

eolf-seql
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<120> ADENOVIRUS POLYNUCLEOTIDES AND POLYPEPTIDES

<130> VB66115 PCT

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<150> UK 1514772.1

<151> 2015-08-19

<150> UK 1510357.5

<151> 2015-06-12

<160> 38

<170> PatentIn version 3.5

<210> 1

<211> 578

<212> PRT

<213> Simian adenovirus

<400> 1

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Tyr Asp Thr Glu Ser Gly Pro Pro Ser Val Pro Phe Leu Thr Pro Pro
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Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
35 40 45

Leu Asn Leu Ala Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60

Lys Met Gly Ser Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80

Gln Asp Ile Thr Thr Ala Ser Pro Pro Leu Lys Lys Thr Lys Thr Asn

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85

90

95

Leu Ser Leu Glu Thr Ser Ser Pro Leu Thr Val Ser Thr Ser Gly Ala
 100 105 110

Leu Thr Val Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu
 115 120 125

Thr Met Gln Ser Glu Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Thr
 130 135 140

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

Gln Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val
 165 170 175

Ser Ala Thr Pro Pro Leu Ser Thr Ser Asn Gly Ser Leu Gly Ile Asp
 180 185 190

Met Gln Ala Pro Ile Tyr Thr Thr Asn Gly Lys Leu Gly Leu Asn Phe
 195 200 205

Gly Ala Pro Leu His Val Val Asp Ser Leu Asn Ala Leu Thr Val Val
 210 215 220

Thr Gly Gln Gly Leu Thr Ile Asn Gly Thr Ala Leu Gln Thr Arg Val
 225 230 235 240

Ser Gly Ala Leu Asn Tyr Asp Thr Ser Gly Asn Leu Glu Leu Arg Ala
 245 250 255

Ala Gly Gly Met Arg Val Asp Ala Asn Gly Gln Leu Ile Leu Asp Val
 260 265 270

Ala Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln

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275

280

285

Gly Pro Leu Phe Val Asn Ser Ala His Asn Leu Asp Val Asn Tyr Asn
 290 295 300

Arg Gly Leu Tyr Leu Phe Thr Ser Gly Asn Thr Lys Lys Leu Glu Val
 305 310 315 320

Asn Ile Lys Thr Ala Lys Gly Leu Ile Tyr Asp Asp Thr Ala Ile Ala
 325 330 335

Ile Asn Ala Gly Asp Gly Leu Gln Phe Asp Ser Gly Ser Asp Thr Asn
 340 345 350

Pro Leu Lys Thr Lys Leu Gly Leu Gly Leu Asp Tyr Asp Ser Ser Arg
 355 360 365

Ala Ile Ile Ala Lys Leu Gly Thr Gly Leu Ser Phe Asp Asn Thr Gly
 370 375 380

Ala Ile Thr Val Gly Asn Lys Asn Asp Asp Lys Leu Thr Leu Trp Thr
 385 390 395 400

Thr Pro Asp Pro Ser Pro Asn Cys Arg Ile Tyr Ser Glu Lys Asp Ala
 405 410 415

Lys Phe Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Val Leu Ala Ser
 420 425 430

Val Ser Val Leu Ser Val Lys Gly Ser Leu Ala Pro Ile Ser Gly Thr
 435 440 445

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

Leu Ser Asn Ser Ser Leu Asp Pro Gln Tyr Trp Asn Tyr Arg Lys Gly

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465		470		475		480									
Asp	Leu	Thr	Glu	Gly	Thr	Ala	Tyr	Thr	Asn	Ala	Val	Gly	Phe	Met	Pro
			485						490					495	
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			500					505					510		
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	530					535					540				
Ser	Thr	Tyr	Ser	Met	Ser	Phe	Ser	Trp	Asn	Trp	Asn	Gly	Ser	Asn	Tyr
545					550					555					560
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Gln Glu

<210> 2

<211> 1734

<212> DNA

<213> Simian adenovirus

<400> 2

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<210> 3

<211> 593

<212> PRT

<213> Simian adenovirus

<400> 3

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Gln Leu Leu Glu Pro Pro Tyr Val Pro Pro Arg Tyr Leu Arg Pro Thr
35 40 45

