

SEQUENCE LISTING

<110> NOUSCOM

<120> GREAT APES ADENOVIRUS NUCLEIC ACID- AND AMINO ACID-SEQUENCES,
VECTORS CONTAINING SAME, AND USES THEREOF

<130> 854-10 PCT

<150> EP17179825.9

<151> 2017-07-05

<160> 74

<170> PatentIn version 3.5

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<211> 37184

<212> DNA

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atgagctgat	tcaccacctc	tcgataccac	aggcatcgct	gattaattaa	agaccctcg	34860
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ggatgaatcgc	agtggcagtg	aagactccag	cgctcgtagc	cgtgaaccat	agagctgggc	34980
attatatcca	cattggcaca	acacagacac	actthtcatac	actthttcat	gattagcagc	35040
tcctctctag	tcaagacat	atcccaagga	atcaccact	cttgaatcaa	ggtaaataccc	35100
acacagcagg	gcaggcctct	cacataactc	acgttatgca	tagtgagcgt	gtcgcaatct	35160
ggaaataaccg	gatgatcttc	catcaccgaa	gcccgggtct	ccgtctcaaa	gggaggtaaa	35220
cggctccctcg	tgtagggaca	gtggcgggat	aatcgagatc	gtgttgaacg	tagagtcag	35280

ccaaagggaa cagcggacgt actcatatatt cctccagcag aaccaagtgc gcgcgtggca	35340
gctatccctg cgtctttctgt ctcgccgcct gccccgctcg gtgtagtagt tgtaatacag	35400
ccactccctc agaccgtcaa ggcgctccct ggcgtccgga tctataacaa caccgtcctg	35460
cagcgccgcc ctgatgacat ccaccaccgt agagtatgcc aagcccagcc acgaaatgca	35520
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agaactttta ttccaatcga tcctctacaa tgtcaaagtg tagatctatc agatggcact	35640
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caaagccacc gcccctatca tgatctatga taaaaacccc acagctatcc accagaccca	35820
tatagttttc atctctccat cgtgaaaaaa tattttacaag ctctctcttt aaatcacctc	35880
caaccaattc aaaaagttga gccagaccgc cctccacctt ctttttcagc atgcgcatca	35940
tgattgcaaa aattcaggct cctcagacac ctgtataaga ttgagaagcg gaacgttaac	36000
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cagatagctg gccagtcata tccggagtca tcacgtgcga acccgtgtag acccccgggt	36540
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gacgaagata caacagaata accccatggg ggggaataac aaagttagta ggtgaataaa	36660
aacgataaac acccgaaact ccctcctgcg taggcaaaat agcgccctcc ctttccaaaa	36720
caacatacag cgcttcaca gcagccatga caaaagactc aaaacactca aaagactcag	36780
tcttaccagg aaaataaaaag cactctcaca gcaccagcac taatcagagt gtgaagaggg	36840
ccaagtgccg aacgagtata tataggaatt aaaaatgacg taaatgtgta aaggtcaaaa	36900

aacgcccaga aaaatacaca gaccaacgcc cgaaacgaaa acccgcgaaa aaatacccag 36960
aagttcctca acaaccgcca cttccgcttt cccacgatac gtcacttcct caaaaatagc 37020
aaactacatt tcccacatgt acaaaaccaa aaccctctcc cttgtcaccg cccacaactt 37080
acataatcac aaacgtcaaa gcctacgtca cccgccccgc ctcgccccgc ccacctcatt 37140
atcatattgg cctcaatcca aaataaggta tattattgat gatg 37184

