTA
  A3_5   GAATCCTCTC ATTGACCAGT ACCTGTATTA CCTGAGCAAA ACTCAGGGTA
  A3_7   GAATCCTCTC ATTGACCAGT ACCTGTATTA CCTGAGCAAA ACTCAGGGTA
  A3_3   GAATCCTCTC ATTGACCAGT ACCTGTATTA CCTGAGCAAA ACTCAGGGTA
 42_12   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGGCCCGG ACCCAGAGCA
  AAV1   GAATCCTCTC ATCGACCAAT ACCTGTATTA CCTGAACAGA ACTCAAA.AT
  AAV2   GAATCCTCTC ATCGACCAGT ACCTGTATTA CTTGAGCAGA ACAAACACTC
  AAV3   GAATCCTCTT ATTGATCAGT ATCTGTACTA CCTGAACAGA ACGCAAGGAA
  AAV8   GAATCCTCTG ATTGACCAGT ACCTGTACTA CTTGTCTCGG ACTCAAACAA
  AAV9   GAACCCCCTC ATCGACCAGT ACCTATACTA CCTGGTCAGA ACACAGACAA
  AAV7   GAATCCCCTC ATCGACCAGT ACTTGTACTA CCTGGCCAGA ACACAGAGTA
  44_2   GAACCCCCTC ATCGACCAGT ACCTGTACTA CCTGTCTCGG ACTCAGTCCA
```

Fig. 1AAU

```
          3601                                                        3650
 42_2     CTACGG..GG TCCACAAGGG AGCTGCA.GT TCCA..... TCAGGCTGGG
 42_8     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
42_15     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
42_5b     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
42_1b     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
42_13     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
42_3a     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
 42_4     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
42_5a     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
42_10     CTACG...GG GTCCACAAGG GAGCTGCAGT TCCA..... TCAGGCTGGG
42_3b     CTACG...GG GTCCACAAGG GAGCTGCAGT TCCA..... TCAGGCTGGG
42_11     CTACG...GG GTCCACAAGG GAGCTGCAGT TCCA..... TCAGGCTGGG
42_6b     CTACG...GG GTCCACAAGG GAGCTGCAGT TCCA..... TCAGGCTGGG
 43_1     CAGGA...GG AACTCAAGGT ACTCAGCAAT TGTTATTTTC TCAAGCCGGG
 43_5     CAGGA...GG AACTCAAGGT ACTCAGCAAT TGTTATTTTC TCAAGCCGGG
43_12     CAGGA...GG AACTCAAGGT ACTCAGCAAT TGTTATTTTC TCAAGCCGGG
43_20     CT......GG AACTGGAGGG ACGCAGACTC TGGCATTCAG CCAAGCGGGT
43_21     CT......GG AACTGGAGGG ACGCAGACTC TGGCATTCAG CCAAGCGGGT
43_23     CT......GG AACTGGAGGG ACGCAGACTC TGGCATTCAG CCAAGCGGGT
43_25     CT......GG AACTGGAGGG ACGCAGACTC TGGCATTCAG CCAAGCGGGT
 44_1     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
 44_5     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
223_10    ACGCAGGAGG TACTGCTGGC AATCGGGAAC TGCAGTTTTA TCAGGGCGGA
223_2     ACGCAGGAGG TACTGCTGGC AATCGGGAAC TGCAGTTTTA TCAGGGCGGA
223_4     ACGCAGGAGG TACTGCTGGC AATCGGGAAC TGCAGTTTTA TCAGGGCGGA
223_5     ACGCAGGAGG TACTGCTGGC AATCGGGAAC TGCAGTTTTA TCAGGGCGGA
223_6     ACGCAGGAGG TACTGCTGGC AATCGGGAAC TGCAGTTTTA TCAGGGCGGA
223_7     ACGCAGGAGG TACTGCTGGC AATCGGGAAC TGCAGTTTTA TCAGGGCGGA
 A3_4     CAAG...TGG AACAACGCAG CAATCGAGAC TGCAGTTCAG CCAAGCTGGG
 A3_5     CAAG...TGG AACAACGCAG CAATCGAGAC TGCAGTTCAA CCAAGCTGGG
 A3_7     CAAG...TGG AACAACGCAG CAATCGAGAC TGCAGTTCAG CCAAGCTGGG
 A3_3     CAAG...TGG AACAACGCAG CAATCGAGAC TGCAGTTCAG CCAAGCTGGG
42_12     CTACG...GG GTCCACAAGG GGGCTGCAGT TCCA..... TCAGGCTGGG
 AAV1     CAGTCC..GG AAGTGCCCAA AACAAGGACT TGCTGTTTAG CCGTGGGTCT
 AAV2     CAAG...TGG AACCACCACG CAGTCAAGGC TTCAGTTTTC TCAGGCCGGA
 AAV3     CAACCTCTGG AACAACCAAC CAATCACGGC TGCTTTTTAG CCAGGCTGGG
 AAV8     CAGGAG..GC .ACGGCAAAT ACGCAGACTC TGGGCTTCAG CCAAGGTGGG
 AAV9     CTGGA..... .ACTGGGGGA ACTCAAACTT TGGCATTCAG CCAAGCAGGC
 AAV7     ACCCAGGAGG CACAGCTGGC AATCGGGAAC TGCAGTTTTA CCAGGGCGGG
 44_2     CGGGA...GG TACCGCAGGA ACTCAGCAGT TGCTATTTTC TCAGGCCGGG
```

Fig. 1AAV

```
          3651                                                      3700
  42_2    CCCAACACCA TGGCCGAGCA ATCAAAGAAC TGGCTGCCCG GACCCTGTTA
  42_8    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
 42_15    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
 42_5b    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
 42_1b    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
 42_13    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
 42_3a    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
  42_4    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
 42_5a    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
 42_10    CCCAACACCA TGGCCGAGCA ATCAAAGAAC TGGCTGCCCG GACCCTGTTA
 42_3b    CCCAACACCA TGGCCGAGCA ATCAAAGAAC TGGCTGCCCG GACCCTGTTA
 42_11    CCCAACACCA TGGCCGAGCA ATCAAAGAAC TGGCTGCCCG GACCCTGTTA
 42_6b    CCCAACACCA TGGCCGAGCA ATCAAAGAAC TGGCTGCCCG GACCCTGTTA
  43_1    CCCGCAAACA TGTCGGCTCA GGCCAAGAAC TGGCTACCTG GACCGTGTTA
  43_5    CCCGCAAACA TGTCGGCTCA GGCCAAGAAC TGGCTACCTG GACCGTGTTA
 43_12    CCCGCAAACA TGTCGGCTCA GGCCAAGAAC TGGCTACCTG GACCGTGTTA
 43_20    CCTAGCTCAA TGGCCAACCA GGCTAGAAAT TGGGTGCCCG GACCTTGCTA
 43_21    CCTAGCTCAA TGGCCAACCA GGCTAGAAAT TGGGTGCCCG GACCTTGCTA
 43_23    CCTAGCTCAA TGGCCAACCA GGCTAGAAAT TGGGTGCCCG GACCTTGCTA
 43_25    CCTAGCTCAA TGGCCAACCA GGCTAGAAAT TGGGTGCCCG GACCTTGCTA
  44_1    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
  44_5    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
223_10    CCTACCACCA TGGCCGAACA AGCAAAGAAC TGGCTGCCCG GACCTTGCTT
 223_2    CCTACCACCA TGGCCGAACA AGCAAAGAAC TGGCTGCCCG GACCTTGCTT
 223_4    CCTACCACCA TGGCCGAACA AGCAAAGAAC TGGCTGCCCG GACCTTGCTT
 223_5    CCTACCACCA TGGCCGAACA AGCAAAGAAC TGGCTGCCCG GACCTTGCTT
 223_6    CCTACCACCA TGGCCGAACA AGCAAAGAAC TGGCTGCCCG GACCTTGCTT
 223_7    CCTACCACCA TGGCCGAACA AGCAAAGAAC TGGCTGCCCG GACCTTGCTT
  A3_4    CCTAGCTCCA TGGCTCAGCA GGCCAAAAAC TGGCTACCGG GACCCAGCTA
  A3_5    CCTAGCTCCA TGGCTCAGCA GGCCAAAAAC TGGCTACCGG GACCCAGCTA
  A3_7    CCTAGCTCCA TGGCTCAGCA GGCCAAAAAC TGGCTACCGG GACCCAGCTA
  A3_3    CCTAGCTCCA TGGCTCAGCA GGCCAAAAAC TGGCTACCGG GACCCAGCTA
 42_12    CCCAACACCA TGGCCGAGCA ATCAAAGAAC TGGCTGCCCG GACCCTGTTA
  AAV1    CCAGCTGGCA TGTCTGTTCA GCCCAAAAAC TGGCTACCTG GACCCTGTTA
  AAV2    GCGAGTGACA TTCGGGACCA GTCTAGGAAC TGGCTTCCTG GACCCTGTTA
  AAV3    CCTCAGTCTA TGTCTTTGCA GGCCAGAAAT TGGCTACCTG GGCCCTGCTA
  AAV8    CCTAATACAA TGGCCAATCA GGCAAAGAAC TGGCTGCCAG GACCCTGTTA
  AAV9    CCTAGCTCAA TGGCCAATCA GGCTAGAAAC TGGGTACCCG GGCCTTGCTA
  AAV7    CCTTCAACTA TGGCCGAACA AGCCAAGAAT TGGTTACCTG GACCTTGCTT
  44_2    CCTAATAACA TGTCGGCTCA GGCCAAAAAC TGGCTACCCG GGCCCTGCTA
```

Fig. 1AAW

```
          3701                                                    3750
  42_2    TCGGCAGCAG AGACTGTCAA AAAACATAGA CAGCAACAAC AACAGTAACT
  42_8    CCGGCAGCAA CGCGTCTCCA CGACACTGTC GCAAAATAAC AACAGCAACT
 42_15    CCGGCAGCAA CGCGTCTCCA CGACACTGTC GCAAAATAAC AACAGCAACT
 42_5b    CCGGCAGCAA CGCGTCTCCA CGACACTGTC GCAAAATAAC AACAGCAACT
 42_1b    CCGGCAGCAA CGCGTCTCCA CGACAGTGTC GCAAAATAAC AACAGCAACT
 42_13    CCGGCAGCAA CGCGTCTCCA CGACAGTGTC GCAAAATAAC AACAGCAACT
 42_3a    CCGGCAGCAA CGCGTCTCCA CGACACTGTC GCAAAATAAC AACAGCAACT
  42_4    CCGGCAGCAA CGCGTCTCCA CGACACTGTC GCAAAATAAC AACAGCAACT
 42_5a    CCGGCAGCAA CGCGTCTCCA CGACACTGTC GCAAAATAAC AACAGCAACT
 42_10    TCGGCAGCAG AGACTGTCAA AAAACATAGA CAGCAACAAC AACAGTAACT
 42_3b    TCGGCAGCAG AGACTGTCAA AAAACATAGA CAGCAACAAC ACCAGTAACT
 42_11    TCGGCGGCAG AGACTGTCAA AAGACATAGA CAGCAACAAC AACAGTAACT
 42_6b    TCGGCAGCAG AGACTGTCAA AAAACATAGA CAGCAACAAC AACAGTAACT
  43_1    CCGTCAGCAA CGAGTTTCCA CGACACTGTC GCAAAACAAC AACAGCAATT
  43_5    CCGTCAGCAA CGAGTTTCCA CGACACTGTC GCAAAACAAC AACAGCAATT
 43_12    CCGTCAGCAA CGAGTTTCCA CGACACTGTC GCAAAACAAC AACAGCAATT
 43_20    CCGGCAGCAG CGCGTCTCCA CGACAACCAA CCAGAACAAC AACAGCAACT
 43_21    CCGGCAGCAG CGCGTCTCCA CGACAACCAA CCAGAGCAAC AACAGCAACT
 43_23    CCGGCAGCAG CGCGTCTCCA CGACAACCAA CCAGAACAAC AACAGCAACT
 43_25    CCGGCAGCAG CGCGTCTCCA CGACAACCAA CCAGAACAAC AACAGCAACT
  44_1    CCGGCAGCAA CGCGTCTCCA CGACACTGTC GCAAAATAAC AACAGCAACT
  44_5    CCGGCAGCAA CGCGTCTCCA CGACACTGTC GCAAAATAAC AACAGCAACT
223_10    CCGGCAACAG AGAGTATCCA AGACGCTGGA TCAAAATAAC AACAGCAACT
 223_2    CCGGCAACAG AGAGTATCCA AGACGCTGGA TCAAAATAAC AACAGCAACT
 223_4    CCGGCAACAG AGAGTATCCA AGACGCTGGA TCAAAATAAC AACAGCAACT
 223_5    CCGGCAACAG AGAGTATCCA AGACGCTGGA TCAAAATAAC AACAGCAACT
 223_6    CCGGCAACAG AGAGTATCCA AGACGCTGGA TCAAAATAAC AACAGCAACT
 223_7    CCGGCAACAG AGAGTATCCA AGACGCTGGA TCAAAATAAC AACAGCAACT
  A3_4    CCGACAGCAG CGAATGTCTA AGACGGCTAA TGACAACAAC AACAGTGAAT
  A3_5    CCGACAGCAG CGAATGTCTA AGACGGCTAA TGACAACAAC AACAGTGAAT
  A3_7    CCGACAGCAG CGAATGTCTA AGACGGCTAA TGACAACAAC AACAGTGAAT
  A3_3    CCGACAGCAG CGAATGTCTA AGACGGCTAA TGACAACAAC AACAGTGAAT
 42_12    TCGGCAGCAG AGACTGTCAA AAAACATAGA CAGCAACAAC AACAGTAACT
  AAV1    TCGGCAGCAG CGCGTTTCTA AAACAAAAAC AGACAACAAC AACAGCAATT
  AAV2    CCGCCAGCAG CGAGTATCAA AGACATCTGC GGATAACAAC AACAGTGAAT
  AAV3    CCGGCAACAG AGACTTTCAA AGACTGCTAA CGACAACAAC AACAGTAACT
  AAV8    CCGCCAACAA CGCGTCTCAA CGACAACCGG GCAAAACAAC AATAGCAACT
  AAV9    CCGTCAGCAG CGCGTCTCCA CAACCACCAA CCAAAATAAC AACAGCAACT
  AAV7    CCGGCAACAA AGAGTCTCCA AAACGCTGGA TCAAAACAAC AACAGCAACT
  44_2    CCGGCAGCAA CGCGTCTCCA CGACACTGTC GCAAAATAAC AACAGCAACT
```

Fig. 1AAX