Gly Gly Arg Asn Ser Ile Arg Tyr Ser Glu Leu Ala Pro Leu Phe Asp
50 55 60

Thr Thr Arg Val Tyr Leu Val Asp Asn Lys Ser Ala Asp Val Ala Ser
65 70 75 80

Leu Asn Tyr Gln Asn Asp His Ser Asn Phe Leu Thr Thr Val Ile Gln
85 90 95

Asn Asn Asp Tyr Ser Pro Ser Glu Ala Ser Thr Gln Thr Ile Asn Leu
100 105 110

Asp Asp Arg Ser His Trp Gly Gly Asp Leu Lys Thr Ile Leu His Thr
115 120 125

Asn Met Pro Asn Val Asn Glu Phe Met Phe Thr Asn Lys Phe Lys Ala
130 135 140

Arg Val Met Val Ser Arg Ser His Thr Lys Glu Asp Arg Val Glu Leu
145 150 155 160

Lys Tyr Glu Trp Val Glu Phe Glu Leu Pro Glu Gly Asn Tyr Ser Glu
165 170 175

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Thr Met Thr Ile Asp Leu Met Asn Asn Ala Ile Val Glu His Tyr Leu
180 185 190

Lys Val Gly Arg Gln Asn Gly Val Leu Glu Ser Asp Ile Gly Val Lys
195 200 205

Phe Asp Thr Arg Asn Phe Arg Leu Gly Leu Asp Pro Val Thr Gly Leu
210 215 220

Val Met Pro Gly Val Tyr Thr Asn Glu Ala Phe His Pro Asp Ile Ile
225 230 235 240

Leu Leu Pro Gly Cys Gly Val Asp Phe Thr Tyr Ser Arg Leu Ser Asn
245 250 255

Leu Leu Gly Ile Arg Lys Arg Gln Pro Phe Gln Glu Gly Phe Arg Ile
260 265 270

Thr Tyr Glu Asp Leu Glu Gly Gly Asn Ile Pro Ala Leu Leu Asp Val
275 280 285

Glu Ala Tyr Gln Asp Ser Leu Lys Glu Asn Glu Ala Gly Gln Glu Asp
290 295 300

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

Glu Ala Pro Glu Gln Glu Glu Asp Met Asn Asp Ser Ala Val Arg Gly
340 345 350

Asp Thr Phe Val Thr Arg Gly Glu Glu Lys Gln Ala Glu Ala Glu Ala
355 360 365

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Ala Ala Glu Glu Lys Gln Leu Ala Ala Ala Ala Ala Ala Ala Leu
370 375 380

Ala Ala Ala Glu Ala Glu Ser Glu Gly Thr Lys Pro Ala Lys Glu Pro
385 390 395 400

Val Ile Lys Pro Leu Thr Glu Asp Ser Lys Lys Arg Ser Tyr Asn Leu
405 410 415

Leu Lys Asp Ser Thr Asn Thr Ala Tyr Arg Ser Trp Tyr Leu Ala Tyr
420 425 430

Asn Tyr Gly Asp Pro Ser Thr Gly Val Arg Ser Trp Thr Leu Leu Cys
435 440 445

Thr Pro Asp Val Thr Cys Gly Ser Glu Gln Val Tyr Trp Ser Leu Pro
450 455 460

Asp Met Met Gln Asp Pro Val Thr Phe Arg Ser Thr Arg Gln Val Ser
465 470 475 480

Asn Phe Pro Val Val Gly Ala Glu Leu Leu Pro Val His Ser Lys Ser
485 490 495

Phe Tyr Asn Asp Gln Ala Val Tyr Ser Gln Leu Ile Arg Gln Phe Thr
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Ser Leu Thr His Val Phe Asn Arg Phe Pro Glu Asn Gln Ile Leu Ala
515 520 525