<210> 11
<211> 29
<212> PRT
<213> Great Ape Adenovirus

<400> 11

Glu Gln Glu Glu Asn Gln Val Val Ala Ala Asp Asp Glu Leu Glu Asp
1 5 10 15

Glu Glu Ala Gln Ala Gln Glu Glu Ala Pro Val Lys Lys
20 25

<210> 12
<211> 15
<212> PRT
<213> Great Ape Adenovirus

<400> 12

Ile Gln Ile Gly Thr Glu Val Val Gly Asp Thr Ser Lys Asp Thr
1 5 10 15

<210> 13
<211> 7
<212> PRT
<213> Great Ape Adenovirus

<400> 13

Asn Glu Ala Asp Ala Thr Ala
1 5

<210> 14
<211> 12
<212> PRT
<213> Great Ape Adenovirus

<400> 14

Met Val Ala Asn Glu Gln Gly Val Leu Glu Ser Lys
1 5 10

<210> 15

<211> 15

<212> PRT

<213> Great Ape Adenovirus

<400> 15

Asn Thr Thr Thr Leu Asn Ala Arg Asp Gly Thr Gly Asn Pro Glu
1 5 10 15

<210> 16

<211> 9

<212> PRT

<213> Great Ape Adenovirus

<400> 16

Lys Lys Asp Asp Val Asn Ala Lys Ile
1 5

<210> 17

<211> 26

<212> PRT

<213> Great Ape Adenovirus

<400> 17

Val Thr Asp Thr Tyr Gln Gly Ile Lys Asn Thr Asn Gly Asn Gly Gln
1 5 10 15

Trp Thr Lys Asp Asp Gln Phe Ala Asp Arg
20 25

<210> 18

<211> 29

<212> PRT

<213> Great Ape Adenovirus

<400> 18

Glu Gln Glu Glu Asn Gln Val Glu Ala Ala Asp Glu Asp Val Glu Asp
1 5 10 15

Glu Glu Ala Gln Ala Gln Glu Glu Ala Pro Ala Lys Lys
20 25

<210> 19
<211> 15
<212> PRT
<213> Great Ape Adenovirus

<400> 19

Leu Gln Ile Gly Thr Glu Val Val Gly Glu Thr Ser Lys Asp Thr
1 5 10 15

<210> 20
<211> 7
<212> PRT
<213> Great Ape Adenovirus

<400> 20

Asn Glu Ala Asp Ala Ala Val
1 5

<210> 21
<211> 12
<212> PRT
<213> Great Ape Adenovirus

<400> 21

Leu Val Ala Asn Glu Gln Gly Val Met Glu Ser Lys
1 5 10

<210> 22
<211> 15
<212> PRT
<213> Great Ape Adenovirus

<400> 22

Asn Thr Ser Thr Leu Asn Ala Arg Asp Gly Thr Gly Asn Pro Glu
1 5 10 15

<210> 23
<211> 9
<212> PRT
<213> Great Ape Adenovirus

<400> 23

Lys Lys Asp Asp Val Asn Ala Lys Val
1 5

<210> 24
<211> 26
<212> PRT
<213> Great Ape Adenovirus

<400> 24

Ile Thr Asp Thr Tyr Gln Gly Val Lys Asn Thr Asn Gly Asn Gly Gln
1 5 10 15

Trp Thr Lys Asp Asp Gln Phe Ala Asp Arg
20 25

<210> 25
<211> 30
<212> PRT
<213> Great Ape Adenovirus

<400> 25

Glu Gln Glu Glu Asn Gln Val Val Ala Ala Asp Glu Asp Leu Glu Glu
1 5 10 15

Asp Glu Glu Ala Gln Ala Glu Glu Gln Ala Pro Ala Lys Lys
20 25 30

<210> 26
<211> 15
<212> PRT
<213> Great Ape Adenovirus

<400> 26

Leu Gln Ile Gly Thr Glu Val Val Gly Asp Thr Ser Lys Asp Thr
1 5 10 15

<210> 27
<211> 7
<212> PRT
<213> Great Ape Adenovirus

<400> 27

Asn Glu Ala Asp Ala Thr Ala

1 5

<210> 28
<211> 12
<212> PRT
<213> Great Ape Adenovirus

<400> 28

Met Val Ala Asn Glu Gln Gly Val Leu Gln Ser Lys
1 5 10

<210> 29
<211> 15
<212> PRT
<213> Great Ape Adenovirus

<400> 29

Asn Thr Ser Thr Leu Asn Ala Arg Asp Gly Thr Gly Asn Pro Glu
1 5 10 15

<210> 30
<211> 9
<212> PRT
<213> Great Ape Adenovirus

<400> 30

Lys Lys Asp Asp Val Asn Ala Lys Val
1 5

<210> 31
<211> 26
<212> PRT
<213> Great Ape Adenovirus

<400> 31

Ile Thr Asp Thr Tyr Gln Gly Val Lys Asn Ser Asn Gly Asn Gly Gln
1 5 10 15

Trp Thr Lys Asp Asp Gln Phe Ala Asp Arg
20 25

<210> 32
<211> 31
<212> PRT

<213> Great Ape Adenovirus

<400> 32

Glu Gln Glu Glu Thr Gln Ala Ala Glu Glu Ala Val Asp Glu Glu Asp
1 5 10 15

Ala Glu Asp Glu Ala Gln Pro Gln Glu Glu Ala Pro Ala Lys Lys
20 25 30

<210> 33

<211> 15

<212> PRT

<213> Great Ape Adenovirus

<400> 33

Leu Gln Ile Gly Thr Glu Val Val Gly Asp Thr Ser Lys Asp Thr
1 5 10 15

<210> 34

<211> 7

<212> PRT

<213> Great Ape Adenovirus

<400> 34

Asn Glu Ala Asp Ala Ala Val
1 5

<210> 35

<211> 12

<212> PRT

<213> Great Ape Adenovirus

<400> 35

Met Val Ala Asn Glu Lys Gly Val Leu Gln Ser Lys
1 5 10

<210> 36

<211> 15

<212> PRT

<213> Great Ape Adenovirus

<400> 36

Asn Thr Ser Thr Leu Asn Ala Arg Asp Gly Thr Gly Asn Pro Glu
1 5 10 15

<210> 37
<211> 9
<212> PRT
<213> Great Ape Adenovirus

<400> 37

Thr Lys Asp Asp Val Asn Ala Lys Val
1 5

<210> 38
<211> 26
<212> PRT
<213> Great Ape Adenovirus

<400> 38

Ile Thr Asp Thr Tyr Gln Gly Val Lys Asn Thr Asn Gly Asn Gly Gln
1 5 10 15

Trp Thr Lys Asp Asp Gln Phe Ala Asp Arg
20 25

<210> 39
<211> 29
<212> PRT
<213> Great Ape Adenovirus

<400> 39

Glu Gln Glu Glu Asn Gln Val Val Ala Ala Asp Asp Glu Leu Glu Asp
1 5 10 15

Glu Glu Ala Gln Ala Gln Glu Glu Ala Pro Val Lys Lys
20 25

<210> 40
<211> 15
<212> PRT
<213> Great Ape Adenovirus

<400> 40

Leu Gln Ile Gly Thr Glu Val Val Gly Asp Thr Ser Lys Asp Thr
1 5 10 15

<210> 41
<211> 7
<212> PRT
<213> Great Ape Adenovirus

<400> 41

Asn Glu Ala Asp Ala Thr Val
1 5

<210> 42
<211> 12
<212> PRT
<213> Great Ape Adenovirus

<400> 42

Met Val Ala Asn Glu Gln Gly Val Leu Glu Ser Lys
1 5 10

<210> 43
<211> 15
<212> PRT
<213> Great Ape Adenovirus

<400> 43

Asn Thr Thr Thr Leu Asn Ala Arg Asp Gly Thr Gly Asn Pro Glu
1 5 10 15

<210> 44
<211> 9
<212> PRT
<213> Great Ape Adenovirus

<400> 44

Lys Lys Asp Asp Val Asn Ala Lys Ile
1 5

<210> 45
<211> 26
<212> PRT
<213> Great Ape Adenovirus

<400> 45

Val Thr Asp Thr Tyr Gln Gly Ile Lys Asn Thr Asn Gly Asn Gly Gln
1 5 10 15

Trp Thr Lys Asp Asp Gln Phe Ala Asp Arg
20 25

<210> 46

<211> 955

<212> PRT

<213> Great Ape Adenovirus

<400> 46

Met Ala Thr Pro Ser Met Met Pro Gln Trp Ser Tyr Met His Ile Ser
1 5 10 15

Gly Gln Asp Ala Ser Glu Tyr Leu Ser Pro Gly Leu Val Gln Phe Ala
20 25 30

Arg Ala Thr Asp Thr Tyr Phe Asn Met Ser Asn Lys Phe Arg Asn Pro
35 40 45

Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50 55 60

Thr Leu Arg Phe Ile Pro Val Asp Arg Glu Asp Thr Ala Tyr Ser Tyr
65 70 75 80

Lys Ala Arg Phe Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85 90 95

Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Thr
100 105 110

Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Pro Leu Ala Pro Lys Gly
115 120 125

Ala Pro Asn Ser Cys Glu Trp Glu Gln Glu Glu Asn Gln Val Val Ala
130 135 140

Ala Asp Asp Glu Leu Glu Asp Glu Glu Ala Gln Ala Gln Glu Glu Ala
145 150 155 160

Pro Val Lys Lys Ile His Val Tyr Ala Gln Ala Pro Leu Ser Gly Glu
165 170 175

Lys Ile Ser Lys Asp Gly Ile Gln Ile Gly Thr Glu Val Val Gly Asp
180 185 190

Thr Ser Lys Asp Thr Phe Ala Asp Lys Thr Phe Gln Pro Glu Pro Gln
195 200 205

Ile Gly Glu Ser Gln Trp Asn Glu Ala Asp Ala Thr Ala Ala Gly Gly
210 215 220

Arg Val Leu Lys Lys Thr Thr Pro Met Arg Pro Cys Tyr Gly Ser Tyr
225 230 235 240

Ala Arg Pro Thr Asn Ala Asn Gly Gly Gln Gly Ile Met Val Ala Asn
245 250 255

Glu Gln Gly Val Leu Glu Ser Lys Val Glu Met Gln Phe Phe Ser Asn
260 265 270

Thr Thr Thr Leu Asn Ala Arg Asp Gly Thr Gly Asn Pro Glu Pro Lys
275 280 285

Val Val Leu Tyr Ser Glu Asp Val His Leu Glu Ser Pro Asp Thr His
290 295 300

Leu Ser Tyr Lys Pro Lys Lys Asp Asp Val Asn Ala Lys Ile Met Leu
305 310 315 320

Gly Gln Gln Ala Met Pro Asn Arg Pro Asn Leu Ile Gly Phe Arg Asp
325 330 335

Asn Phe Ile Gly Leu Met Phe Tyr Asn Ser Thr Gly Asn Met Gly Val
340 345 350

Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala Val Val Asp Leu Gln Asp
355 360 365

Arg Asn Thr Glu Leu Ser Tyr Gln Leu Leu Leu Asp Ser Ile Gly Asp
370 375 380

Arg Thr Arg Tyr Phe Ser Met Trp Asn Gln Ala Val Asp Ser Tyr Asp
385 390 395 400

Pro Asp Val Arg Ile Ile Glu Asn His Gly Thr Glu Asp Glu Leu Pro
405 410 415

Asn Tyr Cys Phe Pro Leu Gly Gly Ile Gly Val Thr Asp Thr Tyr Gln
420 425 430

Gly Ile Lys Asn Thr Asn Gly Asn Gly Gln Trp Thr Lys Asp Asp Gln
435 440 445

Phe Ala Asp Arg Asn Glu Ile Gly Val Gly Asn Asn Phe Ala Met Glu
450 455 460

Ile Asn Ile Gln Ala Asn Leu Trp Arg Asn Phe Leu Tyr Ala Asn Val
465 470 475 480

Gly Leu Tyr Leu Pro Asp Lys Leu Lys Tyr Asn Pro Thr Asn Val Asp
485 490 495

Ile Ser Asp Asn Pro Asn Thr Tyr Asp Tyr Met Asn Lys Arg Val Val
500 505 510

Ala Pro Gly Leu Val Asp Cys Phe Val Asn Val Gly Ala Arg Trp Ser
515 520 525

Leu Asp Tyr Met Asp Asn Val Asn Pro Phe Asn His His Arg Asn Ala
530 535 540

Gly Leu Arg Tyr Arg Ser Met Ile Leu Gly Asn Gly Arg Tyr Val Pro
545 550 555 560

Phe His Ile Gln Val Pro Gln Lys Phe Phe Ala Ile Lys Asn Leu Leu
565 570 575

Leu Leu Pro Gly Ser Tyr Thr Tyr Glu Trp Asn Phe Arg Lys Asp Val
580 585 590

Asn Met Val Leu Gln Ser Ser Leu Gly Asn Asp Leu Arg Val Asp Gly
595 600 605

Ala Ser Ile Lys Phe Asp Ser Ile Thr Leu Tyr Ala Thr Phe Phe Pro
610 615 620

Met Ala His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn Asp
625 630 635 640

Thr Asn Asp Gln Ser Phe Asn Asp Tyr Leu Ser Gly Ala Asn Met Leu
645 650 655

Tyr Pro Ile Pro Ala Lys Ala Thr Asn Val Pro Ile Ser Ile Pro Ser
660 665 670

Arg Asn Trp Ala Ala Phe Arg Gly Trp Ala Phe Thr Arg Leu Lys Thr
675 680 685

Lys Glu Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr
690 695 700

Ser Gly Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr
705 710 715 720

Phe Lys Lys Ile Ser Ile Met Tyr Asp Ser Ser Val Ser Trp Pro Gly
725 730 735

Asn Asp Arg Leu Leu Thr Pro Asn Glu Phe Glu Val Lys Arg Ala Val
740 745 750

Asp Gly Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp
755 760 765

Phe Leu Val Gln Met Leu Ala Asn Tyr Asn Ile Gly Tyr Gln Gly Phe
770 775 780

Tyr Ile Pro Glu Ser Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn
785 790 795 800