```
          3751                                                                 3800
  42_2    TTGCCTGGAC CGGGGCCACT AAATACCATC TGAATGGTAG AAATTCATTA
  42_8    TTGCTTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
 42_15    TTGCTTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
 42_5b    TTGCTTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
 42_1b    TTGCTTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
 42_13    TTGCTTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
 42_3a    TTGCTTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
  42_4    TTGCTTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
 42_5a    TTGCTTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
 42_10    TTGCCTGGAC CGGGGCCACT AAATACCATC TGAATGGCAG AGACTCTCTG
 42_3b    TTGCCTGGAC CGGGGCCACT AAATACCATC TGAATGGTAG AAATTCATTA
 42_11    TTGCCTGGAC CGGGGCCACT AAATACCATC TGAATGGTAG AAATTCATTA
 42_6b    TTGCCTGGAC CGGGGCCACT AAATACCATC TGAATGGTAG AAATTCATTA
  43_1    TTGCTTGGAC CGGTGCCACC AAGTATCACC TGAATGGTAG AAATTCATTA
  43_5    TTGCTTGGAC CGGTGCCACC AAGTATCACC TGAATGGCAG AGACTCCCTG
 43_12    TTGCTTGGAC CGGTGCCACC AAGTATCACC TGAATGGCAG AGACTCCCTG
 43_20    TTGCCTGGAC GGGAGCTGCC AAGTTTAAGC TGAACGGCCG AGACTCTCTA
 43_21    TTGCCTGGAC GGGAGCTGCC AAGTTTAAGC TGAACGGCCG AGACTCTCTA
 43_23    TTGCCTGGAC GGGAGCTGCC AAGTTTAAGC TGAACGGCCG AGACTCTCTA
 43_25    TTGCCTGGAC GGGAGCTGCC AAGTTTAAGC TGAACGGCCG AGACTCTCTA
  44_1    TTGCCTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
  44_5    TTGCCTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
223_10    TTGCCTGGAC TGGTGCCACA AAATACCATT TAAATGNAAG AAATTCATTG
223_2     TTGCCTGGAC TGGTGCCACA AAATACCATT TAAATGGAAG AAATTCATTG
223_4     TTGCCTGGAC TGGTGCCACA AAATACCATT TAAATGGAAG AAATTCATTG
223_5     TTGCCTGGAC TGGTGCCACA AAATACCATT TAAATGGAAG AAATTCATTG
223_6     TTGCCTGGAC TGGTGCCACA AAATACCATT TAAATGGAAG AAATTCATTG
223_7     TTGCCTGGAC TGGTGCCACA AAATACCATT TAAATGGAAG AAATTCATTG
 A3_4     TTGCTTGGAC TGCAGCCACC AAATATTACC TGAATGGAAG AAATTCATTG
 A3_5     TTGCTTGGAC TGCAGCCACC AAATATTACC CGAATGGAAG AAATTCTCTG
 A3_7     TTGCTTGGAC TGCAGCCACC AAATATTACC TGAATGGAAG AAATTCTCTG
 A3_3     TTGCTTGGAC TGCAGCCACC AAATATTACC TGAATGGAAG AAATTCTCTG
42_12     TTGCCTGGAC CGGGGCCACT AAATACCATC TGAATGGTAG AAATTCATTA
 AAV1     TTACCTGGAC TGGTGCTTCA AAATATAACC TCAATGGGCG TGAATCCATC
 AAV2     ACTCGTGGAC TGGAGCTACC AAGTACCACC TCAATGGCAG AGACTCTCTG
 AAV3     TTCCTTGGAC AGCGGCCAGC AAATATCATC TCAATGGCCG CGACTCGCTG
 AAV8     TTGCCTGGAC TGCTGGGACC AAATACCATC TGAATGGAAG AAATTCATTG
 AAV9     TTGCGTGGAC GGGAGCTGCT AAATTCAAGC TGAACGGGAG AGACTCGCTA
 AAV7     TTGCTTGGAC TGGTGCCACC AAATATCACC TGAACGGCAG AAACTCGTTG
 44_2     TTGCCTGGAC CGGTGCCACC AAGTATCATC TGAATGGCAG AGACTCTCTG
```

Fig. 1AAY

```
          3801                                                        3850
 42_2     ACCAACCCGG GCGTAGCCAT GGCCACCAAC AAGGACGACG AGGACCAGTT
 42_8     GTAAATCCCG GTGTCGCTAT GGCAACGCAC AAGGACGACG AAGAGCGATT
42_15     GTAAATCCCG GTGTCGCTAT GGCAACGCAC AAGGACGACG AAGAGCGATT
42_5b     GTAAATCCCG GTGTCGCTAT GGCAACGCAC AAGGACGACG AAGAGCGATT
42_1b     GTAAATCCCG GTGTCGCTAT GGCAACGCAC AAGGGCGACG AAGAGCGATT
42_13     GTAAATCCCG GTGTCGCTAT GGCAACGCAC AAGGGCGACG AAGAGCGATT
42_3a     GTAAATCCCG GTGTCGCTAT GGCAACGCAC AAGGACGACG AAGAGCGATT
 42_4     GTAAATCCCG GTGTCGCTAT GGCAACGCAC AAGGACGACG AAGAGCGATT
42_5a     GTAAATCCCG GTGTCGCTAT GGCAACGCAC AAGGACGACG AAGAGCGATT
42_10     ACCAACCCGG GCGTAGCCAT GGCCACCAAC AAGGACGACG AAGAGCGATT
42_3b     ACCAACCCGG GCGTAGCCAT GGCCACCAAC AAGGACGACG AGGACCAGTT
42_11     ACCAACCCGG GCGTAGCCAT GGCCACCAAC AAGGACGACG AGGACCAGTT
42_6b     ACCAACCCGG GCGTAGCCAT GGCCACCAAC AAGGACGACG AGGACCAGTT
 43_1     GTTAATCCCG GCGTTGCCAT GGCTACCCAC AAGGACGACG AGGACCAGTT
 43_5     GTTAATCCCG GCGTTGCCAT GGCTACCCAC AAGGACGACG AGGAGCGCTT
43_12     GTTAATCCCG GCGTTGCCAT GGCTACCCAC AAGGACGACG AGGAGCGCTT
43_20     ATGAATCCGG GCGTGGCAAT GGCTTCCCAC AAGGATGACG ACGACCGCTT
43_21     ATGAATCCGG GCGTGGCAAT GGCTTCCCAC AAGGATGACG ACGACCGCTT
43_23     ATGAATCCGG GCGTGGCAAT GGCTTCCCAC AAGGATGACG ACGACCGCTT
43_25     ATGAATCCGG GCGTGGCAAT GGCTTCCCAC AAGGATGACG ACGACCGCTT
 44_1     GTAAATCCCG GTGTCGCTAT GGCAACCCAC AAGGACGACG AAGAGCGATT
 44_5     GTAAATCCCG GTGTCGCTAT GGCAACCCAC AAGGACGACG AAGAGCGATT
223_10    GTTAATCCCG GTGTCGCCAT GGCAACCCAC AAGGACGACG AAGAGCGATT
223_2     GTTAATCCCG GTGTCGCCAT GGCAACCCAC AAGGACGACG AGGAACGCTT
223_4     GTTAATCCCG GTGTCGCCAT GGCAACCCAC AAGGACGACG AGGAACGCTT
223_5     GTTAATCCCG GTGTCGCCAT GGCAACCCAC AAGGACGACG AGGAACGCTT
223_6     GTTAATCCCG GTGTCGCCAT GGCAACCCAC AAGGACGACG AGGAACGCTT
223_7     GTTAATCCCG GTGTCGCCAT GGCAACCCAC AAGGACGACG AGGAACGCTT
 A3_4     GTCAATCCCG GGCCCCCAAT GGCCAGTCAC AAGGACGATG AGGAACGCTT
 A3_5     GTCAATCCCG GGCCCCCAAT GGCCAGTCAC AAGGACGATG AGGAAAAGTA
 A3_7     GTCAATCCCG GGCCCCCAAT GGCCAGTCAC AAGGACGATG AGGAAAAGTA
 A3_3     GTCAATCCCG GGCCCCCAGT GGCCAGTCAC AAGGACGATG AGGAAAAGTA
42_12     ACCAACCCGG GCGTAGCCAT GGCCACCAAC AAGGACGACG AGGACCAGTT
 AAV1     ATCAACCCTG GCACTGCTAT GGCCTCACAC AAAGACGACG AAGACAAGTT
 AAV2     GTGAATCC.. GGCC....AT GGCAAGCCAC AAGGACGATG AAGAAAAGTT
 AAV3     GTGAATCCAG GACCAGCTAT GGCCAGTCAC AAGGACGATG AAGAAAAGTT
 AAV8     GCTAATCCTG GCATCGCTAT GGCAACACAC AAAGACGACG AGGAGCGTTT
 AAV9     ATGAATCCTG GCGTGGCTAT GGCATCGCAC AAAGACGACG AGGACCGCTT
 AAV7     GTTAATCCCG GCGTCGCCAT GGCAACTCAC AAGGACGACG AGGACCGCTT
 44_2     GTAAATCCCG GTGTCGCTAT GGCAACCCAC AAGGACGACG AAGAGCGATT
```

Fig. 1AAZ

```
          3851                                                      3900
 42_2     CTTTCCCATC AACGGAGTGC TGGTTTTTGG CGAAACGGGG GCTGCCAACA
 42_8     TTTTCCATCC AGCGGAGTCT TGATGTTTGG GAAACAGGGA GCTGGAAA..
 42_15    TTTTCCATCC AGCGGAGTCT TGATGTTTGG GAAACAGGGA GCTGGAAA..
 42_5b    TTTTCCATCC AGCGGAGTCT TGATGTTTGG GAAACAGGGA GCTGGAAA..
 42_1b    TTTTCCATCC AGCGGAGTCT TGATGTTTGG GAAACAGGGA GCTGGAAA..
 42_13    TTTTCCATCC AGCGGAGTCT TGATGTTTGG GAAACAGGGA GCTGGAAA..
 42_3a    TTTTCCATCC AGCGGAGTCT TGATGTTTGG GAAACAGGGA GCTGGAAA..
 42_4     TTTTCCATCC AGCGGAGTCT TGATGTTTGG GAAACAGGGA GCTGGAAA..
 42_5a    TTTTCCATCC AGCGGAGTCT TGATGTTTGG GAAACAGGGA GCTGGAAA..
 42_10    CTTTCCCATC AACGGAGTGC TGGTTTTTGG CAAAACGGGG GCTGCCAACA
 42_3b    CTTTCCCATC AACGGAGTGC TGGTTTTTGG CAAAACGGGG GCTGCCAACA
 42_11    CTTTCCCATC AACGGAGTGC TGGTTTTTGG CAAAACGGGG GCTGCCAACA
 42_6b    CTTTCCCATC AACGGAGTGC TGGTTTTTGG CAAAACGGGG GCTGCCAACA
 43_1     CTTCCCGTCA AGCGGAGTTC TAATGTTTGG CAAGCAGGGG GCTGGAAA..
 43_5     CTTCCCGTCA AGCGGAGTTC TAATGTTTGG CAAGCAGGGG GCTGGAAA..
 43_12    CTTCCCGTCA AGCGGAGTTC TAATGTTTGG CAAGCAGGGG GCTGGAAA..
 43_20    CTTCCCTTCG AGCGGGGTCC TGATTTTTGG CAAGCAAGGA GCCGGGAA..
 43_21    CTTCCCTTCG AGCGGGGTCC TGATTTTTGG CAAGCAAGGA GCCGGGAA..
 43_23    CTTCCCTTCG AGCGGGGTCC TGATTTTTGG CAAGCAAGGA GCCGGGAA..
 43_25    CTTCCCTTCG AGCGGGGTCC TGATTTTTGG CAAGCAAGGA GCCGGGAA..
 44_1     TTTTCCGTCC AGCGGAGTCT TAATGTTTGG GAAACAGGGA GCTGGAAA..
 44_5     TTTTCCGTCC AGCGGAGTCT TAATGTTTGG GAAACAGGGA GCTGGAAA..
223_10    CTTCCCTTCG AGCGGAGTTC TAATTTTTGG CAAAACTGGA GCAGCTAATA
223_2     CTCCCCTTCG AGCGGAGTTC TAATTTTTGG CAAAACTGGA GCAGCTAATA
223_4     CTTCCCTTCG AGCGGAGTTC TAATTTTTGG CAAAACTGGA GCAGCTAATA
223_5     CTTCCCTTCG AGCGGAGTTC TAATTTTTGG CAAAACTGGA GCAGCTAATA
223_6     CTTCCCTTCG AGCGGAGTTC TAATTTTTGG CAAAACTGGA GCAGCTAATA
223_7     CTTCCCTTCG AGCGGAGTTC TAATTTTTGG CAAAACTGGA GCAGCTAATA
 A3_4     TTTCCCCATG CACGGAAATC TCATCTTTGG AAAACAAGGC ACAGGAAC..
 A3_5     TTTCCCCATG CACGGAAATC TCATCTTTGG AAAACAAGGC ACAGGAAC..
 A3_7     TTTCCCCATG CACGGAAATC TCATCTTTGG AAAACAAGGC ACAGGAAC..
 A3_3     TTTCCCCATG CACGGAAATC TCATCTTTGG AAAACAAGGC ACAGGAAC..
42_12     CTTTCCCATC AACGGAGTGC TGGTTTTTGG CAAAACGGGG GCTGCCAACA
 AAV1     CTTTCCCATG AGCGGTGTCA TGATTTTTGG AAAAGAGAGC GCCGGAGC..
 AAV2     TTTTCCTCAG AGCGGGGTTC TCATCTTTGG GAAGCAAGGC TCAGAGAA..
 AAV3     TTTCCCTATG CACGGCAATC TAATATTTGG CAAAGAAGGG ACAACGGC..
 AAV8     TTTTCCCAGT AACGGGATCC TGATTTTTGG CAAACAAAAT GCTGCCAG..
 AAV9     CTTTCCATCA AGTGGCGTTC TCATATTTGG CAAGCAAGGA GCCGGGAA..
 AAV7     TTTCCCATCC AGCGGAGTCC TGATTTTTGG AAAAACTGGA GCAACTAACA
 44_2     TTTTCCGTCC AGCGGAGTCT TAATGTTTGG GAAACAGGGA GCTGGAAA..
```

Fig. 1AAAA