Arg Pro Pro Ala Pro Thr Ile Thr Thr Val Ser Glu Asn Val Pro Ala
530 535 540

Leu Thr Asp His Gly Thr Leu Pro Leu Arg Asn Ser Ile Gly Gly Val
545 550 555 560

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Tyr Lys Ala Leu Gly Ile Val Ser Pro Arg Val Leu Ser Ser Arg Thr
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Phe

<210> 4

<211> 1779

<212> DNA

<213> Simian adenovirus

<400> 4

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<210> 5

<211> 964

<212> PRT

<213> Simian adenovirus

<400> 5

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			20					25					30		

Arg	Ala	Thr	Asp	Ser	Tyr	Phe	Ser	Leu	Ser	Asn	Lys	Phe	Arg	Asn	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

eolf-seql

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 Ser Leu Ala Pro Lys Gly
115 120 125

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

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

Pro Gln Glu Glu Gln Ala Pro Val Lys Lys Thr His Val Tyr Ala Gln
165 170 175

Ala Pro Leu Ser Gly Glu Lys Ile Thr Lys Asp Gly Leu Gln Ile Gly
180 185 190

Thr Asp Ala Thr Ala Thr Glu Gln Lys Pro Ile Tyr Ala Asp Pro Thr
195 200 205

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

Ala Ser Val Ala Gly Gly Arg Val Leu Lys Lys Thr Thr Pro Met Lys

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

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420

425

430

Asp Thr Tyr Gln Ala Ile Lys Thr Asn Gly Asn Gly Asn Gly Gly Gly
 435 440 445

Asn Thr Thr Trp Thr Lys Asp Glu Thr Phe Ala Asp Arg Asn Glu Ile
 450 455 460

Gly Val Gly Asn Asn Phe Ala Met Glu Ile Asn Leu Ser Ala Asn Leu
 465 470 475 480

Trp Arg Asn Phe Leu Tyr Ser Asn Val Ala Leu Tyr Leu Pro Asp Lys
 485 490 495

Leu Lys Tyr Asn Pro Ser Asn Val Glu Ile Ser Asp Asn Pro Asn Thr
 500 505 510

Tyr Asp Tyr Met Asn Lys Arg Val Val Ala Pro Gly Leu Val Asp Cys
 515 520 525

Tyr Ile Asn Leu Gly Ala Arg Trp Ser Leu Asp Tyr Met Asp Asn Val
 530 535 540

Asn Pro Phe Asn His His Arg Asn Ala Gly Leu Arg Tyr Arg Ser Met
 545 550 555 560

Leu Leu Gly Asn Gly Arg Tyr Val Pro Phe His Ile Gln Val Pro Gln
 565 570 575

Lys Phe Phe Ala Ile Lys Asn Leu Leu Leu Leu Pro Gly Ser Tyr Thr
 580 585 590

Tyr Glu Trp Asn Phe Arg Lys Asp Val Asn Met Val Leu Gln Ser Ser
 595 600 605

Leu Gly Asn Asp Leu Arg Val Asp Gly Ala Ser Ile Lys Phe Glu Ser

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610

615

620

Ile Cys Leu Tyr Ala Thr Phe Phe Pro Met Ala His Asn Thr Ala Ser
625 630 635 640

Thr Leu Glu Ala Met Leu Arg Asn Asp Thr Asn Asp Gln Ser Phe Asn
645 650 655

Asp Tyr Leu Ser Ala Ala Asn Met Leu Tyr Pro Ile Pro Ala Asn Ala
660 665 670

Thr Asn Val Pro Ile Ser Ile Pro Ser Arg Asn Trp Ala Ala Phe Arg
675 680 685

Gly Trp Ala Phe Thr Arg Leu Lys Thr Lys Glu Thr Pro Ser Leu Gly
690 695 700

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

Asp Gly Thr Phe Tyr Leu Asn His Thr Phe Lys Lys Val Ser Val Thr
725 730 735

Phe Asp Ser Ser Val Ser Trp Pro Gly Asn Asp Arg Leu Leu Thr Pro
740 745 750

Asn Glu Phe Glu Ile Lys Arg Ser Val Asp Gly Glu Gly Tyr Asn Val
755 760 765

Ala Gln Cys Asn Met Thr Lys Asp Trp Phe Leu Ile Gln Met Leu Ala
770 775 780

Asn Tyr Asn Ile Gly Tyr Gln Gly Phe Tyr Ile Pro Glu Ser Tyr Lys
785 790 795 800