Phe Gln Pro Met Ser Arg Gln Val Val Asp Glu Thr Asn Tyr Lys Asp
805 810 815

Tyr Gln Ala Ile Gly Ile Thr His Gln His Asn Asn Ser Gly Phe Val
820 825 830

Gly Tyr Leu Ala Pro Thr Met Arg Glu Gly Gln Ala Tyr Pro Ala Asn
835 840 845

Phe Pro Tyr Pro Leu Ile Gly Lys Thr Ala Val Asp Ser Val Thr Gln
850 855 860

Lys Lys Phe Leu Cys Asp Arg Thr Leu Trp Arg Ile Pro Phe Ser Ser
865 870 875 880

Asn Phe Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Leu Leu
885 890 895

Tyr Ala Asn Ser Ala His Ala Leu Asp Met Thr Phe Glu Val Asp Pro
900 905 910

Met Asp Glu Pro Thr Leu Leu Tyr Ile Val Phe Glu Val Phe Asp Val
915 920 925

Val Arg Val His Gln Pro His Arg Gly Val Ile Glu Thr Val Tyr Leu
930 935 940

Arg Thr Pro Phe Ser Ala Gly Asn Ala Thr Thr
945 950 955

<210> 47
<211> 955
<212> PRT
<213> Great Ape Adenovirus

<400> 47

Met Ala Thr Pro Ser Met Met Pro Gln Trp Ser Tyr Met His Ile Ser
1 5 10 15

Gly Gln Asp Ala Ser Glu Tyr Leu Ser Pro Gly Leu Val Gln Phe Ala
20 25 30

Arg Ala Thr Asp Thr Tyr Phe Asn Met Ser Asn Lys Phe Arg Asn Pro
35 40 45

Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50 55 60

Thr Leu Arg Phe Ile Pro Val Asp Arg Glu Asp Thr Ala Tyr Ser Tyr
65 70 75 80

Lys Ala Arg Phe Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85 90 95

Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Thr
100 105 110

Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Pro Leu Ala Pro Lys Gly
115 120 125

Ala Pro Asn Ser Cys Glu Trp Glu Gln Glu Glu Asn Gln Val Glu Ala
130 135 140

Ala Asp Glu Asp Val Glu Asp Glu Glu Ala Gln Ala Gln Glu Glu Ala
145 150 155 160

Pro Val Lys Lys Ile His Val Tyr Ala Gln Ala Pro Leu Ala Gly Glu
165 170 175

Lys Ile Thr Lys Asp Gly Leu Gln Ile Gly Thr Glu Val Val Gly Glu
180 185 190

Thr Ser Lys Asp Thr Phe Ala Asp Lys Thr Phe Gln Pro Glu Pro Gln
195 200 205

Ile Gly Glu Ser Gln Trp Asn Glu Ala Asp Ala Ala Val Ala Gly Gly
210 215 220

Arg Val Leu Lys Lys Thr Thr Pro Met Arg Pro Cys Tyr Gly Ser Tyr
225 230 235 240

Ala Arg Pro Thr Asn Ala Asn Gly Gly Gln Gly Ile Leu Val Ala Asn
245 250 255

Glu Gln Gly Val Met Glu Ser Lys Val Glu Met Gln Phe Phe Ser Asn

260

265

270

Thr Ser Thr Leu Asn Ala Arg Asp Gly Thr Gly Asn Pro Glu Pro Lys
 275 280 285

Val Val Leu Tyr Ser Glu Asp Val His Leu Glu Ser Pro Asp Thr His
 290 295 300

Leu Ser Tyr Lys Pro Lys Lys Asp Asp Val Asn Ala Lys Val Met Leu
 305 310 315 320

Gly Gln Gln Ala Met Pro Asn Arg Pro Asn Leu Ile Gly Phe Arg Asp
 325 330 335

Asn Phe Ile Gly Leu Met Phe Tyr Asn Ser Thr Gly Asn Met Gly Val
 340 345 350

Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala Val Val Asp Leu Gln Asp
 355 360 365

Arg Asn Thr Glu Leu Ser Tyr Gln Leu Met Leu Asp Ser Ile Gly Asp
 370 375 380

Arg Thr Arg Tyr Phe Ser Met Trp Asn Gln Ala Val Asp Ser Tyr Asp
 385 390 395 400

Pro Asp Val Arg Ile Ile Glu Asn His Gly Val Glu Asp Glu Leu Pro
 405 410 415

Asn Tyr Cys Phe Pro Leu Gly Gly Ile Gly Ile Thr Asp Thr Tyr Gln
 420 425 430

Gly Val Lys Asn Thr Asn Gly Asn Gly Gln Trp Thr Lys Asp Asp Gln
 435 440 445

Phe Ala Asp Arg Asn Glu Ile Gly Val Gly Asn Asn Phe Ala Met Glu
 450 455 460

Ile Asn Ile Gln Ala Asn Leu Trp Arg Asn Phe Leu Tyr Ala Asn Val
 465 470 475 480

Gly Leu Tyr Leu Pro Asp Lys Leu Lys Tyr Asn Pro Thr Asn Val Asp
485 490 495

Ile Ser Asp Asn Pro Asn Thr Tyr Asp Tyr Met Asn Lys Arg Val Val
500 505 510

Ala Pro Gly Leu Val Asp Cys Phe Val Asn Val Gly Ala Arg Trp Ser
515 520 525

Leu Asp Tyr Met Asp Asn Val Asn Pro Phe Asn His His Arg Asn Ala
530 535 540

Gly Leu Arg Tyr Arg Ser Met Ile Leu Gly Asn Gly Arg Tyr Val Pro
545 550 555 560

Phe His Ile Gln Val Pro Gln Lys Phe Phe Ala Ile Lys Asn Leu Leu
565 570 575

Leu Leu Pro Gly Ser Tyr Thr Tyr Glu Trp Asn Phe Arg Lys Asp Val
580 585 590

Asn Met Val Leu Gln Ser Ser Leu Gly Asn Asp Leu Arg Val Asp Gly
595 600 605

Ala Ser Ile Lys Phe Asp Ser Ile Thr Leu Tyr Ala Thr Phe Phe Pro
610 615 620

Met Ala His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn Asp
625 630 635 640

Thr Asn Asp Gln Ser Phe Asn Asp Tyr Leu Ser Gly Ala Asn Met Leu
645 650 655

Tyr Pro Ile Pro Ala Lys Ala Thr Asn Val Pro Ile Ser Ile Pro Ser
660 665 670

Arg Asn Trp Ala Ala Phe Arg Gly Trp Ala Phe Thr Arg Leu Lys Thr
675 680 685

Lys Glu Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr

690

695

700

Ser Gly Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr
 705 710 715 720

Phe Lys Lys Ile Ser Ile Met Tyr Asp Ser Ser Val Ser Trp Pro Gly
 725 730 735

Asn Asp Arg Leu Leu Thr Pro Asn Glu Phe Glu Val Lys Arg Ala Val
 740 745 750

Asp Gly Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp
 755 760 765

Phe Leu Val Gln Met Leu Ala Asn Tyr Asn Ile Gly Tyr Gln Gly Phe
 770 775 780

Tyr Ile Pro Glu Ser Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn
 785 790 795 800

Phe Gln Pro Met Ser Arg Gln Val Val Asp Glu Thr Asn Tyr Lys Asp
 805 810 815

Tyr Gln Ala Ile Gly Ile Thr His Gln His Asn Asn Ser Gly Phe Val
 820 825 830

Gly Tyr Leu Ala Pro Thr Met Arg Glu Gly Gln Ala Tyr Pro Ala Asn
 835 840 845

Phe Pro Tyr Pro Leu Ile Gly Lys Thr Ala Val Asp Ser Val Thr Gln
 850 855 860

Lys Lys Phe Leu Cys Asp Arg Thr Leu Trp Arg Ile Pro Phe Ser Ser
 865 870 875 880

Asn Phe Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Leu Leu
 885 890 895

Tyr Ala Asn Ser Ala His Ala Leu Asp Met Thr Phe Glu Val Asp Pro
 900 905 910

Met Asp Glu Pro Thr Leu Leu Tyr Ile Val Phe Glu Val Phe Asp Val
915 920 925

Val Arg Val His Gln Pro His Arg Gly Val Ile Glu Thr Val Tyr Leu
930 935 940

Arg Thr Pro Phe Ser Ala Gly Asn Ala Thr Thr
945 950 955

<210> 48
<211> 956
<212> PRT
<213> Great Ape Adenovirus

<400> 48

Met Ala Thr Pro Ser Met Met Pro Gln Trp Ser Tyr Met His Ile Ser
1 5 10 15

Gly Gln Asp Ala Ser Glu Tyr Leu Ser Pro Gly Leu Val Gln Phe Ala
20 25 30

Arg Ala Thr Asp Thr Tyr Phe Asn Met Ser Asn Lys Phe Arg Asn Pro
35 40 45

Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50 55 60

Thr Leu Arg Phe Ile Pro Val Asp Arg Glu Asp Thr Ala Tyr Ser Tyr
65 70 75 80

Lys Ala Arg Phe Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85 90 95

Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Thr
100 105 110

Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Pro Leu Ala Pro Lys Gly
115 120 125