```
          3901                                                      3950
  42_2    AGACAACGCT GGAA..... AACGTGCTAA TGACCAGCGA GGAGGAGATC
  42_8    AGACAACG.T GGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATC
 42_15    AGACAACG.T GGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATC
 42_5b    AGACAACG.T GGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATC
 42_1b    AGACAACG.T AGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATC
 42_13    AGACAACG.T GGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATC
 42_3a    AGACAACG.T GGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATC
  42_4    AGACAACG.T GGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATC
 42_5a    AGACAACG.T GGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATC
 42_10    AGACAACGCT GGAA..... AACGTGCTAA TGACCAGCGA GGAGGAGATC
 42_3b    AGACAACGCT GGAA..... AACGTGCTAA TGACCAGCGA GGAGGAGATC
 42_11    AGACAACGCT GGAA..... AACGTGCTAA TGACCAGCGA GGAGGAGATC
 42_6b    AGACAACGCT GGAA..... AACGTGCTAA TGACCAGCGA GGAGGAGATC
  43_1    AGACAATG.T GGACTACAGC AGCGTGATGC TCACCAGCGA AGAAGAAATT
  43_5    AGACAATG.T GGACTACAGC AGCGTGATGC TCACCAGCGA AGAAGAAATT
 43_12    AGACAATG.T GGACTACAGC AGCGTGATGC TCACCAGCGA AGAAGAAATT
 43_20    CGATGGAG.T GGATTACAGC CAAGTGCTGA TTACAGATGA GGAAGAAATC
 43_21    CGATGGAG.T GGATTACAGC CAAGTGCTGA TTACAGATGA GGAAGAAATC
 43_23    CGATGGAG.T GGATTACAGC CAAGTGCTGA TTACAGATGA GGAAGAAATC
 43_25    CGATGGAG.T GGATTACAGC CAAGTGCTGA TTACAGATGA GGAAGAAATC
  44_1    AGACAACG.T GGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATT
  44_5    AGACAACG.T GGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATT
223_10    AAACTACATT AGAA..... AACGTGCTCA TGACAAATGA AGAAGAAATT
 223_2    AAACTACATT AGAA..... AACGTGCTCA TGACAAATGA AGAAGAAATT
 223_4    AAACTACATT AGAA..... AACGTGCTCA TGACAAATGA AGAAGAAATT
 223_5    AAACTACATT AGAA..... AACGTGCTCA TGACAAATGA AGAAGAAATT
 223_6    AAACTACATT AGAA..... AACGTGCTCA TGACAAATGA AGAAGAAATT
 223_7    AAACTACATT AGAA..... AACGTGCTCA TGACAAATGA AGAAGAAATT
  A3_4    TACCAATG.T GGACATTGAA TCAGTGCTTA TTACAGACGA AGAAGAAATC
  A3_5    TACCAATG.T GGACATTGAA TCAGTGCTTA TTACAGACGA AGAAGAAATC
  A3_7    TACCAATG.T GGACATTGAA TCAGTGCTTA TTACAGACGA AGAAGAAATC
  A3_3    TACCAATG.T GGACATTGAA TCAGTGCTTA TTACAGACGA AGAAGAAATC
 42_12    AGACAACGCT GGAA..... AACGTGCTAA TGACCAGCGA GGAGGAGATC
  AAV1    TTCAAACA.C TGCATTGGAC AATGTCATGA TTACAGACGA AGAGGAAATT
  AAV2    AACAAATG.T GAACATTGAA AAGGTCATGA TTACAGACGA AGAGGAAATC
  AAV3    AAGTAACG.C AGAATTAGAT AATGTAATGA TTACGGATGA AGAAGAGATT
  AAV8    AGACAATG.C GGATTACAGC GATGTCATGC TCACCAGCGA GGAAGAAATC
  AAV9    CGATGGAG.T CGACTACAGC CAGGTGCTGA TTACAGATGA GGAAGAAATT
  AAV7    AAACTACATT GGAA..... AATGTGTTAA TGACAAATGA AGAAGAAATT
  44_2    AGACAACG.T GGACTATAGC AGCGTTATGC TAACCAGTGA GGAAGAAATT
```

Fig. 1AAAB

```
          3951                                                    4000
 42_2     AAAACCACCA ATCCCGTGGC TACAGAAGAA TACGGTGTGG TCTCCAGCAA
 42_8     AAAACCACCA ACCCAGTGGC CACAGAACAG TACGGCGTGG TGGCCGATAA
42_15     AAAACCACCA ACCCAGTGGC CACAGAACAG TACGGCGTGG TGGCCGATAA
42_5b     AAAACCACCA ACCCAGTGGC CACAGAACAG TACGGCGTGG TGGCCGATAA
42_1b     AAAACCACCA ACCCAGTGGC CACAGAACAG TACGGCGTGG TGGCCGATAA
42_13     AAAACCACCA ACCCAGTGGC CACAGAACAG TACGGCGTGG TGGCCGATAA
42_3a     AAAACCACCA ACCCAGTGGC CACAGAACAG TACGGCGTGG TGGCCGATAA
 42_4     AAAACCACCA ACCCAGTGGC CACAGAACAG TACGGCGTGG TGGCCGATAA
42_5a     AAAACCACCA ACCCAGTGGC CACAGAACAG TACGGCGTGG TGGCCGATAA
42_10     AAAACCACCA ATCCCGTGGC TACAGAAGAA TACGGTGTGG TCTCCAGCAA
42_3b     AAAACCACCA ATCCCGTGGC TACAGAACAG TACGGTGTGG TCTCCAGCAA
42_11     AAAACCACCA ATCCCGTGGC TACAGAAGAA TACGGTGTGG TCTCCAGCAA
42_6b     AAAACCACCA ATCCCGTGGC TACAGAAGAA TACGGTGTGG TCTCCAGCAA
 43_1     AAAACTACTA ACCCAGTGGC TACAGAGCAG TATGGTGTGG TGGCAGACAA
 43_5     AAAACTACTA ACCCAGTGGC TACAGAGCAG TATGGTGTGG TGGCAGACAA
43_12     AAAACTACTA ACCCAGTGGC TACAGAGCAG TATGGTGTGG TGGCAGACAA
43_20     AAGGCTACCA ACCCCGTGGC CACAGAAGAA TATGGAGCAG TGGCCATCAA
43_21     AAGGCTACCA ACCCCGTGGC CACAGAAGAA TATGGAGCAG TGGCCATCAA
43_23     AAGGCTACCA ACCCCGTGGC CACAGAAGAA TATGGAGCAG TGGCCATCAA
43_25     AAGGCTACCA ACCCCGTGGC CACAGAAGAA TATGGAGCAG TGGCCATCAA
 44_1     AAAACCACCA ACCCAGTGGC CACGGAACAG TACGGCGTGG TGGCCGATAA
 44_5     AAAACCACCA ACCCAGTGGC CACAGAACAG TACGGCGTGG TGGCCGATAA
223_10    CGTCCTACCA ACCCGGTAGC TACCGAGGAA TACGGGATTG TAAGCAGCAA
223_2     CGTCCTACCA ACCCGGTAGC TACCGAGGAA TACGGGATTG TAAGCAGCAA
223_4     CGTCCTACCA ACCCGGTAGC TACCGAGGAA TACGGGATTG TAAGCAGCAA
223_5     CGTCCTACCA ACCCGGTAGC TACCGAGGAA TACGGGATTG TAAGCAGCAA
223_6     CGTCCTACCA ACCCGGTAGC TACCGAGGAA TACGGGATTG TAAGCAGCAA
223_7     CGTCCTACCA ACCCGGTAGC TACCGAGGAA TACGGGATTG TAAGCAGCAA
 A3_4     AGAACAACTA ATCCTGTGGC TACAGAACAA TACGGACAGG TTGCCACCAA
 A3_5     AGAACGACTA ATCCTGTGGC TACAGAACAA TACGGACAGG TTGCCACCAA
 A3_7     AGAACAACTA ATCCTGTGGC TACAGAACAA TACGGACAGG TTGCCACCAA
 A3_3     AGAACAACTA ATCCTGTGGC TACAGAACAA TACGGACAGG TTGCCACCAA
42_12     AAAACCACCA ATCCCGTGGC TACAGAAGAA TACGGTGTGG TCTCCAGCAA
 AAV1     AAAGCCACTA ACCCTGTGGC CACCGAAAGA TTTGGGACCG TGGCAGTCAA
 AAV2     GGAACAACCA ATCCCGTGGC TACGGAGCAG TATGGTTCTG TATCTACCAA
 AAV3     CGTACCACCA ATCCTGTGGC AACAGAGCAG TATGGAACTG TGGCAAATAA
 AAV8     AAAACCACTA ACCCTGTGGC TACAGAGGAA TACGGTATCG TGGCAGATAA
 AAV9     AAAGCCACCA ACCCTGTAGC CACAGAGGAA TACGGAGCAG TGGCCATCAA
 AAV7     CGTCCTACTA ATCCTGTAGC CACGGAAGAA TACGGGATAG TCAGCAGCAA
 44_2     AAAACCACCA ACCCAGTGGC CACAGAACAG TACGGCGTGG TGGCCGATAA
```

Fig. 1AAAC

```
          4001                                                      4050
  42_2    CCTGCAATCG TCTACGGCCG GACCCCAGAC ACAGACTGTC AACAGCCAGG
  42_8    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
 42_15    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
 42_5b    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
 42_1b    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
 42_13    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
 42_3a    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
  42_4    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
 42_5a    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
 42_10    CCTGCAATCG TCTACGGCCG GACCCCAGAC ACAGACTGTC AACAGCCAGG
 42_3b    CCTGCAATCG TCTACGGCCG GACCCCAGAC ACAGACTGTC AACAGCCAGG
 42_11    CCTGCAATCG TCTACGGCCG GACCCCAGAC ACAGACTGTC AACAGCCAGG
 42_6b    CCTGCAATCG TCTACGGCCG GACCCCAGAC ACAGACTGTC AACAGCCAGG
  43_1    CCTGCAGCAG ACCAACGGAG CTCCCATTGT GGGAACTGTC AACAGCCAGG
  43_5    CCTGCAGCAG ACCAACGGAG CTCCCATTGT GGGAACTGTC AACAGCCAGG
 43_12    CCTGCAGCAG ACCAACGGAG CTCCCATTGT GGGAACTGTC AACAGCCAGG
 43_20    CAACCAGGCC GCCAATACGC AGGCGCAGAC CGGACTCGTG CACAACCAGG
 43_21    CAACCAGGCC GCCAATACGC AGGCGCAGAC CGGACTCGTG CACAACCAGG
 43_23    CAACCAGGCC GCCAATACGC AGGCGCAGAC CGGACTCGTG CACAACCAGG
 43_25    CAACCAGGCC GCCAATACGC AGGCGCAGAC CGGACTCGTG CACAACCAGG
  44_1    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
  44_5    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
223_10    CTTGCAGGCG GCTAGCACCG CAGCCCAGAC ACAAGTTGTT AACAACCAGG
 223_2    CTTGCAGGCG GCTAGCACCG CAGCCCAGAC ACAAGTTGTT AACAACCAGG
 223_4    CTTGCAGGCG GCTAGCACCG CAGCCCAGAC ACAAGTTGTT AACAACCAGG
 223_5    CTTGCAGGCG GCTAGCACCG CAGCCCAGAC ACAAGTTGTT AACAACCAGG
 223_6    CTTGCAGGCG GCTAGCACCG CAGCCCAGAC ACAAGTTGTT AACAACCAGG
 223_7    CTTGCAGGCG GCTAGCACCG CAGCCCAGAC ACAAGTTGTT AACAACCAGG
  A3_4    CCATCAGAGT CAGGACACCA CAGCTTCCTA TGGAAGTGTG GACAGCCAGG
  A3_5    CCGTCAGAGT CAGAACACCA CAGCTTCCTA TGGAAGTGTG GACAGCCAGG
  A3_7    CCATCAGAGT CAGAACACCA CAGCTTCCTA TGGAAGTGTG GACAGCCAGG
  A3_3    CCATCAGAGT CAGAACACCA CAGCTTCCTA TGGAAGTGTG GACAGCCAGG
 42_12    CCTGCAATCG TCTACGGCCG GACCCCAGAC ACAGACTGTC AACAGCCAGG
  AAV1    TTTCCAGAGC AGCAGCACAG ACCCTGCGAC CGGAGATGTG CATGCTATGG
  AAV2    CCTCCAGAGA GGCAACAGAC AAGCAGCTAC CGCAGATGTC AACACACAAG
  AAV3    CTTGCAGAGC TCAAATACAG CTCCCACGAC TGGAACTGTC AATCATCAGG
  AAV8    CTTGCAGCAG CAAAACACGG CTCCTCAAAT TGGAACTGTC AACAGCCAGG
  AAV9    CAACCAGGCC GCTAACACGC AGGCGCAAAC TGGACTTGTG CATAACCAGG
  AAV7    CTTACAAGCG GCTAATACTG CAGCCCAGAC ACAAGTTGTC AACAACCAGG
  44_2    CCTGCAACAG CAAAACGCCG CTCCTATTGT AGGGGCCGTC AACAGTCAAG
```

Fig. 1AAAD