Asp Arg Met Tyr Ser Phe Phe Arg Asn Phe Gln Pro Met Ser Arg Gln

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805

810

815

Val Val Asp Glu Thr Lys Tyr Lys Asp Tyr Gln Gln Val Gly Ile Ile
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His Gln His Asn Asn Ser Gly Phe Val Gly Tyr Leu Ala Pro Thr Met
835 840 845

Arg Glu Gly Gln Ala Tyr Pro Ala Asn Phe Pro Tyr Pro Leu Ile Gly
850 855 860

Lys Thr Ala Val Asp Ser Val Thr Gln Lys Lys Phe Leu Cys Asp Arg
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Thr Leu Trp Arg Ile Pro Phe Ser Ser Asn Phe Met Ser Met Gly Ala
885 890 895

Leu Thr Asp Leu Gly Gln Asn Leu Leu Tyr Ala Asn Ser Ala His Ala
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Leu Asp Met Thr Phe Glu Val Asp Pro Met Asp Glu Pro Thr Leu Leu
915 920 925

Tyr Val Leu Phe Glu Val Phe Asp Val Val Arg Val His Gln Pro His
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Arg Gly Val Ile Glu Thr Val Tyr Leu Arg Thr Pro Phe Ser Ala Gly
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Asn Ala Thr Thr

<210> 6

<211> 2880

<212> DNA

<213> Simian adenovirus

eolf-seql

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eolf-seq1

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eolf-seql

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eolf-seq1

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eolf-seq1

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eolf-seql

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eolf-seql

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primer"

<400> 18
atatatactc tctcggcact tggcctttta cactgcgaag tggttggtgct ggtgctgcgt 60

tgagagatct ttatttggtta actgttaatt gtc 93

eolf-seql

<210> 19
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 19
ttaatagaca cagtagctta ata 23

<210> 20
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 20
ggaagggagt gtctagtgtt 20

<210> 21
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 21
caatgggcgt ggatagcggg ttgac 25

<210> 22
<211> 19
<212> DNA
<213> Artificial Sequence

eolf-seql

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 22
cagcatgcct gctattgtc

19

<210> 23
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 23
catctacgta ttagtcacgc ctattacca

29

<210> 24
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 24
gacttggaat tccccgtgag t

21

<210> 25
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
probe"

eolf-seql

<400> 25
 acatcaatgg gcgtggatag cggtt 25

<210> 26
 <211> 592
 <212> DNA
 <213> Woodchuck hepatitis virus

<400> 26
 taatcaacct ctggattaca aaatttgtga aagattgact ggtattctta actatgttgc 60
 tcctttttacg ctatgtggat acgctgcttt aatgcctttg tatcatgcta ttgcttcccg 120
 tatggctttc attttctcct ccttgataa atcctggttg ctgtctcttt atgaggagtt 180
 gtggcccgtt gtcaggcaac gtggcgtggt gtgactgtg ttgctgacg caacccccac 240
 tggttggggc attgccacca cctgtcagct cctttccggg actttcgctt tccccctccc 300
 tattgccacg gcggaactca tcgccgcctg ccttgcccgc tgctggacag gggctcggct 360
 gttgggcact gacaattccg tgggtgtgtc ggggaaatca tcgtcctttc cttggctgct 420
 cgcctgtgtt gccacctgga ttctgcgcgg gacgtccttc tgctacgtcc cttcggccct 480
 caatccagcg gaccttcctt cccgcggcct gctgccggct ctgcggcctc ttccgcgtct 540
 tcgccttcgc cctcagacga gtcggatctc cctttggggc gcctccccgc ct 592