Ala Pro Asn Ser Cys Glu Trp Glu Gln Glu Glu Asn Gln Val Val Ala
130 135 140

Ala Asp Glu Asp Leu Glu Glu Asp Glu Glu Ala Gln Ala Glu Glu Gln
145 150 155 160

Ala Pro Val Lys Lys Ile His Val Tyr Ala Gln Ala Pro Leu Ala Gly
165 170 175

Glu Lys Ile Thr Lys Asp Gly Leu Gln Ile Gly Thr Glu Val Val Gly
180 185 190

Asp Thr Ser Lys Asp Thr Phe Ala Asp Lys Thr Phe Gln Pro Glu Pro
195 200 205

Gln Ile Gly Glu Ser Gln Trp Asn Glu Ala Asp Ala Thr Ala Ala Gly
210 215 220

Gly Arg Val Leu Lys Lys Thr Thr Pro Met Arg Pro Cys Tyr Gly Ser
225 230 235 240

Tyr Ala Arg Pro Thr Asn Ala Asn Gly Gly Gln Gly Ile Met Val Ala
245 250 255

Asn Glu Gln Gly Val Leu Gln Ser Lys Val Glu Met Gln Phe Phe Ser
260 265 270

Asn Thr Ser Thr Leu Asn Ala Arg Asp Gly Thr Gly Asn Pro Glu Pro
275 280 285

Lys Val Val Leu Tyr Ser Glu Asp Val His Leu Glu Ser Pro Asp Thr
290 295 300

His Leu Ser Tyr Lys Pro Lys Lys Asp Asp Val Asn Ala Lys Val Met
305 310 315 320

Leu Gly Gln Gln Ala Met Pro Asn Arg Pro Asn Leu Ile Gly Phe Arg
325 330 335

Asp Asn Phe Ile Gly Leu Met Phe Tyr Asn Ser Thr Gly Asn Met Gly
340 345 350

Val Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala Val Val Asp Leu Gln
355 360 365

Asp Arg Asn Thr Glu Leu Ser Tyr Gln Leu Met Leu Asp Ser Ile Gly
370 375 380

Asp Arg Thr Arg Tyr Phe Ser Met Trp Asn Gln Ala Val Asp Ser Tyr
385 390 395 400

Asp Pro Asp Val Arg Ile Ile Glu Asn His Gly Val Glu Asp Glu Leu
405 410 415

Pro Asn Tyr Cys Phe Pro Leu Gly Gly Ile Gly Ile Thr Asp Thr Tyr
420 425 430

Gln Gly Val Lys Asn Ser Asn Gly Asn Gly Gln Trp Thr Lys Asp Asp
435 440 445

Gln Phe Ala Asp Arg Asn Glu Ile Gly Val Gly Asn Asn Phe Ala Met
450 455 460

Glu Ile Asn Ile Gln Ala Asn Leu Trp Arg Asn Phe Leu Tyr Ala Asn
465 470 475 480

Val Gly Leu Tyr Leu Pro Asp Lys Leu Lys Tyr Asn Pro Thr Asn Val
485 490 495

Asp Ile Ser Asp Asn Pro Asn Thr Tyr Asp Tyr Met Asn Lys Arg Val
500 505 510

Val Ala Pro Gly Leu Val Asp Cys Phe Val Asn Val Gly Ala Arg Trp
515 520 525

Ser Leu Asp Tyr Met Asp Asn Val Asn Pro Phe Asn His His Arg Asn
530 535 540

Ala Gly Leu Arg Tyr Arg Ser Met Ile Leu Gly Asn Gly Arg Tyr Val
545 550 555 560

Pro Phe His Ile Gln Val Pro Gln Lys Phe Phe Ala Ile Lys Asn Leu
565 570 575

Leu Leu Leu Pro Gly Ser Tyr Thr Tyr Glu Trp Asn Phe Arg Lys Asp
580 585 590

Val Asn Met Val Leu Gln Ser Ser Leu Gly Asn Asp Leu Arg Val Asp
595 600 605

Gly Ala Ser Ile Lys Phe Asp Ser Ile Thr Leu Tyr Ala Thr Phe Phe
610 615 620

Pro Met Ala His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn
625 630 635 640

Asp Thr Asn Asp Gln Ser Phe Asn Asp Tyr Leu Ser Gly Ala Asn Met
645 650 655

Leu Tyr Pro Ile Pro Ala Lys Ala Thr Asn Val Pro Ile Ser Ile Pro
660 665 670

Ser Arg Asn Trp Ala Ala Phe Arg Gly Trp Ala Phe Thr Arg Leu Lys
675 680 685

Thr Lys Glu Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val
690 695 700

Tyr Ser Gly Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His
705 710 715 720

Thr Phe Lys Lys Ile Ser Ile Met Tyr Asp Ser Ser Val Ser Trp Pro
725 730 735

Gly Asn Asp Arg Leu Leu Thr Pro Asn Glu Phe Glu Val Lys Arg Ala
740 745 750

Val Asp Gly Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp
755 760 765

Trp Phe Leu Val Gln Met Leu Ala Asn Tyr Asn Ile Gly Tyr Gln Gly
770 775 780

Phe Tyr Ile Pro Glu Ser Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg
785 790 795 800

Asn Phe Gln Pro Met Ser Arg Gln Val Val Asp Glu Thr Asn Tyr Lys
805 810 815

Asp Tyr Gln Ala Ile Gly Ile Thr His Gln His Asn Asn Ser Gly Phe
820 825 830

Val Gly Tyr Leu Ala Pro Thr Met Arg Glu Gly Gln Ala Tyr Pro Ala
835 840 845

Asn Phe Pro Tyr Pro Leu Ile Gly Lys Thr Ala Val Asp Ser Val Thr
850 855 860

Gln Lys Lys Phe Leu Cys Asp Arg Thr Leu Trp Arg Ile Pro Phe Ser
865 870 875 880

Ser Asn Phe Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Leu
885 890 895

Leu Tyr Ala Asn Ser Ala His Ala Leu Asp Met Thr Phe Glu Val Asp
900 905 910

Pro Met Asp Glu Pro Thr Leu Leu Tyr Ile Val Phe Glu Val Phe Asp
915 920 925

Val Val Arg Val His Gln Pro His Arg Gly Val Ile Glu Thr Val Tyr
930 935 940

Leu Arg Thr Pro Phe Ser Ala Gly Asn Ala Thr Thr
945 950 955

<210> 49
<211> 957
<212> PRT
<213> Great Ape Adenovirus

<400> 49

Met Ala Thr Pro Ser Met Met Pro Gln Trp Ser Tyr Met His Ile Ser
1 5 10 15

Gly Gln Asp Ala Ser Glu Tyr Leu Ser Pro Gly Leu Val Gln Phe Ala
20 25 30

Arg Ala Thr Asp Thr Tyr Phe Asn Met Ser Asn Lys Phe Arg Asn Pro
35 40 45

Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50 55 60

Thr Leu Arg Phe Ile Pro Val Asp Arg Glu Asp Thr Ala Tyr Ser Tyr
65 70 75 80

Lys Ala Arg Phe Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85 90 95

Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Thr
100 105 110

Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Pro Leu Ala Pro Lys Gly
115 120 125

Ala Pro Asn Ser Cys Glu Trp Glu Gln Glu Glu Thr Gln Ala Ala Glu
130 135 140

Glu Ala Val Asp Glu Glu Asp Ala Glu Asp Glu Ala Gln Pro Gln Glu
145 150 155 160

Glu Ala Pro Val Lys Lys Ile His Val Tyr Ala Gln Ala Pro Leu Ala
165 170 175

Gly Glu Lys Ile Thr Lys Asp Gly Leu Gln Ile Gly Thr Glu Val Val
180 185 190

Gly Asp Thr Ser Lys Asp Thr Phe Ala Asp Lys Thr Phe Gln Pro Glu
195 200 205

Pro Gln Ile Gly Glu Ser Gln Trp Asn Glu Ala Asp Ala Ala Val Ala
210 215 220

Gly Gly Arg Val Leu Lys Lys Thr Thr Pro Met Arg Pro Cys Tyr Gly

225		230		235		240									
Ser	Tyr	Ala	Arg	Pro	Thr	Asn	Ala	Asn	Gly	Gly	Gln	Gly	Ile	Met	Val
				245					250					255	
Ala	Asn	Glu	Lys	Gly	Val	Leu	Gln	Ser	Lys	Val	Glu	Met	Gln	Phe	Phe
			260					265					270		
Ser	Asn	Thr	Ser	Thr	Leu	Asn	Ala	Arg	Asp	Gly	Thr	Gly	Asn	Pro	Glu
		275					280					285			
Pro	Lys	Val	Val	Leu	Tyr	Ser	Glu	Asp	Val	His	Leu	Glu	Ser	Pro	Asp
	290					295					300				
Thr	His	Leu	Ser	Tyr	Lys	Pro	Thr	Lys	Asp	Asp	Val	Asn	Ala	Lys	Val
305					310					315					320
Met	Leu	Gly	Gln	Gln	Ala	Met	Pro	Asn	Arg	Pro	Asn	Leu	Ile	Gly	Phe
				325					330					335	
Arg	Asp	Asn	Phe	Ile	Gly	Leu	Met	Phe	Tyr	Asn	Ser	Thr	Gly	Asn	Met
			340					345					350		
Gly	Val	Leu	Ala	Gly	Gln	Ala	Ser	Gln	Leu	Asn	Ala	Val	Val	Asp	Leu
		355					360					365			
Gln	Asp	Arg	Asn	Thr	Glu	Leu	Ser	Tyr	Gln	Leu	Met	Leu	Asp	Ser	Ile
	370					375					380				
Gly	Asp	Arg	Thr	Arg	Tyr	Phe	Ser	Met	Trp	Asn	Gln	Ala	Val	Asp	Ser
385					390					395				400	
Tyr	Asp	Pro	Asp	Val	Arg	Ile	Ile	Glu	Asn	His	Gly	Val	Glu	Asp	Glu
				405					410					415	
Leu	Pro	Asn	Tyr	Cys	Phe	Pro	Leu	Gly	Gly	Ile	Gly	Ile	Thr	Asp	Thr
			420					425					430		
Tyr	Gln	Gly	Val	Lys	Asn	Thr	Asn	Gly	Asn	Gly	Gln	Trp	Thr	Lys	Asp
		435					440					445			