```
          4051                                                        4100
  42_2    GGGCTCTGCC CGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
  42_8    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
 42_15    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
 42_5b    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
 42_1b    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
 42_13    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
 42_3a    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
  42_4    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
 42_5a    GAGCCTTACC TGGCATGGCC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
 42_10    GGGCTCTGCC CGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
 42_3b    GGGCTCTGCC CGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
 42_11    GGGCTCTGCC CGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
 42_6b    GGGCTCTGCC CGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
  43_1    GGGCCTTACC TGGTATGGTC TGGCAAAACC GGGACGTGTA CCTGCAGGGC
  43_5    GGGCCTTACC TGGTATGGTC TGGCAAAACC GGGACGTGTA CCTGCAGGGC
 43_12    GGGCCTTACC TGGTATGGTC TGGCAAAACC GGGACGTGTA CCTGCAGGGC
 43_20    GGGTGATTCC CGGCATGGTG TGGCAGAATA GAGACGTGTA CCTGCAGGGT
 43_21    GGGTGATTCC CGGCATGGTG TGGCAGAATA GAGACGTGTA CCTGCAGGGT
 43_23    GGGTGATTCC CGGCATGGTG TGGCAGAATA GAGACGTGTA CCTGCAGGGT
 43_25    GGGTGATTCC CGGCATGGTG TGGCAGAATA GAGACGTGTA CCTGCAGGGT
  44_1    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
  44_5    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
223_10    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAAGGT
 223_2    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAAGGT
 223_4    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAAGGT
 223_5    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAAGGT
 223_6    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAAGGT
 223_7    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAAGGT
  A3_4    GAATCTTACC TGGAATGGTG TGGCAGGACC GCGATGTCTA TCTTCAAGGT
  A3_5    GAATCTTACC TGGAATGGTG TGGCAGGACC GCGATGTCTA TCTTCAAGGT
  A3_7    GAATCTTACC TGGAATGGTG TGGCAGGACC GCGATGTCTA TCTTCAAGGT
  A3_3    GAATCTTACC TGGAATGGTG TGGCAGGACC GCGATGTCTA TCTTCAAGGT
 42_12    GGGCTCTGCC CGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
   AAV1   GAGCATTACC TGGCATGGTG TGGCAAGATA GAGACGTGTA CCTGCAGGGT
   AAV2   GCGTTCTTCC AGGCATGGTC TGGCAGGACA GAGATGTGTA CCTTCAGGGG
   AAV3   GGGCCTTACC TGGCATGGTG TGGCAAGATC GTGACGTGTA CCTTCAAGGA
   AAV8   GGGCCTTACC CGGTATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
   AAV9   GAGTTATTCC TGGTATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGC
   AAV7   GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
  44_2    GAGCCTTACC TGGCATGGTC TGGCAGAACC GGGACGTGTA CCTGCAGGGT
```

Fig. 1AAAE

```
          4101                                                                4150
  42_2    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
  42_8    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
 42_15    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
 42_5b    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
 42_1b    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
 42_13    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
 42_3a    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
  42_4    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
 42_5a    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
 42_10    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 42_3b    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 42_11    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 42_6b    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
  43_1    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
  43_5    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
 43_12    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CATCCTTCGC
 43_20    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 43_21    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 43_23    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 43_25    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
  44_1    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGAAACTTT CATCCCTCGC
  44_5    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGAAACTTT CATCCCTCGC
223_10    CCC.ATTTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 223_2    CCC.ATTTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 223_4    CCC.ATTTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 223_5    CCC.ATTTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 223_6    CCC.ATTTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
 223_7    CCC.ATTTGG GCCAAGATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
  A3_4    CCC.ATTTGG GCCAAAACTC CTCACACGGA CGGACACTTT CATCCTTCTC
  A3_5    CCC.ATTTGG GCCAAAACTC CTCACACGGA CGGACACTTT CATCCTTCTC
  A3_7    CCC.ATTTGG GCCAAAACTC CTCACACGGA CGGACACTTT CATCCTTCTC
  A3_3    CCC.ATTTGG GCCAAAACTC CTCACACGGA CGGACACTTT CATCCTTCTC
 42_12    CCC.ATCTGG GCCAAAATTC CTCACACGGA CGGCAACTTT CACCCGTCTC
  AAV1    CCC.ATTTGG GCCAAAATTC CTCACACAGA TGGACACTTT CACCCGTCTC
  AAV2    CCC.ATCTGG GCAAAGATTC CACACACGGA CGGACATTTT CACCCCTCTC
  AAV3    CCT.ATCTGG GCAAAGATTC CTCACACGGA TGGACACTTT CATCCTTCTC
  AAV8    CCC.ATCTGG GCCAAGATTC CTCACACGGA CGGCAACTTC CACCCGTCTC
  AAV9    CCCTATTTGG GCTAAAATAC CTCACACAGA TGGCAACTTT CACCCGTCTC
  AAV7    CCC.ATCTGG GCCAAGATTC CTCACACGGA TGGCAACTTT CACCCGTCTC
  44_2    CCT.ATCTGG GCCAAGATTC CTCACACGGA CGGAAACTTT CATCCCTCGC
```

Fig. 1AAAF

```
          4151                                                      4200
  42_2    CCCTGATGGG CGGATTTGGA CTCAAACACC CGCCTCCTCA AATTCTCATC
  42_8    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
 42_15    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
 42_5b    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
 42_1b    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
 42_13    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
 42_3a    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
  42_4    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
 42_5a    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
 42_10    CCCTGATGGG CGGATTTGGA CTCAAACACC CGCCTCCTCA AATTCTCATC
 42_3b    CCCTGATGGG CGGATTTGGA CTCAAACACC CGCCTCCTCA AATTCTCATC
 42_11    CCCTGATGGG CGGATTTGGA CTCAAACACC CGCCTCCTCA AATTCTCATC
 42_6b    CCCTGATGGA CGGATTTGGA CTCAAACACC CGCCTCCTCA AATTCTCATC
  43_1    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGGTG
  43_5    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGGTG
 43_12    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGGTG
 43_20    CCCTGATGGG CGGCTTTGGA CTGAAGCACC CGCCTCCTCA AATTCTCATC
 43_21    CCCTGATGGG CGGCTTTGGA CTGAAGCACC CGCCTCCTCA AATTCTCATC
 43_23    CCCTGATGGG CGGCTTTGGA CTGAAGCACC CGCCTCCTCA AATTCTCATC
 43_25    CCCTGATGGG CGGCTTTGGA CTGAAGCACC CGCCTCCTCA AATTCTCATC
  44_1    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
  44_5    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
223_10    CTCTAATGGG TGGCTTTGGA CTGAAACACC CGCCTCCCCA GATCCTGATC
 223_2    CTCTAATGGG TGGCTTTGGA CTGAAACACC CGCCTCCCCA GATCCTGATC
 223_4    CTCTAATGGG TGGCTTTGGA CTGAAACACC CGCCTCCCCA GATCCTGATC
 223_5    CTCTAATGGG TGGCTTTGGA CTGAAACACC CGCCTCCCCA GATCCTGATC
 223_6    CTCTAATGGG TGGCTTTGGA CTGAAACACC CGCCTCCCCA GATCCTGATC
 223_7    CTCTAATGGG TGGCTTTGGA CTGAAACACC CGCCTCCCCA GATCCTGATC
  A3_4    CGCTCATGGG AGGCTTTGGA CTGAAACACC CTCCTCCCCA GATCCTGATC
  A3_5    CGCTCATGGG AGGCTTTGGA CTGAAACACC CTCCTCCCCA GATCCTGATC
  A3_7    CGCTCATGGG AGGCTTTGGA CTGAAACACC CTCCTCCCCA GATCCTGATC
  A3_3    CGCTCATGGG AGGCTTTGGA CTGAAACACC CTCCTCCCCA GATCCTGATC
 42_12    CCCTGATGGG CGGATTTGGA CTCAAACACC CGCCTCCTCA AATTCTCATC
  AAV1    CTCTTATGGG CGGCTTTGGA CTCAAGAACC CGCCTCCTCA GATCCTCATC
  AAV2    CCCTCATGGG TGGATTCGGA CTTAAACACC CTCCTCCACA GATTCTCATC
  AAV3    CTCTGATGGG AGGCTTTGGA CTGAAACATC CGCCTCCTCA AATCATGATC
  AAV8    CGCTGATGGG CGGCTTTGGC CTGAAACATC CTCCGCCTCA GATCCTGATC
  AAV9    CTCTGATGGG TGGATTTGGA CTGAAACACC CACCTCCACA GATTCTAATT
  AAV7    CTTTGATGGG CGGCTTTGGA CTTAAACATC CGCCTCCTCA GATCCTGATC
  44_2    CGCTGATGGG AGGCTTTGGA CTGAAACACC CGCCTCCTCA GATCCTGATT
```

Fig. 1AAAG

```
          4201                                                      4250
  42_2    AAAAACACCC CGGTACCTGC TAATCCTCCA GAGGTGTTTA CTCCTGCCAA
  42_8    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCCAA
 42_15    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCCAA
 42_5b    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCCAA
 42_1b    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCCAA
 42_13    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCCAA
 42_3a    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCCAA
  42_4    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCCAA
 42_5a    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCCAA
 42_10    AAAAACACCC CGGTACCTGC TAATCCTCCA GAGGTGTTTA CTCCTGCCAA
 42_3b    AAAAACACCC CGGTACCTGC TAATCCTCCA GAGGTGTTTA CTCCTGCCAA
 42_11    AAAAACACCC CGGTACCTGC TAATCCTCCA GAGGTGTTTA CTCCTGCCAA
 42_6b    AAAAACACCC CGGTACCTGC TAATCCTCCA GAGGTGTTTA CTCCTGCCAA
  43_1    AAAAACACTC CTGTTCCTGC GGATCCTCCG ACCACCTTCA GCCAGGCCAA
  43_5    AAAAACACTC CTGTTCCTGC GGATCCTCCG ACCACCTTCA GCCAGGCCAA
 43_12    AAAAACACTC CTGTTCCTGC GGATCCTCCG ACCACCTTCA GCCAGGCCAA
 43_20    AAGAACACAC CGGTTCCAGC GGACCCGCCG CTTACCTTCA ACCAGGCCAA
 43_21    AAGAACACAC CGGTTCCAGC GGACCCGCCG CTTACCTTCA ACCAGGCCAA
 43_23    AAGAACACAC CGGTTCCAGC GGACCCGCCG CTTACCTTCA ACCAGGCCAA
 43_25    AAGAACACAC CGGTTCCAGC GGACCCGCCG CTTACCTTCA ACCAGGCCAA
  44_1    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCTAA
  44_5    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCTAA
223_10    AAAAACACAC CGGTACCTGC TAATCCTCCA GAAGTGTTTA CTCCTGCCAA
 223_2    AAAAACACGC CGGTACCTGC TAATCCTCCA GAAGTGTTTA CTCCTGCCAA
 223_4    AAAAACACAC CGGTACCTGC TAATCCTCCA GAAGTGTTTA CTCCTGCCAA
 223_5    AAAAACACAC CGGTACCTGC TAATCCTCCA GAAGTGTTTA CTCCTGCCAA
 223_6    AAAAACACAC CGGTACCTGC TAATCCTCCA GAAGTGTTTA CTCCTGCCAA
 223_7    AAAAACACAC CGGTACCTGC TAATCCTCCA GAAGTGTTTA CTCCTGCCAA
  A3_4    AAAAACACAC CTGTGCCAGC GAATCCCGCG ACCACTTTCA CTCCTGGAAA
  A3_5    AAAAACACAC CTGTGCCAGC GAATCCCGCG ACCACTTTCA CTCCTGGAAA
  A3_7    AAAAACACAC CTGTGCCAGC GAATCCCGCG ACCACTTTCA CTCCTGGAAA
  A3_3    AAAAACACAC CTGTGCCAGC GAATCCCGCG ACCACTTTCA CTCCTGGAAA
 42_12    A...A..... .......... .......... .......... ..........
  AAV1    AAAAACACGC CTGTTCCTGC GAATCCTCCG GCGGAGTTTT CAGCTACAAA
  AAV2    AAGAACACCC CGGTACCTGC GAATCCTTCG ACCACCTTCA GTGCGGCAAA
  AAV3    AAAAATACTC CGGTACCGGC AAATCCTCCG ACGACTTTCA GCCCGGCCAA
  AAV8    AAGAACACGC CTGTACCTGC GGATCCTCCG ACCACCTTCA ACCAGTCAAA
  AAV9    AAAAATACAC CAGTGCCGGC AGATCCTCCT CTTACCTTCA ATCAAGCCAA
  AAV7    AAGAACACTC CCGTTCCCGC TAATCCTCCG GAGGTGTTTA CTCCTGCCAA
  44_2    AAGAATACAC CTGTTCCCGC GGATCCTCCA ACTACCTTCA GTCAAGCTAA
```

Fig. 1AAAH