<210> 27
 <211> 543
 <212> PRT
 <213> Simian adenovirus

<400> 27
 Met Lys Arg Thr Lys Thr Ser Asp Glu Ser Phe Asn Pro Val Tyr Pro
 1 5 10 15

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

Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
 35 40 45

eolf-seql

Leu Asn Leu Ala Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60

Lys Met Gly Ser Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80

Gln Asp Ile Thr Thr Ala Ser Pro Pro Leu Lys Lys Thr Lys Thr Asn
85 90 95

Leu Ser Leu Glu Thr Ser Ser Pro Leu Thr Val Ser Thr Ser Gly Ala
100 105 110

Leu Thr Val Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu
115 120 125

Thr Met Gln Ser Glu Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Thr
130 135 140

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

Gln Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val
165 170 175

Ser Ala Thr Pro Pro Ile Asn Val Ser Ser Gly Ser Leu Gly Leu Asp
180 185 190

Met Glu Asp Pro Met Tyr Thr His Asp Gly Lys Leu Gly Ile Arg Ile
195 200 205

Gly Gly Pro Leu Arg Val Val Asp Ser Leu His Thr Leu Thr Val Val
210 215 220

Thr Gly Asn Gly Leu Thr Val Asp Asn Asn Ala Leu Gln Thr Arg Val
225 230 235 240

eolf-seql

Thr Gly Ala Leu Gly Tyr Asp Thr Ser Gly Asn Leu Gln Leu Arg Ala
245 250 255

Ala Gly Gly Met Arg Ile Asp Ala Asn Gly Gln Leu Ile Leu Asn Val
260 265 270

Ala Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln
275 280 285

Gly Pro Leu Tyr Ile Asn Thr Asp His Asn Leu Asp Leu Asn Cys Asn
290 295 300

Arg Gly Leu Thr Thr Thr Thr Thr Asn Asn Thr Lys Lys Leu Glu Thr
305 310 315 320

Lys Ile Ser Ser Gly Leu Asp Tyr Asp Thr Asn Gly Ala Val Ile Ile
325 330 335

Lys Leu Gly Thr Gly Leu Ser Phe Asp Asn Thr Gly Ala Leu Thr Val
340 345 350

Gly Asn Thr Gly Asp Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro
355 360 365

Ser Pro Asn Cys Arg Ile His Ser Asp Lys Asp Cys Lys Phe Thr Leu
370 375 380

Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Ser Val Ala Ala Leu
385 390 395 400

Ala Val Ser Gly Asn Leu Ala Ser Ile Thr Gly Thr Val Ala Ser Val
405 410 415

Thr Ile Phe Leu Arg Phe Asp Gln Asn Gly Val Leu Met Glu Asn Ser
420 425 430

eolf-seql

Ser Leu Asp Arg Gln Tyr Trp Asn Phe Arg Asn Gly Asn Ser Thr Asn
 435 440 445

Ala Ala Pro Tyr Thr Asn Ala Val Gly Phe Met Pro Asn Leu Ala Ala
 450 455 460

Tyr Pro Lys Thr Gln Ser Gln Thr Ala Lys Asn Asn Ile Val Ser Gln
 465 470 475 480

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

Leu Asn Gly Thr Asn Glu Ser Ser Glu Thr Ser Gln Val Ser His Tyr
 500 505 510

Ser Met Ser Phe Thr Trp Ala Trp Glu Ser Gly Gln Tyr Ala Thr Glu
 515 520 525

Thr Phe Ala Thr Asn Ser Phe Thr Phe Ser Tyr Ile Ala Glu Gln
 530 535 540

<210> 28

<211> 541

<212> PRT

<213> Simian adenovirus

<400> 28

Met Lys Arg Ala Lys Thr Ser Asp Glu Thr Phe Asn Pro Val Tyr Pro
 1 5 10 15

Tyr Asp Thr Glu Asn Gly Pro Pro Ser Val Pro Phe Leu Thr Pro Pro
 20 25 30

Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
 35 40 45

Leu Arg Leu Ser Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu

eolf-seql

50

55

60

Lys Met Gly Asn Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80

Gln Asp Val Thr Thr Val Thr Pro Pro Leu Lys Lys Thr Lys Thr Asn
85 90 95

Leu Ser Leu Gln Thr Ser Ala Pro Leu Thr Val Ser Ser Gly Ser Leu
100 105 110

Thr Val Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu Thr
115 120 125

Met Gln Ser Gln Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Gly Leu
130 135 140