Asp Gln Phe Ala Asp Arg Asn Glu Ile Gly Val Gly Asn Asn Phe Ala
450 455 460

Met Glu Ile Asn Ile Gln Ala Asn Leu Trp Arg Asn Phe Leu Tyr Ala
465 470 475 480

Asn Val Gly Leu Tyr Leu Pro Asp Lys Leu Lys Tyr Asn Pro Thr Asn
485 490 495

Val Asp Ile Ser Asp Asn Pro Asn Thr Tyr Asp Tyr Met Asn Lys Arg
500 505 510

Val Val Ala Pro Gly Leu Val Asp Cys Phe Val Asn Val Gly Ala Arg
515 520 525

Trp Ser Leu Asp Tyr Met Asp Asn Val Asn Pro Phe Asn His His Arg
530 535 540

Asn Ala Gly Leu Arg Tyr Arg Ser Met Ile Leu Gly Asn Gly Arg Tyr
545 550 555 560

Val Pro Phe His Ile Gln Val Pro Gln Lys Phe Phe Ala Ile Lys Asn
565 570 575

Leu Leu Leu Leu Pro Gly Ser Tyr Thr Tyr Glu Trp Asn Phe Arg Lys
580 585 590

Asp Val Asn Met Val Leu Gln Ser Ser Leu Gly Asn Asp Leu Arg Val
595 600 605

Asp Gly Ala Ser Ile Lys Phe Asp Ser Ile Thr Leu Tyr Ala Thr Phe
610 615 620

Phe Pro Met Ala His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg
625 630 635 640

Asn Asp Thr Asn Asp Gln Ser Phe Asn Asp Tyr Leu Ser Gly Ala Asn
645 650 655

Met Leu Tyr Pro Ile Pro Ala Lys Ala Thr Asn Val Pro Ile Ser Ile

660

665

670

Pro Ser Arg Asn Trp Ala Ala Phe Arg Gly Trp Ala Phe Thr Arg Leu
 675 680 685

Lys Thr Lys Glu Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe
 690 695 700

Val Tyr Ser Gly Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn
 705 710 715 720

His Thr Phe Lys Lys Ile Ser Ile Met Tyr Asp Ser Ser Val Ser Trp
 725 730 735

Pro Gly Asn Asp Arg Leu Leu Thr Pro Asn Glu Phe Glu Val Lys Arg
 740 745 750

Ala Val Asp Gly Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys
 755 760 765

Asp Trp Phe Leu Val Gln Met Leu Ala Asn Tyr Asn Ile Gly Tyr Gln
 770 775 780

Gly Phe Tyr Ile Pro Glu Ser Tyr Lys Asp Arg Met Tyr Ser Phe Phe
 785 790 795 800

Arg Asn Phe Gln Pro Met Ser Arg Gln Val Val Asp Glu Thr Asn Tyr
 805 810 815

Lys Asp Tyr Gln Ala Ile Gly Ile Thr His Gln His Asn Asn Ser Gly
 820 825 830

Phe Val Gly Tyr Leu Ala Pro Thr Met Arg Glu Gly Gln Ala Tyr Pro
 835 840 845

Ala Asn Phe Pro Tyr Pro Leu Ile Gly Lys Thr Ala Val Asp Ser Val
 850 855 860

Thr Gln Lys Lys Phe Leu Cys Asp Arg Thr Leu Trp Arg Ile Pro Phe
 865 870 875 880

Ser Ser Asn Phe Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn
885 890 895

Leu Leu Tyr Ala Asn Ser Ala His Ala Leu Asp Met Thr Phe Glu Val
900 905 910

Asp Pro Met Asp Glu Pro Thr Leu Leu Tyr Ile Val Phe Glu Val Phe
915 920 925

Asp Val Val Arg Val His Gln Pro His Arg Gly Val Ile Glu Thr Val
930 935 940

Tyr Leu Arg Thr Pro Phe Ser Ala Gly Asn Ala Thr Thr
945 950 955

<210> 50
<211> 955
<212> PRT
<213> Great Ape Adenovirus

<400> 50

Met Ala Thr Pro Ser Met Met Pro Gln Trp Ser Tyr Met His Ile Ser
1 5 10 15

Gly Gln Asp Ala Ser Glu Tyr Leu Ser Pro Gly Leu Val Gln Phe Ala
20 25 30

Arg Ala Thr Asp Thr Tyr Phe Asn Met Ser Asn Lys Phe Arg Asn Pro
35 40 45

Thr Val Ala Pro Thr His Asp Val Thr Thr Asp Arg Ser Gln Arg Leu
50 55 60

Thr Leu Arg Phe Ile Pro Val Asp Arg Glu Asp Thr Ala Tyr Ser Tyr
65 70 75 80

Lys Ala Arg Phe Thr Leu Ala Val Gly Asp Asn Arg Val Leu Asp Met
85 90 95

Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Thr
100 105 110

Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Pro Leu Ala Pro Lys Gly
115 120 125

Ala Pro Asn Ser Cys Glu Trp Glu Gln Glu Glu Asn Gln Val Val Ala
130 135 140

Ala Asp Asp Glu Leu Glu Asp Glu Glu Ala Gln Ala Gln Glu Glu Ala
145 150 155 160

Pro Val Lys Lys Ile His Val Tyr Ala Gln Ala Pro Leu Ser Gly Glu
165 170 175

Lys Ile Thr Lys Asp Gly Leu Gln Ile Gly Thr Glu Val Val Gly Asp
180 185 190

Thr Ser Lys Asp Thr Phe Ala Asp Lys Thr Phe Gln Pro Glu Pro Gln
195 200 205

Ile Gly Glu Ser Gln Trp Asn Glu Ala Asp Ala Thr Val Ala Gly Gly
210 215 220

Arg Val Leu Lys Lys Thr Thr Pro Met Arg Pro Cys Tyr Gly Ser Tyr
225 230 235 240

Ala Arg Pro Thr Asn Ala Asn Gly Gly Gln Gly Ile Met Val Ala Asn
245 250 255

Glu Gln Gly Val Leu Glu Ser Lys Val Glu Met Gln Phe Phe Ser Asn
260 265 270

Thr Thr Thr Leu Asn Ala Arg Asp Gly Thr Gly Asn Pro Glu Pro Lys
275 280 285

Val Val Leu Tyr Ser Glu Asp Val His Leu Glu Ser Pro Asp Thr His
290 295 300

Leu Ser Tyr Lys Pro Lys Lys Asp Asp Val Asn Ala Lys Ile Met Leu
305 310 315 320

Gly Gln Gln Ala Met Pro Asn Arg Pro Asn Leu Ile Gly Phe Arg Asp
325 330 335

Asn Phe Ile Gly Leu Met Phe Tyr Asn Ser Thr Gly Asn Met Gly Val
340 345 350

Leu Ala Gly Gln Ala Ser Gln Leu Asn Ala Val Val Asp Leu Gln Asp
355 360 365

Arg Asn Thr Glu Leu Ser Tyr Gln Leu Met Leu Asp Ser Ile Gly Asp
370 375 380

Arg Thr Arg Tyr Phe Ser Met Trp Asn Gln Ala Val Asp Ser Tyr Asp
385 390 395 400

Pro Asp Val Arg Ile Ile Glu Asn His Gly Thr Glu Asp Glu Leu Pro
405 410 415

Asn Tyr Cys Phe Pro Leu Gly Gly Ile Gly Val Thr Asp Thr Tyr Gln
420 425 430

Gly Ile Lys Asn Thr Asn Gly Asn Gly Gln Trp Thr Lys Asp Asp Gln
435 440 445

Phe Ala Asp Arg Asn Glu Ile Gly Val Gly Asn Asn Phe Ala Met Glu
450 455 460

Ile Asn Ile Gln Ala Asn Leu Trp Arg Asn Phe Leu Tyr Ala Asn Val
465 470 475 480

Gly Leu Tyr Leu Pro Asp Lys Leu Lys Tyr Asn Pro Thr Asn Val Asp
485 490 495

Ile Ser Asp Asn Pro Asn Thr Tyr Asp Tyr Met Asn Lys Arg Val Val
500 505 510

Ala Pro Gly Leu Val Asp Cys Phe Val Asn Val Gly Ala Arg Trp Ser
515 520 525

Leu Asp Tyr Met Asp Asn Val Asn Pro Phe Asn His His Arg Asn Ala
530 535 540

Gly Leu Arg Tyr Arg Ser Met Ile Leu Gly Asn Gly Arg Tyr Val Pro
545 550 555 560

Phe His Ile Gln Val Pro Gln Lys Phe Phe Ala Ile Lys Asn Leu Leu
565 570 575

Leu Leu Pro Gly Ser Tyr Thr Tyr Glu Trp Asn Phe Arg Lys Asp Val
580 585 590

Asn Met Val Leu Gln Ser Ser Leu Gly Asn Asp Leu Arg Val Asp Gly
595 600 605

Ala Ser Ile Lys Phe Asp Ser Ile Thr Leu Tyr Ala Thr Phe Phe Pro
610 615 620

Met Ala His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn Asp
625 630 635 640