```
          4251                                                                4300
  42_2    GTTTGCCTCA TTTATCACGC AGTACAGCAC CGGCCA.GGT CAGCGTGGAG
  42_8    GCTGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 42_15    GCTGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 42_5b    GCTGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 42_1b    GCTGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 42_13    GCTGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 42_3a    GCTGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
  42_4    GCCGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 42_5a    GCTGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 42_10    GTTTGCCTCA TTTATCACGC AGTACAGCAC CGGCCA.GGT CAGCGTGGAG
 42_3b    GTTTGCCTCA TTTATCACGC AGTACAGCAC CGGCCA.GGT CAGCGTGGAG
 42_11    GTTTGCCTCA TTTATCACGC AGTACAGCAC CGGCCA.GGT CAGCGTGGAG
 42_6b    GTTTGCCTCA TTTATCACGC AGTACAGCAC CGGCCA.GGT CAGCGTGGAG
  43_1    GCTGGCTTCT TTTATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
  43_5    GCTGGCTTCT TTTATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 43_12    GCTGGCTTCT TTTATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 43_20    GCTGAACTCT TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 43_21    GCTGAACTCT TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 43_23    GCTGAACTCT TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
 43_25    GCTGAACTCT TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
  44_1    GCTGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
  44_5    GCTGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
223_10    GTTTGCTTCC TTCATCACGC AGTACAGCAC CGGGCA.AGT CAGCGTTGAG
 223_2    GTTTGCTTCC TTCATCACGC AGTACAGCAC CGGGCA.AGT CAGCGTTGAG
 223_4    GTTTGCTTCC TTCATCACGC AGTACAGCAC CGGGCA.AGT CAGCGTTGAG
 223_5    GTTTGCTTCC TTCATCACGC AGTACAGCAC CGGGCA.AGT CAGCGTTGAG
 223_6    GCTTGCTTCC TTCATCACGC AGTACAGCAC CGGGCA.AGT CAGCGTTGAG
 223_7    GATTGCTTCC TTCATCACGC AGTACAGCAC CGGGCA.AGT CAGCGTTGAG
  A3_4    GTTTGCTTCG TTCATTACCC AGTATTCCAC CGGACA.GGT CAGCGTGGAA
  A3_5    GTTTGCTTCG TTCATTACCC AGTATTCCAC CGGACA.GGT CAGCGTGGAA
  A3_7    GTTTGCTTCG TTCATTACCC AGTATTCCAC CGGACA.GGT CAGCGTGGAA
  A3_3    GTTTGCTTCG TTCATTACCC AGTATTCCAC CGGACA.GGT CAGCGTGGAA
 42_12    .......... .......... .......... .......... ..........
  AAV1    GTTTGCTTCA TTCATCACCC AATACTCCAC AGGACA.AGT GAGTGTGGAA
  AAV2    GTTTGCTTCC TTCATCACAC AGTACTCCAC GGGACACGGT CAGCGTGGAG
  AAV3    GTTTGCTTCA TTTATCACTC AGTACTCCAC TGGACA.GGT CAGCGTGGAA
  AAV8    GCTGAACTCT TTCATCACGC AATACAGCAC CGGACA.GGT CAGCGTGGAA
  AAV9    GCTGAACTCT TTCATCACGC AGTACAGCAC GGGACA.AGT CAGCGTGGAA
  AAV7    GTTTGCTTCG TTCATCACAC AGTACAGCAC CGGACA.AGT CAGCGTGGAA
  44_2    GCTGGCGTCG TTCATCACGC AGTACAGCAC CGGACA.GGT CAGCGTGGAA
```

Fig. 1AAAI

```
          4301                                                      4350
  42_2    ATCGAGTGGG AACTGCAGAA AGAAAACAGC AAACGCTGGA ATCCAGAGAT
  42_8    ATTGAATGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 42_15    ATTGAATGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 42_5b    ATTGAATGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 42_1b    ATTGAATGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 42_13    ATTGAATGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 42_3a    ATTGAATGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
  42_4    ATTGAATGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 42_5a    ATTGAATGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 42_10    ATCGAGTGGG AACTGCAGAA AGAAAACAGC AAACGCTGGA ATCCAGAGAT
 42_3b    ATCGAGTGGG AACTGCAGAA AGAAAACAGC AAACGCTGGA ATCCAGAGAT
 42_11    ATCGAGTGGG AACTGCAGAA AGAGAACAGC AAACGCTGGA ATCCAGAGAT
 42_6b    ATCGAGTGGG AACTGCAGAA AGAAAACAGC AAACGCTGGA ATCCAGAGAT
  43_1    ATCGAATGGG AGCTGCAGAA AGAAAACAGC AAGCGCTGGA ACCCAGAGAT
  43_5    ATCGAATGGG AGCTGCAGAA AGAAAACAGC AAGCGCTGGA ACCCAGAGAT
 43_12    ATCGAATGGG AGCTGCAGAA AGAAAACAGC AAGCGCTGGA ACCCAGAGAT
 43_20    ATCGAGTGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ATCCAGAGAT
 43_21    ATCGAGTGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ATCCAGAGAT
 43_23    ATCGAGTGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ATCCAGAGAT
 43_25    ATCGAGTGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ATCCAGAGAT
  44_1    ATTGAATGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ACCCAGAGAT
  44_5    ATTGAATGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ACCCAGAGAT
223_10    ATCGAGTGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 223_2    ATCGAGTGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 223_4    ATCGAATGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 223_5    ATCGAATGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 223_6    ATCGAGTGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
 223_7    ATCGAGTGGG AGCTGCAGAA AGAGAACAGC AAGCGCTGGA ACCCAGAGAT
  A3_4    ATAGAGTGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ACCCAGAAAT
  A3_5    ATAGAGTGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ACCCGGAAAT
  A3_7    ATAGAGTGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ACCCAGAAAT
  A3_3    ATAGAGTGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ACCCAGAAAT
 42_12    .......... .......... .......... .......... ..........
  AAV1    ATTGAATGGG AGCTGCAGAA AGAAAACAGC AAGCGCTGGA ATCCCGAAGT
  AAV2    ATCGAGTGGG AGCTGCAGAA GGAAAACAGC AAACGCTGGA ATCCCGAAAT
  AAV3    ATTGAGTGGG AGCTACAGAA AGAAAACAGC AAACGTTGGA ATCCAGAGAT
  AAV8    ATTGAATGGG AGCTGCAGAA GGAAAACAGC AAGCGCTGGA ACCCCGAGAT
  AAV9    ATCGAGTGGG AGCTGCAGAA AGAAAACAGC AAGCGCTGGA ATCCAGAGAT
  AAV7    ATCGAGTGGG AGCTGCAGAA GGAAAACAGC AAGCGCTGGA ACCCGGAGAT
  44_2    ATTGAATGGG AGCTGCAGAA AGAAAACAGC AAACGCTGGA ACCCAGAGAT
```

Fig. 1AAAJ

```
          4351                                                    4400
  42_2    TCAGTACACC TCAAATTATG CCAAGTCTAA TAAT.GTGGA ATTTGCTGTC
  42_8    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 42_15    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 42_5b    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 42_1b    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 42_13    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 42_3a    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
  42_4    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 42_5a    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 42_10    TCAGTACACC TCAAATTATG CCAAGTCTAA TAAT.GTGGA ATTTGCTGTC
 42_3b    TCAGTACACC TCAAATTATG CCAAGTCTAA TAAT.GTGGA ATTTGCTGTC
 42_11    TCAGTACACC TCAAATTATG CCAAGTCTAA TAAT.GTGGA ATTTGCTGTC
 42_6b    TCAGTACACC TCAAATTATG CCAAGTCTAA TAAT.GTGGA ATTTGCTGTC
  43_1    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
  43_5    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 43_12    TCAGTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 43_20    TCAATACACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 43_21    TCAATACACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 43_23    TCAATACACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
 43_25    TCAATACACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
  44_1    TCAATACACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTCGCTGTT
  44_5    TCAATACACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTT
223_10    TCAGTACACC TCCAACTTTG ACAAACAGAC TGGA.GTGGA CTTTGCTGTT
 223_2    TCAGTACACC TCCAACTTTG ACAAACAGAC TGGA.GTGGA CTTTGCTGTT
 223_4    TCAGTACACC TCCAACTTTG ACAAACAGAC TGGA.GTGGA CTTTGCTGTT
 223_5    TCAGTACACC TCCAACTTTG ACAAACAGAC TGGA.GTGGA CTTTGCTGTT
 223_6    TCAGTACACC TCCAACTTTG ACAAACAGAC TGGA.GTGGA CTTTGCTGTT
 223_7    TCAGTACACC TCCAACTTTG ACAAACAGAC TGGA.GTGGA CTTTGCTGTT
  A3_4    TCAGTACACC TCCAACTACA ACAAGTCGGT GAAT.GTGGA GTTTACCGTG
  A3_5    TCAGTACACC TCCAACTACA ACAAGTCGGT GAAT.GTGGA GTTTACCGTG
  A3_7    TCAGTACACC TCCAACTACA ACAAGTCGGT GAAT.GTGGA GTTTACCGTG
  A3_3    TCAGTACACC TCCAACTACA ACAAGTCGGT GAAT.GTGGA GTTTACCGTG
 42_12    ...GTATACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
  AAV1    GCAGTACACA TCCAATTATG CAAAATCTGC CAAC.GTTGA TTTTACTGTG
  AAV2    TCAGTACACT TCCAACTACA ACAAGTCTGT TAATCGTGGA CTT.ACCGTG
  AAV3    TCAGTACACT TCCAACTACA ACAAGTCTGT TAAT.GTGGA CTTTACTGTA
  AAV8    CCAGTACACC TCCAACTACT ACAAATCTAC AAGT.GTGGA CTTTGCTGTT
  AAV9    CCAGTATACT TCAAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTC
  AAV7    TCAGTACACC TCCAACTTTG AAAAGCAGAC TGGT.GTGGA CTTTGCCGTT
  44_2    TCAATACACT TCCAACTACT ACAAATCTAC AAAT.GTGGA CTTTGCTGTT
```

Fig. 1AAAK

```
         4401                                                    4450
  42_2   AACAACGAAG GGGTTTATAC TGAGCCTCGC CCCATTGGCA CCCGTTACCT
  42_8   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CCCGTTACCT
 42_15   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CCCGTTACCT
 42_5b   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CCCGTTACCT
 42_1b   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CCCGTTACCT
 42_13   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CCCGTTACCT
 42_3a   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CCCGTTACCT
  42_4   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CCCGTTACCT
 42_5a   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CCCGTTACCT
 42_10   AACAACGAAG GGGTTTATAC TGAGCCTCGC CCCATTGGCA CCCGTTACCT
 42_3b   AACAACGAAG GGGTTTATAC TGAGCCTCGC CCCATTGGCA CCCGTTACCT
 42_11   AACAACGAAG GGGTTTATAC TGAGCCTCGC CCCATTGGCA CCCGTTACCT
 42_6b   AACAACGAAG GGGTTTATAC TGAGCCTCGC CCCATTGGCA CCCGTTACCT
  43_1   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CTCGTTATCT
  43_5   AATACCGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CTCGTTATCT
 43_12   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CTCGTTATCT
 43_20   AACACGGAAG GAGTTTATAG CGAGCCTCGC CCCATTGGCA CCCGTTACCT
 43_21   AACACGGAAG GAGTTTATAG CGAGCCTCGC CCCATTGGCA CCCGTTACCT
 43_23   AACACGGAAG GAGTTTATAG CGAGCCTCGC CCCATTGGCA CCCGTTACCT
 43_25   AACACGGAGG GGGTTTATAG CGAGCCTCGC CCCATTGGCA CCCGTTACCT
  44_1   AACACAGATG GCACTTATTC TGAGCCTCGC CCCATTGGCA CCCGTTACCT
  44_5   AACACAGATG GCACTTATTC TGAGCCTCGC CCCATTGGCA CCCGTTACCT
223_10   GACAGCCAGG GTGTTTACTC TGAGCCT... .......... ..........
 223_2   GACAGCCAGG GTGTTTACTC TGAGCCT... .......... ..........
 223_4   GACAGCCAGG GTGTTTACTC TGAGCCT... .......... ..........
 223_5   GACAGCCAGG GTGTTTACTC TGAGCCT... .......... ..........
 223_6   GACAGCCAGG GTGTTTACTC TGAGCCT... .......... ..........
 223_7   GACAGCCAGG GTGTTTACTC TGAGCCT... .......... ..........
  A3_4   GACGCAAACG GTGTTTATTC TGAACCCCGC CCTATTGGCA CTCGTTACCT
  A3_5   GACGCAAACG GTGTTTATTC TGAACCCCGC CCTATTGGCA CTCGTTACCT
  A3_7   GACGCAAACG GTGTTTATTC TGAACCCCGC CCTATTGGCA CTCGTTACCT
  A3_3   GACGCAAACG GTGTTTATTC TGAACCCCGC CCTATTGGCA CTCGTTACCT
 42_12   AATACTGAGG GTACTTATTC AGAGCCTCGC CCCATTGGCA CCCGTTACCT
  AAV1   GACAACAATG GACTTTATAC TGAGCCTCGC CCCATTGGCA CCCGTTACCT
  AAV2   GATACTAATG GCGTGTATTC AGAGCCTCGC CCCATTGGCA CCAGATACCT
  AAV3   GACACTAATG GTGTTTATAG TGAACCTCGC CCTATTGGAA CCCGGTATCT
  AAV8   AATACAGAAG GCGTGTACTC TGAACCCCGC CCCATTGGCA CCCGTTACCT
  AAV9   AATACCGAAG GTGTTTACTC TGAGCCTCGC CCCATTGGTA CTCGTTACCT
  AAV7   GACAGCCAGG GTGTTTACTC TGAGCCTCGC CCTATTGGCA CTCGTTACCT
  44_2   AACACAGATG GCACTTATTC TGAGCCTCGC CCCATCGGCA CCCGTTACCT
```

Fig. 1AAAL