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

Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val Gly
165 170 175

Thr Thr Pro Pro Ile Ser Val Ser Ser Gly Ser Leu Gly Leu Asp Met
180 185 190

Glu Asp Pro Met Tyr Thr His Asp Gly Lys Leu Gly Ile Arg Ile Gly
195 200 205

Gly Pro Leu Gln Val Val Asp Ser Leu His Thr Leu Thr Val Val Thr
210 215 220

Gly Asn Gly Ile Thr Val Ala Asn Asn Ala Leu Gln Thr Lys Val Ala
225 230 235 240

Gly Ala Leu Gly Tyr Asp Ser Ser Gly Asn Leu Glu Leu Arg Ala Ala

eolf-seql

245

250

255

Gly Gly Met Arg Ile Asn Thr Gly Gly Gln Leu Ile Leu Asp Val Ala
260 265 270

Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln Gly
275 280 285

Pro Leu Tyr Val Asn Thr Asn His Asn Leu Asp Leu Asn Cys Asn Arg
290 295 300

Gly Leu Thr Thr Thr Thr Ser Ser Asn Thr Thr Lys Leu Glu Thr Lys
305 310 315 320

Ile Asp Ser Gly Leu Asp Tyr Asn Ala Asn Gly Ala Ile Ile Ala Lys
325 330 335

Leu Gly Thr Gly Leu Thr Phe Asp Asn Thr Gly Ala Ile Thr Val Gly
340 345 350

Asn Thr Gly Asp Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro Ser
355 360 365