Thr Asn Asp Gln Ser Phe Asn Asp Tyr Leu Ser Gly Ala Asn Met Leu
645 650 655

Tyr Pro Ile Pro Ala Lys Ala Thr Asn Val Pro Ile Ser Ile Pro Ser
660 665 670

Arg Asn Trp Ala Ala Phe Arg Gly Trp Ala Phe Thr Arg Leu Lys Thr
675 680 685

Lys Glu Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr
690 695 700

Ser Gly Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr
705 710 715 720

Phe Lys Lys Ile Ser Ile Met Tyr Asp Ser Ser Val Ser Trp Pro Gly
725 730 735

Asn Asp Arg Leu Leu Thr Pro Asn Glu Phe Glu Val Lys Arg Ala Val
740 745 750

Asp Gly Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp
755 760 765

Phe Leu Val Gln Met Leu Ala Asn Tyr Asn Ile Gly Tyr Gln Gly Phe
770 775 780

Tyr Ile Pro Glu Ser Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn
785 790 795 800

Phe Gln Pro Met Ser Arg Gln Val Val Asp Glu Thr Asn Tyr Lys Asp
805 810 815

Tyr Gln Ala Ile Gly Ile Thr His Gln His Asn Asn Ser Gly Phe Val
820 825 830

Gly Tyr Leu Ala Pro Thr Met Arg Glu Gly Gln Ala Tyr Pro Ala Asn
835 840 845

Phe Pro Tyr Pro Leu Ile Gly Lys Thr Ala Val Asp Ser Val Thr Gln
850 855 860

Lys Lys Phe Leu Cys Asp Arg Thr Leu Trp Arg Ile Pro Phe Ser Ser
865 870 875 880

Asn Phe Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Leu Leu
885 890 895

Tyr Ala Asn Ser Ala His Ala Leu Asp Met Thr Phe Glu Val Asp Pro
900 905 910

Met Asp Glu Pro Thr Leu Leu Tyr Ile Val Phe Glu Val Phe Asp Val
915 920 925

Val Arg Val His Gln Pro His Arg Gly Val Ile Glu Thr Val Tyr Leu
930 935 940

Arg Thr Pro Phe Ser Ala Gly Asn Ala Thr Thr
945 950 955

<210> 51
<211> 651

<212> PRT

<213> Great Ape Adenovirus

<400> 51

Met Arg Arg Ala Ala Met Phe Glu Glu Gly Pro Pro Pro Ser Tyr Glu
1 5 10 15

Ser Ala Met Gly Ile Ser Pro Ala Ala Pro Leu Gln Pro Pro Tyr Val
20 25 30

Pro Pro Arg Tyr Leu Gln Pro Thr Gly Gly Arg Asn Ser Ile Cys Tyr
35 40 45

Ser Glu Leu Gln Pro Leu Tyr Asp Thr Thr Arg Leu Tyr Leu Val Asp
50 55 60

Asn Lys Ser Ala Asp Val Ala Ser Leu Asn Tyr Gln Asn Asp His Ser
65 70 75 80

Asp Phe Leu Thr Thr Val Ile Gln Asn Asn Asp Phe Thr Pro Thr Glu
85 90 95

Ala Ser Thr Gln Thr Ile Asn Leu Asp Asn Arg Ser Asn Trp Gly Gly
100 105 110

Asp Leu Lys Thr Ile Leu His Thr Asn Met Pro Asn Val Asn Glu Phe
115 120 125

Met Phe Thr Asn Ser Phe Lys Ala Arg Val Met Val Ala Arg Glu Gln
130 135 140

Gly Glu Ala Lys Tyr Glu Trp Val Asp Phe Thr Leu Pro Glu Gly Asn
145 150 155 160

Tyr Ser Glu Thr Met Thr Leu Asp Leu Met Asn Asn Ala Ile Val Glu
165 170 175

His Tyr Leu Lys Val Gly Arg Gln Asn Gly Val Lys Glu Ser Asp Ile
180 185 190

Gly Val Lys Phe Asp Thr Arg Asn Phe Arg Leu Gly Trp Asp Pro Val

195

200

205

Thr Gly Leu Val Met Pro Gly Val Tyr Thr Asn Glu Ala Phe His Pro
 210 215 220

Asp Ile Val Leu Leu Pro Gly Cys Gly Val Asp Phe Thr Gln Ser Arg
 225 230 235 240

Leu Ser Asn Leu Leu Gly Val Arg Lys Arg Gln Pro Phe Gln Glu Gly
 245 250 255

Phe Lys Ile Thr Tyr Glu Asp Leu Glu Gly Gly Asn Ile Pro Ala Leu
 260 265 270

Leu Asp Leu Asp Ala Tyr Glu Glu Ser Leu Lys Pro Glu Glu Ser Ala
 275 280 285

Gly Asp Ser Gly Glu Ser Gly Glu Glu Gln Ala Gly Gly Gly Gly Ser
 290 295 300

Ala Ser Val Glu Asn Glu Ser Thr Pro Ala Val Ala Ala Asp Ala Ala
 305 310 315 320

Glu Val Glu Pro Glu Ala Met Gln Gln Asp Ala Glu Glu Gly Ala Gln
 325 330 335

Glu Asp Met Asn Asn Gly Glu Ile Arg Gly Asp Thr Phe Ala Thr Arg
 340 345 350

Gly Glu Glu Lys Glu Ala Glu Ala Ala Ala Ala Thr Ala Glu Ala Glu
 355 360 365

Thr Glu Ala Glu Ala Glu Pro Glu Thr Glu Val Met Glu Asp Met Asn
 370 375 380

Asp Gly Glu Arg Arg Gly Asp Thr Phe Ala Thr Arg Gly Glu Glu Lys
 385 390 395 400

Ala Ala Glu Ala Glu Ala Ala Ala Glu Glu Ala Ala Ala Ala Ala Ala
 405 410 415

Lys Ala Glu Ala Ala Ala Glu Ala Lys Val Glu Ala Asp Val Ala Val
420 425 430

Glu Ala Gln Ala Glu Glu Glu Ala Ala Ala Glu Ala Val Lys Glu Lys
435 440 445

Ala Gln Ala Glu Gln Glu Glu Lys Lys Pro Val Ile Gln Pro Leu Lys
450 455 460

Glu Asp Ser Lys Lys Arg Ser Tyr Asn Val Ile Glu Gly Ser Thr Phe
465 470 475 480

Thr Gln Tyr Arg Ser Trp Tyr Leu Ala Tyr Asn Tyr Gly Asp Pro Val
485 490 495

Lys Gly Val Arg Ser Trp Thr Leu Leu Cys Thr Pro Asp Val Thr Cys
500 505 510

Gly Ser Glu Gln Met Tyr Trp Ser Leu Pro Asn Met Met Gln Asp Pro
515 520 525

Val Thr Phe Arg Ser Thr Arg Gln Val Ser Asn Phe Pro Val Val Gly
530 535 540

Ala Glu Leu Leu Pro Val His Ser Lys Ser Phe Tyr Asn Glu Gln Ala
545 550 555 560

Val Tyr Ser Gln Leu Ile Arg Gln Ala Thr Ser Leu Thr His Val Phe
565 570 575

Asn Arg Phe Pro Glu Asn Gln Ile Leu Ala Arg Pro Pro Ala Pro Thr
580 585 590

Ile Thr Thr Val Ser Glu Asn Val Pro Ala Leu Thr Asp His Gly Thr
595 600 605

Leu Pro Leu Arg Asn Ser Ile Ser Gly Val Gln Arg Val Thr Ile Thr
610 615 620

Asp Ala Arg Arg Arg Thr Cys Pro Tyr Val Tyr Lys Ala Leu Gly Ile

625 630 635 640

Val Ser Pro Arg Val Leu Ser Ser Arg Thr Phe
 645 650

<210> 52
<211> 651
<212> PRT
<213> Great Ape Adenovirus

<400> 52

Met Arg Arg Ala Ala Met Phe Glu Glu Gly Pro Pro Pro Ser Tyr Glu
1 5 10 15

Ser Ala Met Gly Ile Ser Pro Ala Ala Pro Leu Gln Pro Pro Tyr Val
 20 25 30

Pro Pro Arg Tyr Leu Gln Pro Thr Gly Gly Arg Asn Ser Ile Cys Tyr
 35 40 45