```
          4451                                                    4500
                          VP1-3 stop          Poly A signal
  42_2    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
  42_8    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGC TAATTCGTTT
 42_15    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
 42_5b    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
 42_1b    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TGATTCGTTT
 42_13    CACCCGTAGC CTGTAATTGC CTGTTAATCA ATAAACCGGT TGATTCGTTT
 42_3a    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
  42_4    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
 42_5a    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
 42_10    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
 42_3b    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
 42_11    CACCCGTAAC CTGTAATTAC TTGTTAATCA ATAAACCGGT TGATTCGTTT
 42_6b    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
  43_1    CACCCGTAAT CTGTAATTGC TTGTTAATCA ATAAACCGGT ..........
  43_5    CACCCGTAAT CTGTAATTGC TTGTTAATCA ATAAACCGGT TAATTCGTTT
 43_12    CACCCGTAAT CTGTAATTGC TTGTTAATCA ATAAACCGGT TAATTCGTTT
 43_20    CACCCGCAAC CTGTAATTAC ATGTTAATCA ATAAACCGGT TAATTCGTTT
 43_21    CACCCGCAAC CTGTAATTAC ATGTTAATCA ATAAACCGGT TAATTCGTTT
 43_23    CACCCGCAAC CTGTAATTAC ATGTTAATCA ATAAACCGGT TAATTCGTTT
 43_25    CACCCGCAAC CTGTAATTAC ATGTTAATCA ATAAACCGGT TAATTCGTTT
  44_1    CACCCGTAAT CTGTAATTGC TCGTTAATCA ATAAACCGGT TGATTCGTTT
  44_5    CACCCGTAAT CTGTAATTGC TTGTTAATCA ATAAACCGGT TGATTCGTTT
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    TACCCGGAAC TTGTAATTTC CTGTTAATGA ATAAACCGAT TTATGCGTTT
  A3_5    TACCCGGAAC TTGTAATTTC CTGTTAATGA ATAAACCGAT TTATGCGTTT
  A3_7    TACCCGGAAC TTGTAATTTC CTGTTAATGA ATAAACCGAT TTATGCGTTT
  A3_3    TACCCGGAAC TTGTAATTTC CTGTTAATGA ATAAGCCGAT TTATGCGTTT
 42_12    CACCCGTAAC CTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
  AAV1    TACCCGTCCC CTGTAATTAC GTGTTAATCA ATAAACCGGT TGATTCGTTT
  AAV2    GACTCGTAAT CTGTAATTGC TTGTTAATCA ATAAACCGTT TAATTCGTTT
  AAV3    CACACGAAAC TTGTGAATCC TGGTTAATCA ATAAACCGTT TAATTCGTTT
  AAV8    CACCCGTAAT CTGTAATTGC CTGTTAATCA ATAAACCGGT TGATTCGTTT
  AAV9    CACCCGTAAT TTGTAATTGC CTGTTAATCA ATAAACCGGT TAATTCGTTT
  AAV7    CACCCGTAAT CTGTAATTGC ATGTTAATCA ATAAACCGGT TGATTCGTTT
  44_2    CACCCGTAAT CTGTAATTGC TTGTTAATCA ATAAACCGGT TGATTCGTTT
                       vp1-3 stop        PolyA signal
```

Fig. 1AAAM

```
          4501                                                      4550

  42_2    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
  42_8    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 42_15    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 42_5b    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTCGTTTA AACCTGCAGG
 42_1b    CAGTTGAACT TTGGTCTC.. ...AAGGGCG AATTC..... ..........
 42_13    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 42_3a    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
  42_4    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 42_5a    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 42_10    CAGTTGAACT TTGGTC.... ...AAGGGCG AATTC..... ..........
 42_3b    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 42_11    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 42_6b    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
  43_1    .......... .......... .......... .......... ..........
  43_5    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTCGTTTA AACCTGCAGG
 43_12    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 43_20    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 43_21    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 43_23    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
 43_25    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
  44_1    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
  44_5    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTCGC.GG CCGCTA....
  A3_5    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
  A3_7    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
  A3_3    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTCGT.TT AAACCT....
 42_12    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
  AAV1    CAGTTGAACT TTGGTCTCCT GTCCTTCTTA TCTTATCGGT TACCATGGTT
  AAV2    CAGTTGAACT TTGGTCTC.T GCGTATTTCT ..TTCTT.AT CTAGTTTCCA
  AAV3    CAGTTGAACT TTGGCTCT.T GTGCACTTCT TTATCTTTAT CTTGTTTCCA
  AAV8    CAGTTGAACT TTGGTCTC.T GCG....... .......... ..........
  AAV9    CAGTTGAACT TTGGTCTC.T GCG....... .......... ..........
  AAV7    CAGTTGAACT TTGGTCTCCT GTGCTTCTTA TCTTATCGGT TTCCATAGCA
  44_2    CAGTTGAACT TTGGTCTC.T GCGAAGGGCG AATTC..... ..........
```

Fig. 1AAAN

```
         4551                                                        4600
  42_2   .......... .......... .......... .......... ..........
  42_8   .......... .......... .......... .......... ..........
 42_15   .......... .......... .......... .......... ..........
 42_5b   ACTAGTCCCT TTAGTGAGGG TTAATTCTGA G......... ..........
 42_1b   .......... .......... .......... .......... ..........
 42_13   .......... .......... .......... .......... ..........
 42_3a   .......... .......... .......... .......... ..........
  42_4   .......... .......... .......... .......... ..........
 42_5a   .......... .......... .......... .......... ..........
 42_10   .......... .......... .......... .......... ..........
 42_3b   .......... .......... .......... .......... ..........
 42_11   .......... .......... .......... .......... ..........
 42_6b   .......... .......... .......... .......... ..........
  43_1   .......... .......... .......... .......... ..........
  43_5   AC........ .......... .......... .......... ..........
 43_12   .......... .......... .......... .......... ..........
 43_20   .......... .......... .......... .......... ..........
 43_21   .......... .......... .......... .......... ..........
 43_23   .......... .......... .......... .......... ..........
 43_25   .......... .......... .......... .......... ..........
  44_1   .......... .......... .......... .......... ..........
  44_5   .......... .......... .......... .......... ..........
223_10   .......... .......... .......... .......... ..........
 223_2   .......... .......... .......... .......... ..........
 223_4   .......... .......... .......... .......... ..........
 223_5   .......... .......... .......... .......... ..........
 223_6   .......... .......... .......... .......... ..........
 223_7   .......... .......... .......... .......... ..........
  A3_4   .......... .......... .......... .......... ..........
  A3_5   .......... .......... .......... .......... ..........
  A3_7   .......... .......... .......... .......... ..........
  A3_3   .......... .......... .......... .......... ..........
 42_12   .......... .......... .......... .......... ..........
  AAV1   ATAGCTTACA CATTAACTGC TTGGTTGCGC T......... ..........
  AAV2   TGGCTAC... GTAGATAAGT AGC....... .......... ..........
  AAV3   TGGCTACTGC GTAGATAAGC AGCGGCCTGC GGCGCTTGCG CTTCGCGGTT
  AAV8   .......... .......... .......... .......... ..........
  AAV9   .......... .......... .......... .......... ..........
  AAV7   ACTGGTTACA CATTAACTGC TTGGGTGCGC TTCACGATAA GAACACTGAC
  44_2   .......... .......... .......... .......... ..........
```

Fig. 1AAAO

```
          4601                                                        4650
  42_2    .......... .......... .......... .......... ..........
  42_8    .......... .......... .......... .......... ..........
 42_15    .......... .......... .......... .......... ..........
 42_5b    ....CTTGGC GTAATCATGG GTCATAG... .......... ..........
 42_1b    .......... .......... .......... .......... ..........
 42_13    .......... .......... .......... .......... ..........
 42_3a    .......... .......... .......... .......... ..........
  42_4    .......... .......... .......... .......... ..........
 42_5a    .......... .......... .......... .......... ..........
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    .......... .......... .......... .......... ..........
 42_6b    .......... .......... .......... .......... ..........
  43_1    .......... .......... .......... .......... ..........
  43_5    .......... .......... .......... .......... ..........
 43_12    .......... .......... .......... .......... ..........
 43_20    .......... .......... .......... .......... ..........
 43_21    .......... .......... .......... .......... ..........
 43_23    .......... .......... .......... .......... ..........
 43_25    .......... .......... .......... .......... ..........
  44_1    .......... .......... .......... .......... ..........
  44_5    .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    .......... .......... .......... .......... ..........
  A3_5    .......... .......... .......... .......... ..........
  A3_7    .......... .......... .......... .......... ..........
  A3_3    .......... .......... .......... .......... ..........
 42_12    .......... .......... .......... .......... ..........
  AAV1    ....TCGCGA TAAAAGACTT ACGTCATCGG GTTACCCCTA GTGATGGAGT
  AAV2    ....ATGGCG GGTTAATCAT TAACTACAAG GA.ACCCCTA GTGATGGAGT
  AAV3    TACAACTGCT GGTTAATATT TAACTCTCGC CATACCTCTA GTGATGGAGT
  AAV8    .......... .......... .......... .......... ..........
  AAV9    .......... .......... .......... .......... ..........
  AAV7    .......... .......... ..GTCACCGC GGTACCCCTA GTGATGGAGT
  44_2    .......... .......... .......... .......... ..........
```

Fig. 1AAAP

```
          4651                                                        4700
 42_2     .......... .......... .......... .......... ..........
 42_8     .......... .......... .......... .......... ..........
42_15     .......... .......... .......... .......... ..........
42_5b     .......... .......... .......... .......... ..........
42_1b     .......... .......... .......... .......... ..........
42_13     .......... .......... .......... .......... ..........
42_3a     .......... .......... .......... .......... ..........
 42_4     .......... .......... .......... .......... ..........
42_5a     .......... .......... .......... .......... ..........
42_10     .......... .......... .......... .......... ..........
42_3b     .......... .......... .......... .......... ..........
42_11     .......... .......... .......... .......... ..........
42_6b     .......... .......... .......... .......... ..........
 43_1     .......... .......... .......... .......... ..........
 43_5     .......... .......... .......... .......... ..........
43_12     .......... .......... .......... .......... ..........
43_20     .......... .......... .......... .......... ..........
43_21     .......... .......... .......... .......... ..........
43_23     .......... .......... .......... .......... ..........
43_25     .......... .......... .......... .......... ..........
 44_1     .......... .......... .......... .......... ..........
 44_5     .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
223_2     .......... .......... .......... .......... ..........
223_4     .......... .......... .......... .......... ..........
223_5     .......... .......... .......... .......... ..........
223_6     .......... .......... .......... .......... ..........
223_7     .......... .......... .......... .......... ..........
 A3_4     .......... .......... .......... .......... ..........
 A3_5     .......... .......... .......... .......... ..........
 A3_7     .......... .......... .......... .......... ..........
 A3_3     .......... .......... .......... .......... ..........
42_12     .......... .......... .......... .......... ..........
 AAV1     TGCCCACTCC CTCTCTGCGC GCTCGCTCGC TCGGTGGGGC CTGCGGACCA
 AAV2     TGGCCACTCC CTCTCTGCGC GCTCGCTCGC TCACTGAGGC CGGGCGACCA
 AAV3     TGGCCACTCC CTCTATGCGC ACTCGCTCGC TCGGTGGGGC CTGGCGACCA
 AAV8     .......... .......... .......... .......... ..........
 AAV9     .......... .......... .......... .......... ..........
 AAV7     TGGCCACTCC CTCTATGCGC GCTCGCTCGC TCGGTGGGGC CTGCGGACCA
 44_2     .......... .......... .......... .......... ..........
```

Fig. 1AAAQ

```
          4701                                                        4750
  42_2    .......... .......... .......... .......... ..........
  42_8    .......... .......... .......... .......... ..........
 42_15    .......... .......... .......... .......... ..........
 42_5b    .......... .......... .......... .......... ..........
 42_1b    .......... .......... .......... .......... ..........
 42_13    .......... .......... .......... .......... ..........
 42_3a    .......... .......... .......... .......... ..........
  42_4    .......... .......... .......... .......... ..........
 42_5a    .......... .......... .......... .......... ..........
 42_10    .......... .......... .......... .......... ..........
 42_3b    .......... .......... .......... .......... ..........
 42_11    .......... .......... .......... .......... ..........
 42_6b    .......... .......... .......... .......... ..........
  43_1    .......... .......... .......... .......... ..........
  43_5    .......... .......... .......... .......... ..........
 43_12    .......... .......... .......... .......... ..........
 43_20    .......... .......... .......... .......... ..........
 43_21    .......... .......... .......... .......... ..........
 43_23    .......... .......... .......... .......... ..........
 43_25    .......... .......... .......... .......... ..........
  44_1    .......... .......... .......... .......... ..........
  44_5    .......... .......... .......... .......... ..........
223_10    .......... .......... .......... .......... ..........
 223_2    .......... .......... .......... .......... ..........
 223_4    .......... .......... .......... .......... ..........
 223_5    .......... .......... .......... .......... ..........
 223_6    .......... .......... .......... .......... ..........
 223_7    .......... .......... .......... .......... ..........
  A3_4    .......... .......... .......... .......... ..........
  A3_5    .......... .......... .......... .......... ..........
  A3_7    .......... .......... .......... .......... ..........
  A3_3    .......... .......... .......... .......... ..........
 42_12    .......... .......... .......... .......... ..........
  AAV1    AAGGTCCGCA GACGGCAGAG CTCTGCTCTG CCGGCCCCAC CGAGCGAGCG
  AAV2    AAGGTCGCCC GACGCCCGGG CTTTGCCCGG GCGGCCTCAG TGAGCGAGCG
  AAV3    AAGGTCGCCA GACGGACGTG CTTTGCACGT CCGGCCCCAC CGAGCGAGCG
  AAV8    .......... .......... .......... .......... ..........
  AAV9    .......... .......... .......... .......... ..........
  AAV7    AAGGTCCGCA GACGGCAGAG CTCTGCTCTG CCGGCCCCAC CGAGCGAGCG
  44_2    .......... .......... .......... .......... ..........
```

Fig. 1AAAR