Ser Glu Leu Gln Pro Leu Tyr Asp Thr Thr Arg Leu Tyr Leu Val Asp
50 55 60

Asn Lys Ser Ala Asp Val Ala Ser Leu Asn Tyr Gln Asn Asp His Ser
65 70 75 80

Asp Phe Leu Thr Thr Val Ile Gln Asn Asn Asp Phe Thr Pro Thr Glu
 85 90 95

Ala Ser Thr Gln Thr Ile Asn Leu Asp Asn Arg Ser Asn Trp Gly Gly
 100 105 110

Asp Leu Lys Thr Ile Leu His Thr Asn Met Pro Asn Val Asn Glu Phe
115 120 125

Met Phe Thr Asn Ser Phe Lys Ala Arg Val Met Val Ala Arg Glu Gln
130 135 140

Gly Glu Ala Lys Tyr Glu Trp Val Asp Phe Thr Leu Pro Glu Gly Asn
145 150 155 160

Tyr Ser Glu Thr Met Thr Leu Asp Leu Met Asn Asn Ala Ile Val Glu
165 170 175

His Tyr Leu Lys Val Gly Arg Gln Asn Gly Val Lys Glu Ser Asp Ile
180 185 190

Gly Val Lys Phe Asp Thr Arg Asn Phe Arg Leu Gly Trp Asp Pro Val
195 200 205

Thr Gly Leu Val Met Pro Gly Val Tyr Thr Asn Glu Ala Phe His Pro
210 215 220

Asp Ile Val Leu Leu Pro Gly Cys Gly Val Asp Phe Thr Gln Ser Arg
225 230 235 240

Leu Ser Asn Leu Leu Gly Val Arg Lys Arg Gln Pro Phe Gln Glu Gly
245 250 255

Phe Lys Ile Thr Tyr Glu Asp Leu Glu Gly Gly Asn Ile Pro Ala Leu
260 265 270

Leu Asp Leu Asp Ala Tyr Glu Glu Ser Leu Lys Pro Glu Glu Ser Ala
275 280 285

Gly Asp Ser Gly Glu Ser Gly Glu Glu Gln Ala Gly Gly Gly Gly Ser
290 295 300

Ala Ser Val Glu Asn Glu Ser Thr Pro Ala Val Ala Ala Asp Ala Ala
305 310 315 320

Glu Val Glu Pro Glu Ala Met Gln Gln Asp Ala Glu Glu Gly Ala Gln
325 330 335

Glu Asp Met Asn Asn Gly Glu Ile Arg Gly Asp Thr Phe Ala Thr Arg
340 345 350

Gly Glu Glu Lys Glu Ala Glu Ala Ala Ala Thr Ala Glu Ala Glu
355 360 365

Thr Glu Ala Glu Ala Glu Pro Glu Thr Glu Val Met Glu Asp Met Asn
370 375 380

Asp Gly Glu Arg Arg Gly Asp Thr Phe Ala Thr Arg Gly Glu Glu Lys
385 390 395 400

Ala Ala Glu Ala Glu Ala Ala Ala Glu Glu Ala Ala Ala Ala Ala Ala
405 410 415

Lys Ala Glu Ala Ala Ala Glu Ala Lys Val Glu Ala Asp Val Ala Val
420 425 430

Glu Ala Gln Ala Glu Glu Glu Ala Ala Thr Glu Ala Val Lys Glu Lys
435 440 445

Ala Gln Ala Glu Gln Glu Glu Lys Lys Pro Val Ile Gln Pro Leu Lys
450 455 460

Glu Asp Ser Lys Lys Arg Ser Tyr Asn Val Ile Glu Gly Ser Thr Phe
465 470 475 480

Thr Gln Tyr Arg Ser Trp Tyr Leu Ala Tyr Asn Tyr Gly Asp Pro Val
485 490 495

Lys Gly Val Arg Ser Trp Thr Leu Leu Cys Thr Pro Asp Val Thr Cys
500 505 510

Gly Ser Glu Gln Met Tyr Trp Ser Leu Pro Asn Met Met Gln Asp Pro
515 520 525

Val Thr Phe Arg Ser Thr Arg Gln Val Ser Asn Phe Pro Val Val Gly
530 535 540

Ala Glu Leu Leu Pro Val His Ser Lys Ser Phe Tyr Asn Glu Gln Ala
545 550 555 560

Val Tyr Ser Gln Leu Ile Arg Gln Ala Thr Ser Leu Thr His Val Phe
565 570 575

Asn Arg Phe Pro Glu Asn Gln Ile Leu Ala Arg Pro Pro Ala Pro Thr
580 585 590

Ile Thr Thr Val Ser Glu Asn Val Pro Ala Leu Thr Asp His Gly Thr
595 600 605

Leu Pro Leu Arg Asn Ser Ile Ser Gly Val Gln Arg Val Thr Ile Thr
610 615 620

Asp Ala Arg Arg Arg Thr Cys Pro Tyr Val Tyr Lys Ala Leu Gly Ile
625 630 635 640

Val Ser Pro Arg Val Leu Ser Ser Arg Thr Phe
645 650

<210> 53
<211> 598
<212> PRT
<213> Great Ape Adenovirus

<400> 53

Met Ser Asp Ser Ser Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu
1 5 10 15

Leu Gln Met Lys Arg Ala Arg Ser Ser Asp Glu Thr Phe Asn Pro Val
20 25 30

Tyr Pro Tyr Asp Thr Glu Ile Ala Pro Thr Ser Val Pro Phe Leu Thr
35 40 45

Pro Pro Phe Val Ser Ser Ala Gly Met Gln Glu Asn Pro Ala Gly Val
50 55 60

Leu Ser Leu His Leu Ser Glu Pro Leu Thr Thr His Asn Gly Ala Leu
65 70 75 80

Thr Leu Lys Met Gly Gly Gly Leu Thr Leu Asp Lys Glu Gly Asn Leu
85 90 95

Thr Ser Gln Asn Ile Thr Ser Val Asp Pro Pro Leu Lys Lys Ser Lys
100 105 110

Asn Asn Ile Ser Leu Gln Thr Ala Ala Pro Leu Ala Val Ser Ser Gly
115 120 125

Ala Leu Thr Leu Phe Ala Thr Pro Pro Leu Ala Val Ser Gly Asp Asn
130 135 140

Leu Thr Val Gln Ser Gln Ala Pro Leu Thr Leu Glu Asp Ser Lys Leu
145 150 155 160

Thr Leu Ala Thr Lys Gly Pro Leu Thr Val Ser Glu Gly Lys Leu Val
165 170 175

Leu Glu Thr Glu Pro Pro Leu His Ala Ser Asp Ser Ser Ser Leu Gly
180 185 190

Leu Ser Val Thr Ala Pro Leu Ser Ile Asn Asn Asp Ser Leu Gly Leu
195 200 205

Asp Met Gln Ala Pro Ile Ser Ser Arg Asp Gly Lys Leu Ala Leu Thr
210 215 220

Val Ala Ala Pro Leu Thr Val Ala Glu Gly Ile Asn Ala Leu Ala Val
225 230 235 240

Ala Thr Gly Asn Gly Ile Gly Leu Asn Glu Thr Asn Thr His Leu Gln
245 250 255

Ala Lys Leu Val Ala Pro Leu Gly Phe Asp Thr Asn Gly Asn Ile Lys
260 265 270

Leu Ser Val Ala Gly Gly Met Arg Leu Asn Asn Asn Thr Leu Ile Leu
275 280 285

Asp Val Asn Tyr Pro Phe Glu Ala Gln Gly Gln Leu Ser Leu Arg Val
290 295 300

Gly Ser Gly Pro Leu Tyr Val Asp Ser Ser Ser His Asn Leu Thr Ile
305 310 315 320

Arg Cys Leu Arg Gly Leu Tyr Val Thr Ser Ser Asn Asn Gln Asn Gly
325 330 335

Leu Glu Ala Asn Ile Lys Leu Thr Lys Gly Leu Val Tyr Asp Gly Asn

340

345

350

Ala Ile Ala Val Asn Val Gly Lys Gly Leu Glu Tyr Ser Pro Thr Gly
 355 360 365

Thr Thr Glu Lys Pro Ile Gln Thr Lys Ile Gly Leu Gly Met Glu Tyr
 370 375 380

Asp Thr Glu Gly Ala Met Met Thr Lys Leu Gly Ser Gly Leu Ser Phe
 385 390 395 400

Asp Asn Ser Gly Ala Ile Val Val Gly Asn Lys Asn Asp Asp Arg Leu
 405 410 415

Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Gln Ile Tyr Ser
 420 425 430