```
          4751                    4774
  42_2    .......... .......... ....
  42_8    .......... .......... ....
 42_15    .......... .......... ....
 42_5b    .......... .......... ....
 42_1b    .......... .......... ....
 42_13    .......... .......... ....
 42_3a    .......... .......... ....
  42_4    .......... .......... ....
 42_5a    .......... .......... ....
 42_10    .......... .......... ....
 42_3b    .......... .......... ....
 42_11    .......... .......... ....
 42_6b    .......... .......... ....
  43_1    .......... .......... ....
  43_5    .......... .......... ....
 43_12    .......... .......... ....
 43_20    .......... .......... ....
 43_21    .......... .......... ....
 43_23    .......... .......... ....
 43_25    .......... .......... ....
  44_1    .......... .......... ....
  44_5    .......... .......... ....
223_10    .......... .......... ....
 223_2    .......... .......... ....
 223_4    .......... .......... ....
 223_5    .......... .......... ....
 223_6    .......... .......... ....
 223_7    .......... .......... ....
  A3_4    .......... .......... ....
  A3_5    .......... .......... ....
  A3_7    .......... .......... ....
  A3_3    .......... .......... ....
 42_12    .......... .......... ....
  AAV1    AGCGCGCAGA GAGGGAGTGG GCAA
  AAV2    AGCGCGCAGA GAGGGAGTGG CCAA
  AAV3    AGTGCGCATA GAGGGAGTGG CCAA
  AAV8    .......... .......... ....
  AAV9    .......... .......... ....
  AAV7    AGCGCGCATA GAGGGAGTGG CCAA
  44_2    .......... .......... ....
```

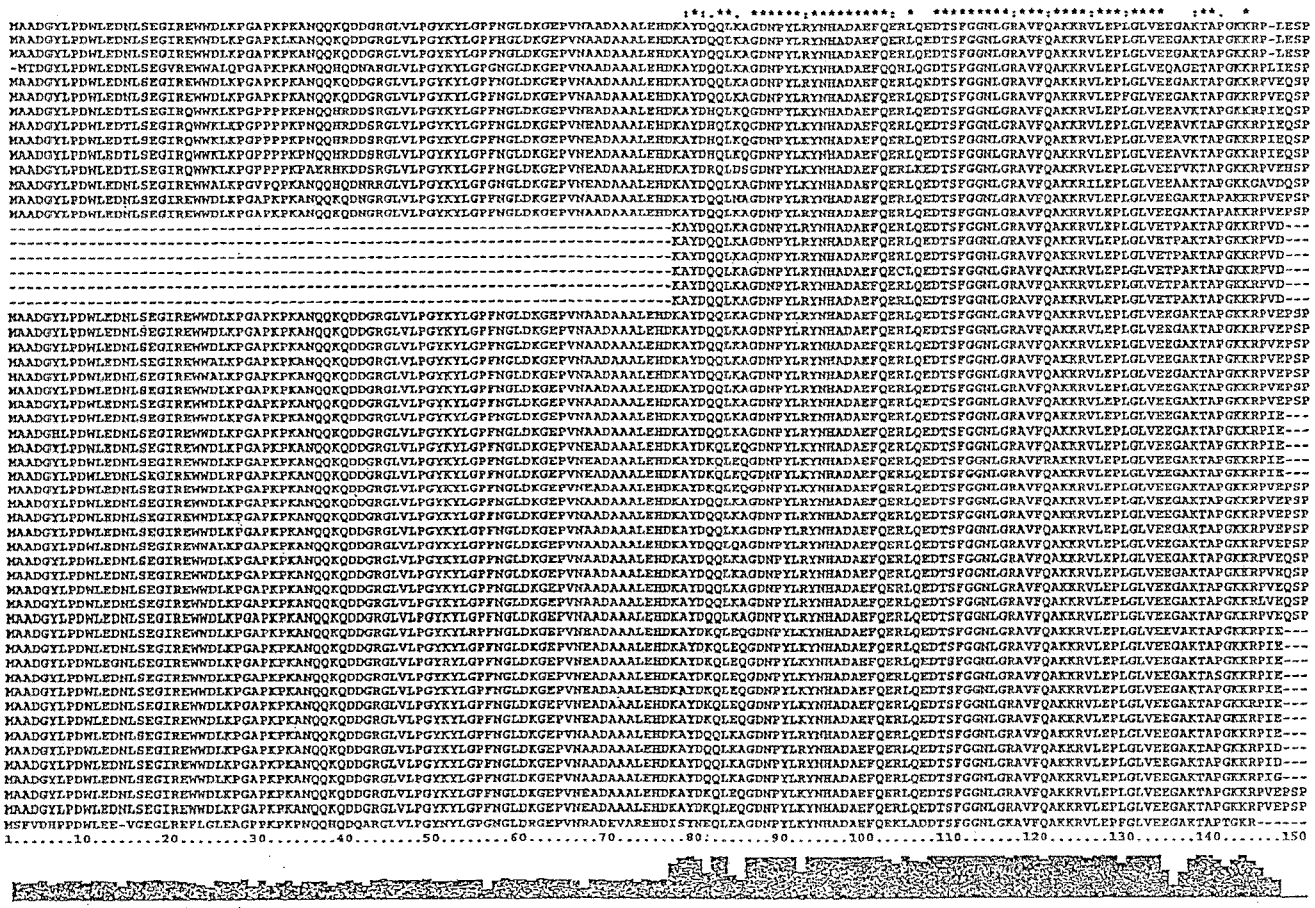
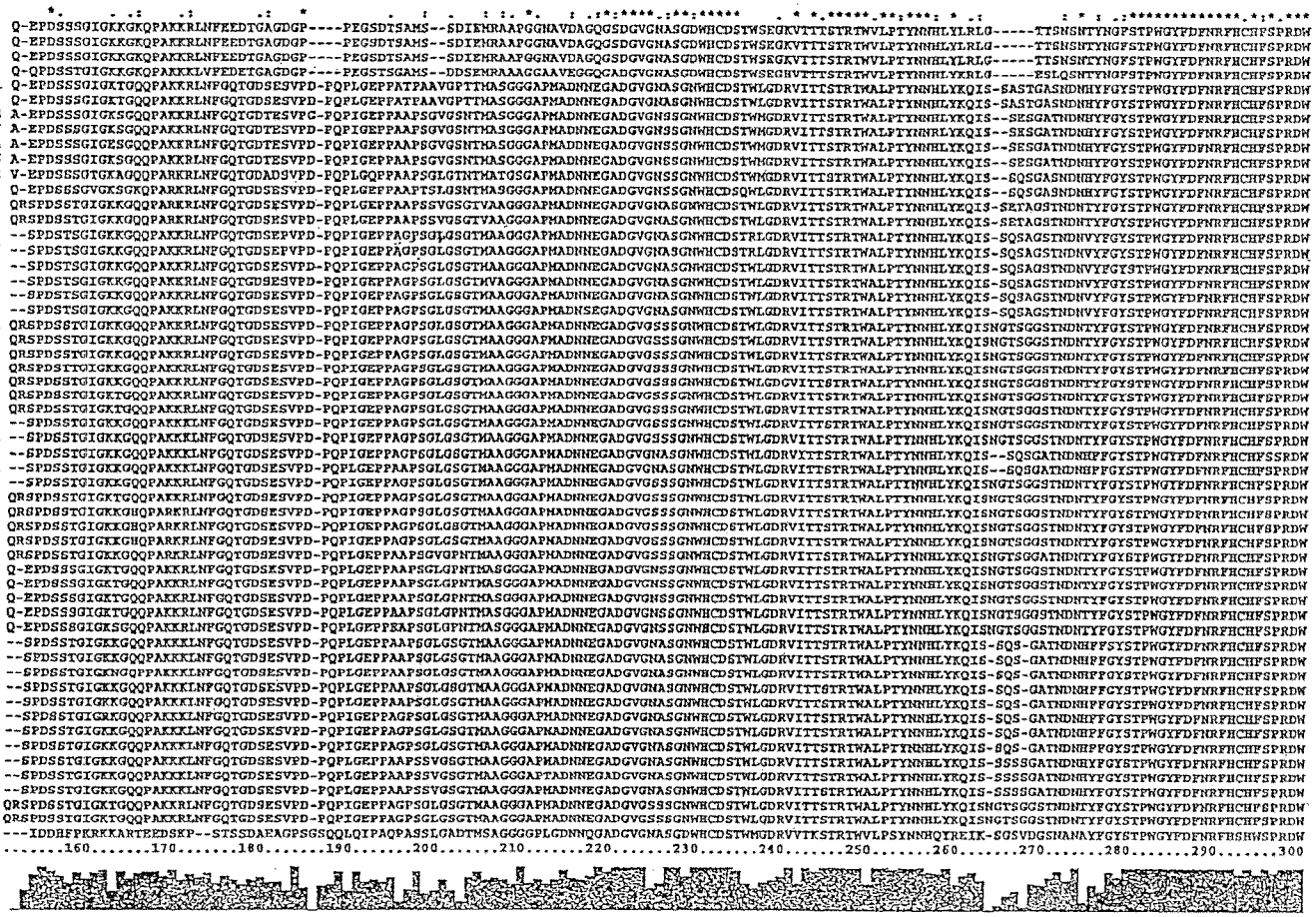


Fig. 2A



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Fig. 2B

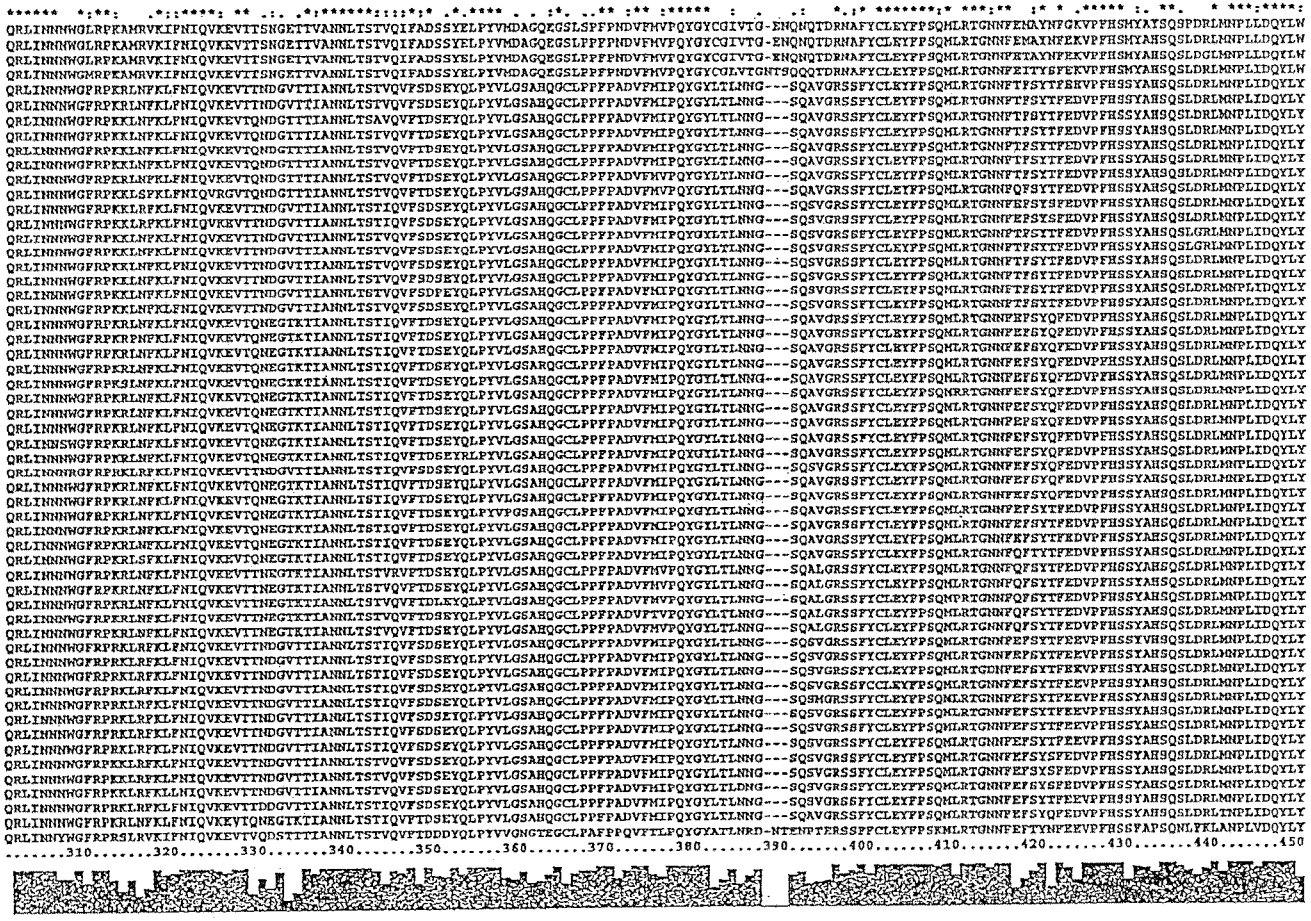


Fig. 2C

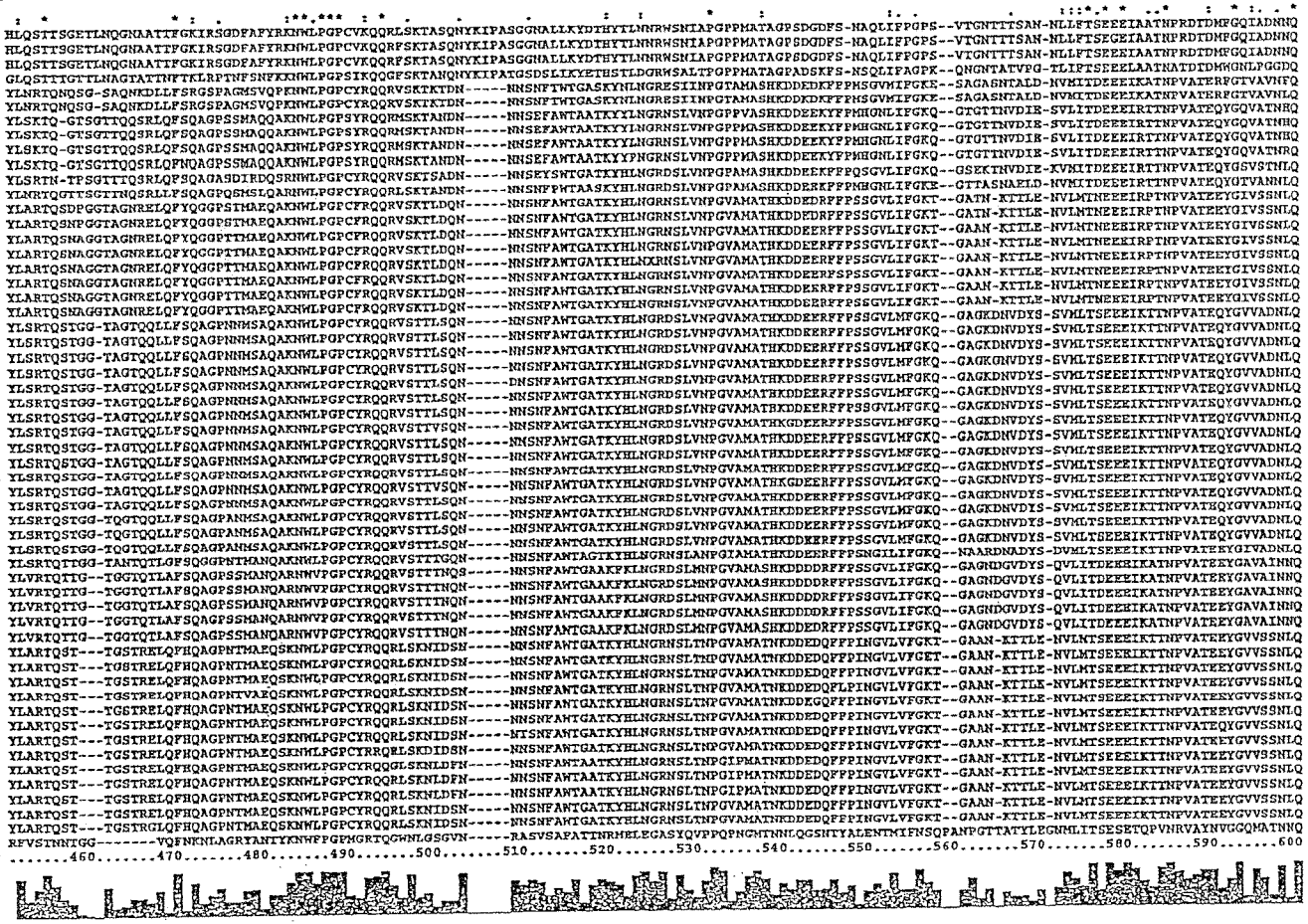


Fig. 2D

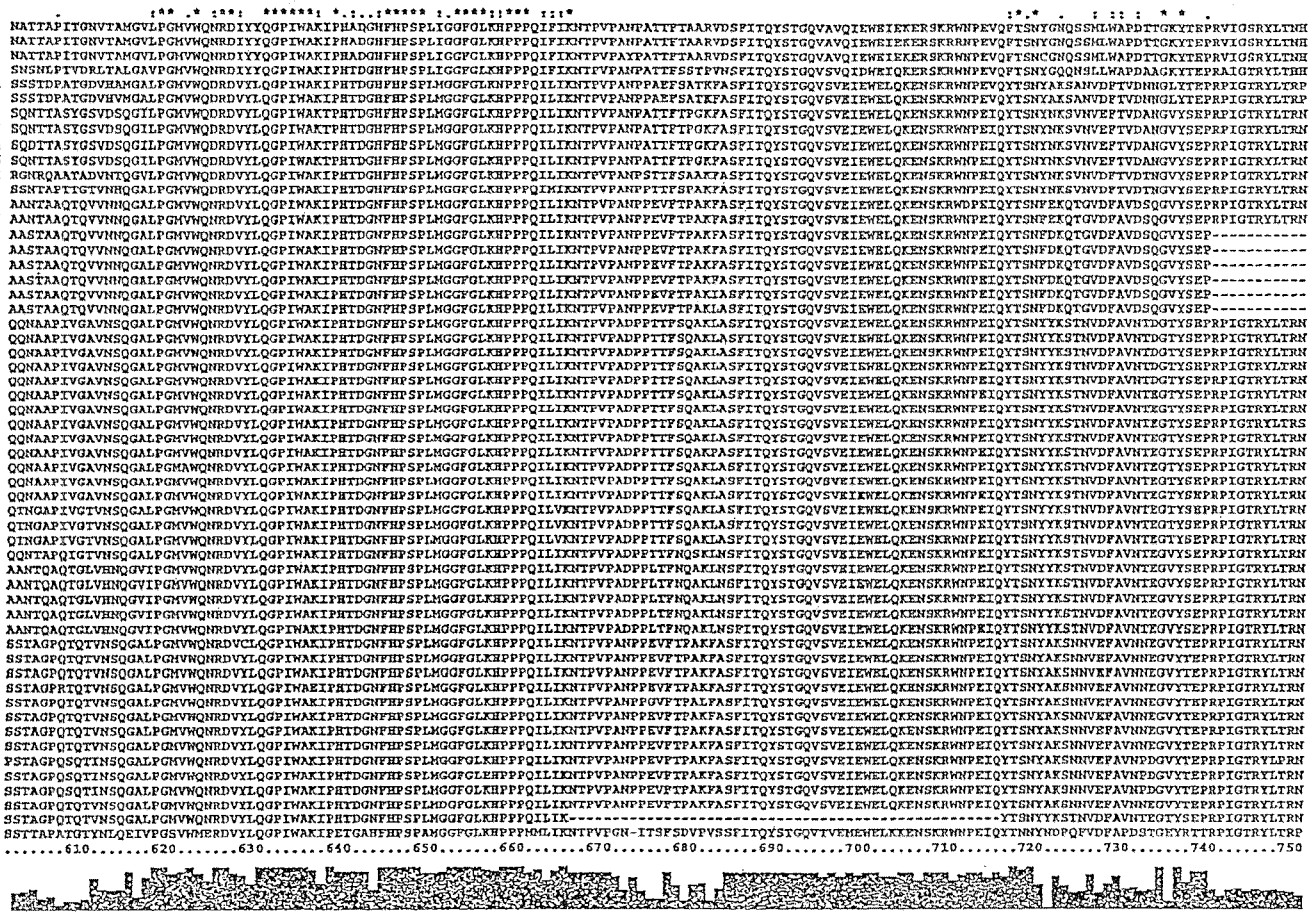

C1VP1
C2VP1
C5VP1@2
AAV4VP1
AAV1
AAV6VP1
A3_3
A3_7
A3_4
A3_5
AAV2
AAV3
3.3bVP1
AAV7
223_4
223_5
223_10
223_2
223_7
223_6
44_1
44_5
44_2
29.3VP1
29.5VP1
42_15
42_8
42_13
42_3A
41_4
42_5A
42_1B
42_5B
43_1
43_12
43_5
AAV8
43_21
43_25
43_23
43_20
AAV_9
24_1
42.2REAL
7.2VP1
27.3VP1
16.3VP1
42_10
42_3B
42_11
F1VP1
F5VP1@3
F3VP1
42_6B
42_12
AAV5CAP
ruler
.....610.....620.....630.....640.....650.....660.....670.....680.....690.....700.....710.....720.....730.....740.....750

Fig. 2E

Fig. 2F

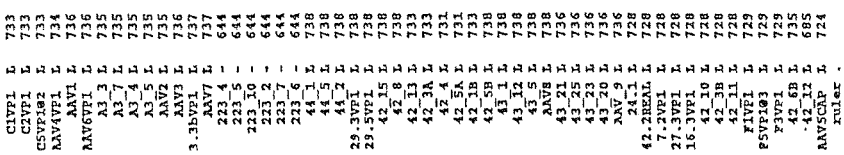

C1VP1 L 733
C2VP1 L 733
C5VP1#2 L 733
AAV4VP1 L 734
AAV1 L 736
AAV6VP1 L 736
A3_3 L 735
A3_7 L 735
A3_4 L 735
A3_5 L 735
AAV2 L 735
AAV3 L 736
3.3bVP1 L 737
AAV7 L 737
223_4 - 644
223_5 - 644
223_10 - 644
223_2 - 644
223_7 - 644
223_6 - 644
44_1 L 738
44_5 L 738
44_2 L 738
29.3VP1 L 738
29.5VP1 L 738
42_15 L 738
42_8 L 738
42_13 L 733
42_3A L 733
42_4 L 731
42_5A L 731
42_1B L 733
42_5B L 738
43_1 L 738
43_12 L 738
43_5 L 738
AAV8 L 738
43_21 L 736
43_25 L 736
43_23 L 736
43_20 L 736
AAV_9 L 736
24_1 L 728
42.2BRAL L 728
7.2VP1 L 728
27.3VP1 L 728
16.3VP1 L 728
42_10 L 728
42_3B L 728
42_11 L 728
KIVP1 L 729
PSVP1#3 L 729
P3VP1 L 729
42_6B L 735
42_12 L 695
AAV5CAP L 724
Point -

Fig. 3A

```
Met Pro Gly Phe Tyr Glu Ile Val Ile Lys Val Pro Ser Asp Leu Asp
1               5                  10                  15

Glu His Leu Pro Gly Ile Ser Asp Ser Phe Val Asn Trp Val Ala Glu
            20                  25                  30

Lys Glu Trp Glu Leu Pro Pro Asp Ser Asp Met Asp Leu Asn Leu Ile
        35                  40                  45

Glu Gln Ala Pro Leu Thr Val Ala Glu Lys Leu Gln Arg Asp Phe Leu
    50                  55                  60

Val Gln Trp Arg Arg Val Ser Lys Ala Pro Glu Ala Leu Phe Phe Val
65                  70                  75                  80

Gln Phe Glu Lys Gly Glu Ser Tyr Phe His Leu His Val Leu Val Glu
                85                  90                  95

Thr Thr Gly Val Lys Ser Met Val Leu Gly Arg Phe Leu Ser Gln Ile
            100                 105                 110

Arg Glu Lys Leu Val Gln Thr Ile Tyr Arg Gly Val Glu Pro Thr Leu
        115                 120                 125

Pro Asn Trp Phe Ala Val Thr Lys Thr Arg Asn Gly Ala Gly Gly Gly
    130                 135                 140

Asn Lys Val Val Asp Glu Cys Tyr Ile Pro Asn Tyr Leu Leu Pro Lys
145                 150                 155                 160

Thr Gln Pro Glu Leu Gln Trp Ala Trp Thr Asn Met Glu Glu Tyr Ile
                165                 170                 175

Ser Ala Cys Leu Asn Leu Ala Glu Arg Lys Arg Leu Val Ala Gln His
            180                 185                 190

Leu Thr His Val Ser Gln Thr Gln Glu Gln Asn Lys Glu Asn Leu Asn
        195                 200                 205

Pro Asn Ser Asp Ala Pro Val Ile Arg Ser Lys Thr Ser Ala Arg Tyr
    210                 215                 220
```

Fig. 3B

```
Met Glu Leu Val Gly Trp Leu Val Asp Arg Gly Ile Thr Ser Glu Lys
225                 230                 235                 240

Gln Trp Ile Gln Glu Asp Gln Ala Ser Tyr Ile Ser Phe Asn Ala Ala
                245                 250                 255

Ser Asn Ser Arg Ser Gln Ile Lys Ala Ala Leu Asp Asn Ala Gly Lys
            260                 265                 270

Ile Met Ala Leu Thr Lys Ser Ala Pro Asp Tyr Leu Val Gly Pro Ser
        275                 280                 285

Leu Pro Ala Asp Ile Lys Thr Asn Arg Ile Tyr Arg Ile Leu Glu Leu
    290                 295                 300

Asn Gly Tyr Asp Pro Ala Tyr Ala Gly Ser Val Phe Leu Gly Trp Ala
305                 310                 315                 320

Gln Lys Lys Phe Gly Lys Arg Asn Thr Ile Trp Leu Phe Gly Pro Ala
                325                 330                 335

Thr Thr Gly Lys Thr Asn Ile Ala Glu Ala Ile Ala His Ala Val Pro
            340                 345                 350

Phe Tyr Gly Cys Val Asn Trp Thr Asn Glu Asn Phe Pro Phe Asn Asp
        355                 360                 365

Cys Val Asp Lys Met Val Ile Trp Trp Glu Glu Gly Lys Met Thr Ala
    370                 375                 380

Lys Val Val Glu Ser Ala Lys Ala Ile Leu Gly Gly Ser Lys Val Arg
385                 390                 395                 400

Val Asp Gln Lys Cys Lys Ser Ser Ala Gln Ile Asp Pro Thr Pro Val
                405                 410                 415

Ile Val Thr Ser Asn Thr Asn Met Cys Ala Val Ile Asp Gly Asn Ser
            420                 425                 430

Thr Thr Phe Glu His Gln Gln Pro Leu Gln Asp Arg Met Phe Lys Phe
        435                 440                 445
```

Fig. 3C

```
Glu Leu Thr Arg Arg Leu Glu His Asp Phe Gly Lys Val Thr Lys Gln
450                 455                 460

Glu Val Lys Glu Phe Phe Arg Trp Ala Ser Asp His Val Thr Glu Val
465                 470                 475                 480

Ala His Glu Phe Tyr Val Arg Lys Gly Gly Ala Ser Lys Arg Pro Ala
                485                 490                 495

Pro Asp Asp Ala Asp Ile Ser Glu Pro Lys Arg Ala Cys Pro Ser Val
            500                 505                 510

Ala Asp Pro Ser Thr Ser Asp Ala Glu Gly Ala Pro Val Asp Phe Ala
        515                 520                 525

Asp Arg Tyr Gln Asn Lys Cys Ser Arg His Ala Gly Met Ile Gln Met
    530                 535                 540

Leu Phe Pro Cys Lys Thr Cys Glu Arg Met Asn Gln Asn Phe Asn Ile
545                 550                 555                 560

Cys Phe Thr His Gly Val Arg Asp Cys Leu Glu Cys Phe Pro Gly Val
                565                 570                 575

Ser Glu Ser Gln Pro Val Val Arg Lys Lys Thr Tyr Arg Lys Leu Cys
            580                 585                 590

Ala Ile His His Leu Leu Gly Arg Ala Pro Glu Ile Ala Cys Ser Ala
        595                 600                 605

Cys Asp Leu Val Asn Val Asp Leu Asp Asp Cys Val Ser Glu Gln
    610                 615                 620
```