Glu Lys Asp Ala Lys Leu Thr Leu Val Leu Thr Lys Cys Gly Ser Gln
 435 440 445

Val Val Gly Thr Val Ser Ile Ala Ala Leu Lys Gly Ser Leu Val Pro
 450 455 460

Ile Thr Ser Ala Ile Ser Val Val Gln Ile Tyr Leu Arg Phe Asp Glu
 465 470 475 480

Asn Gly Val Leu Met Ser Asn Ser Ser Leu Asn Gly Glu Tyr Trp Asn
 485 490 495

Phe Arg Asn Gly Asp Ser Thr Asn Gly Thr Pro Tyr Thr Asn Ala Val
 500 505 510

Gly Phe Met Pro Asn Leu Leu Ala Tyr Pro Lys Gly Gln Thr Thr Thr
 515 520 525

Ala Lys Ser Asn Ile Val Ser Gln Val Tyr Met Asn Gly Asp Asp Thr
 530 535 540

Lys Pro Met Thr Phe Thr Ile Asn Phe Asn Gly Leu Ser Glu Thr Gly
 545 550 555 560

Asp Thr Pro Val Ser Lys Tyr Ser Met Thr Phe Ser Trp Arg Trp Pro
565 570 575

Asn Gly Ser Tyr Ile Gly His Asn Phe Val Thr Asn Ser Phe Thr Phe
580 585 590

Ser Tyr Ile Ala Gln Glu
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<211> 602
<212> PRT
<213> Great Ape Adenovirus

<400> 54

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Val Tyr Pro Tyr Asp Thr Glu Ile Ala Pro Thr Ser Val Pro Phe Leu
35 40 45

Thr Pro Pro Phe Val Ser Pro Ala Gly Met Gln Glu Asn Pro Ala Gly
50 55 60

Val Leu Ser Leu His Leu Ser Glu Pro Leu Thr Thr His Asn Gly Ala
65 70 75 80

Leu Thr Leu Lys Met Gly Gly Gly Leu Ile Leu Asp Lys Glu Gly Asn
85 90 95

Leu Thr Ser Gln Asn Ile Thr Ser Val Asp Pro Pro Leu Lys Lys Ser
100 105 110

Lys Asn Asn Ile Ser Leu Gln Thr Ala Ala Pro Leu Ala Val Ser Ser
115 120 125

Gly Ala Leu Thr Leu Phe Ala Thr Pro Pro Leu Ala Val Ser Gly Asp
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Asn Leu Thr Val Gln Ser Gln Ala Pro Leu Thr Leu Glu Asp Ser Lys
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Leu Thr Leu Ala Thr Lys Gly Pro Leu Thr Val Ser Glu Gly Lys Leu
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Val Leu Glu Thr Glu Ala Pro Leu His Ala Ser Asp Ser Ser Ser Leu
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Gly Leu Ser Val Thr Ala Pro Leu Ser Ile Asn Asn Asp Ser Leu Gly
195 200 205

Leu Asp Leu Gln Ala Pro Ile Val Ser Gln Asn Gly Lys Leu Ala Leu
210 215 220

Asn Ile Ala Gly Pro Leu Ala Val Ala Asp Ser Ile Asn Ala Leu Thr
225 230 235 240

Val Gly Thr Gly Lys Gly Ile Gly Leu Asn Glu Thr Ser Thr His Leu
245 250 255

Gln Ala Lys Leu Val Ala Pro Leu Gly Phe Asp Thr Asn Gly Asn Ile
260 265 270

Lys Leu Ser Val Ala Gly Gly Met Arg Leu Asn Asn Asp Thr Leu Ile
275 280 285

Leu Asp Val Asn Tyr Pro Phe Glu Ala Gln Gly Gln Leu Ser Leu Arg
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Val Gly Thr Gly Pro Leu Tyr Val Asp Ser Ser Ser His Asn Leu Thr
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Ile Arg Cys Leu Arg Gly Leu Tyr Ile Thr Ser Ser Asn Asn Gln Asn
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Gly Leu Glu Ala Asn Ile Lys Leu Thr Lys Gly Leu Val Tyr Glu Gly
340 345 350

Asn Ala Ile Ala Val Asn Val Gly Gln Gly Leu Gln Tyr Ser Thr Thr
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Ala Thr Ser Glu Gly Val Tyr Pro Ile Gln Ser Lys Ile Gly Leu Gly
370 375 380

Met Glu Tyr Asp Thr Asn Gly Ala Met Met Ala Lys Leu Gly Ser Gly
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Leu Ser Phe Asp Asn Ser Gly Ala Ile Val Val Gly Asn Lys Asn Asp
405 410 415

Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Arg
420 425 430

Ile Tyr Ser Glu Lys Asp Thr Lys Leu Thr Leu Val Leu Thr Lys Cys
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Gly Ser Gln Ile Leu Gly Thr Val Ser Ala Leu Ala Val Arg Gly Ser
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Leu Ala Pro Ile Thr Asn Ala Ser Ser Ile Val Gln Ile Phe Leu Arg
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Phe Asp Glu Asn Gly Leu Leu Met Ser Asn Ser Ser Leu Asp Gly Asp
485 490 495

Tyr Trp Asn Tyr Arg Asn Gly Asp Ser Thr Asn Gly Thr Pro Tyr Thr
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Asn Ala Val Gly Phe Met Pro Asn Leu Ala Ala Tyr Pro Lys Gly Gln
515 520 525

Ala Thr Thr Ala Lys Ser Ser Ile Val Ser Gln Val Tyr Met Asp Gly
530 535 540

Asp Thr Thr Lys Pro Ile Thr Leu Lys Ile Asn Phe Asn Gly Ile Asp
545 550 555 560

Glu Thr Thr Glu Asn Thr Pro Val Ser Lys Tyr Ser Met Thr Phe Ser
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Trp Ser Trp Pro Thr Ala Ser Tyr Ile Gly His Thr Phe Ala Thr Asn
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Ser Phe Thr Phe Ser Tyr Ile Ala Gln Glu
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<212> DNA
<213> Great Ape Adenovirus

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tctcgaccca ggccctgtat cctccaggat acggtcgaga gccctttt 168

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<211> 174
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 <223> FW primer GAd right end

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aatctactcg acccctattt gtttattttt ct 92

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 <213> Human immunodeficiency virus

<400> 74

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			20					25					30		

His Ile Val Trp Ala Ser Arg Glu Leu Glu Arg Phe Ala Val Asn Pro
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Gly Leu Leu Glu Thr Ser Glu Gly Cys Arg Gln Ile Leu Gly Gln Leu
50 55 60

Gln Pro Ser Leu Gln Thr Gly Ser Glu Glu Leu Arg Ser Leu Tyr Asn
65 70 75 80

Thr Val Ala Thr Leu Tyr Cys Val His Gln Lys Ile Asp Val Lys Asp
85 90 95

Thr Lys Glu Ala Leu Glu Lys Ile Glu Glu Glu Gln Asn Lys Ser Lys
100 105 110

Lys Lys Ala Gln Gln Ala Ala Ala Gly Thr Gly Asn Ser Ser Gln Val
115 120 125

Ser Gln Asn Tyr Pro Ile Val Gln Asn Leu Gln Gly Gln Met Val His
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Gln Ala Ile Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Val Val Glu
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Glu Lys Ala Phe Ser Pro Glu Val Ile Pro Met Phe Ser Ala Leu Ser
165 170 175

Glu Gly Ala Thr Pro Gln Asp Leu Asn Thr Met Leu Asn Thr Val Gly
180 185 190

Gly His Gln Ala Ala Met Gln Met Leu Lys Glu Thr Ile Asn Glu Glu
195 200 205

Ala Ala Glu Trp Asp Arg Leu His Pro Val His Ala Gly Pro Ile Ala
210 215 220

Pro Gly Gln Met Arg Glu Pro Arg Gly Ser Asp Ile Ala Gly Thr Thr
225 230 235 240

Ser Thr Leu Gln Glu Gln Ile Gly Trp Met Thr Asn Asn Pro Pro Ile
245 250 255

Pro Val Gly Glu Ile Tyr Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys
260 265 270

Ile Val Arg Met Tyr Ser Pro Thr Ser Ile Leu Asp Ile Arg Gln Gly
275 280 285

Pro Lys Glu Pro Phe Arg Asp Tyr Val Asp Arg Phe Tyr Lys Thr Leu
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Arg Ala Glu Gln Ala Ser Gln Glu Val Lys Asn Trp Met Thr Glu Thr
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Leu Gly Pro Ala Ala Thr Leu Glu Glu Met Met Thr Ala Cys Gln Gly
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Gln Val Thr Asn Ser Ala Thr Ile Met Met Gln Arg Gly Asn Phe Arg
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Ile Ala Lys Asn Cys Arg Ala Pro Arg Lys Lys Gly Cys Trp Lys Cys
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Gly Lys Glu Gly His Gln Met Lys Asp Cys Asn Glu Arg Gln Ala Asn
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Phe Leu Gly Lys Ile Trp Pro Ser His Lys Gly Arg Pro Gly Asn Phe
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Leu Gln Ser Arg Pro Glu Pro Thr Ala Pro Pro Glu Glu Ser Phe Arg
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Phe Gly Glu Glu Lys Thr Thr Pro Ser Gln Lys Gln Glu Pro Ile Asp
465 470 475 480

Lys Glu Leu Tyr Pro Leu Ala Ser Leu Arg Ser Leu Phe Gly Asn Asp
485 490 495

Pro Ser Ser Gln
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