Pro Asn Cys Arg Ile His Ala Asp Lys Asp Lys Phe Thr Leu Val Leu
370 375 380

Thr Lys Cys Gly Ser Gln Ile Leu Ala Ser Val Ala Ala Leu Ala Val
385 390 395 400

Ser Gly Asn Leu Ser Ser Met Thr Gly Thr Val Ser Ser Val Thr Ile
405 410 415

Phe Leu Arg Phe Asp Gln Asn Gly Val Leu Met Glu Asn Ser Ser Leu
420 425 430

Asp Lys Glu Tyr Trp Asn Phe Arg Asn Gly Asn Ser Thr Asn Ala Thr

eolf-seql

435

440

445

Pro Tyr Thr Asn Ala Val Gly Phe Met Pro Asn Leu Ser Ala Tyr Pro
450 455 460

Lys Thr Gln Ser Gln Thr Ala Lys Asn Asn Ile Val Ser Glu Val Tyr
465 470 475 480

Leu His Gly Asp Lys Ser Lys Pro Met Ile Leu Thr Ile Thr Leu Asn
485 490 495

Gly Thr Asn Glu Ser Ser Glu Thr Ser Gln Val Ser His Tyr Ser Met
500 505 510

Ser Phe Thr Trp Ser Trp Asp Ser Gly Lys Tyr Ala Thr Glu Thr Phe
515 520 525

Ala Thr Asn Ser Phe Thr Phe Ser Tyr Ile Ala Glu Gln
530 535 540

<210> 29

<211> 543

<212> PRT

<213> Simian adenovirus

<400> 29

Met Lys Arg Thr Lys Thr Ser Asp Glu Ser Phe Asn Pro Val Tyr Pro
1 5 10 15

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

Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
35 40 45

Leu Asn Leu Ala Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60

eolf-seql

Lys Met Gly Ser Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80

Gln Asp Ile Thr Ser Thr Thr Pro Pro Leu Lys Lys Thr Lys Thr Asn
85 90 95

Leu Ser Leu Glu Thr Ser Ser Pro Leu Thr Val Ser Thr Ser Gly Ala
100 105 110

Leu Thr Val Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu
115 120 125

Thr Met Gln Ser Glu Ala Pro Leu Ala Val Gln Asp Ala Lys Leu Thr
130 135 140

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

Gln Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val
165 170 175

Ser Ser Thr Pro Pro Ile Ser Val Ser Ser Gly Ser Leu Gly Leu Asp
180 185 190

Met Glu Asp Pro Met Tyr Thr His Asp Gly Lys Leu Gly Ile Arg Ile
195 200 205

Gly Gly Pro Leu Arg Val Val Asp Ser Leu His Thr Leu Thr Val Val
210 215 220

Thr Gly Asn Gly Leu Thr Val Asp Asn Asn Ala Leu Gln Thr Arg Val
225 230 235 240

Thr Gly Ala Leu Gly Tyr Asp Thr Ser Gly Asn Leu Gln Leu Arg Ala
245 250 255

eolf-seql

Ala Gly Gly Met Arg Ile Asp Ala Asn Gly Gln Leu Ile Leu Asp Val
260 265 270

Ala Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln
275 280 285

Gly Pro Leu Tyr Val Asn Thr Asp His Asn Leu Asp Leu Asn Cys Asn
290 295 300

Arg Gly Leu Thr Thr Thr Thr Thr Asn Asn Thr Lys Lys Leu Glu Thr
305 310 315 320

Lys Ile Ser Ser Gly Leu Asp Tyr Asp Thr Asn Gly Ala Val Ile Ile
325 330 335

Lys Leu Gly Thr Gly Leu Ser Phe Asp Asn Thr Gly Ala Leu Thr Val
340 345 350

Gly Asn Thr Gly Asp Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro
355 360 365

Ser Pro Asn Cys Arg Ile His Ser Asp Lys Asp Cys Lys Phe Thr Leu
370 375 380

Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Ser Val Ala Ala Leu
385 390 395 400

Ala Val Ser Gly Asn Leu Ala Ser Ile Thr Gly Thr Val Ala Ser Val
405 410 415

Thr Ile Phe Leu Arg Phe Asp Gln Asn Gly Val Leu Met Glu Asn Ser
420 425 430

Ser Leu Asp Lys Gln Tyr Trp Asn Phe Arg Asn Gly Asn Ser Thr Asn
435 440 445

eolf-seql

Ala Ala Pro Tyr Thr Asn Ala Val Gly Phe Met Pro Asn Leu Ala Ala
450 455 460

Tyr Pro Lys Thr Gln Ser Gln Thr Ala Lys Asn Asn Ile Val Ser Gln
465 470 475 480

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

Leu Asn Gly Thr Asn Glu Ser Ser Glu Thr Ser Gln Val Ser His Tyr
500 505 510

Ser Met Ser Phe Thr Trp Ala Trp Glu Ser Gly Gln Tyr Ala Thr Glu
515 520 525

Thr Phe Ala Thr Asn Ser Phe Thr Phe Ser Tyr Ile Ala Glu Gln
530 535 540

<210> 30

<211> 543

<212> PRT

<213> Simian adenovirus

<400> 30

Met Lys Arg Thr Lys Thr Ser Asp Lys Ser Phe Asn Pro Val Tyr Pro
1 5 10 15

Tyr Asp Thr Glu Asn Gly Pro Pro Ser Val Pro Phe Leu Thr Pro Pro
20 25 30

Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
35 40 45

Leu Asn Leu Ala Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60

Lys Met Gly Ser Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser

eolf-seql

260

265

270

Ala Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln
 275 280 285

Gly Pro Leu Tyr Val Asn Thr Asp His Asn Leu Asp Leu Asn Cys Asn
 290 295 300

Arg Gly Leu Thr Thr Thr Thr Thr Asn Asn Thr Lys Lys Leu Glu Thr
 305 310 315 320

Lys Ile Gly Ser Gly Leu Asp Tyr Asp Thr Asn Gly Ala Val Ile Ile
 325 330 335

Lys Leu Gly Thr Gly Val Ser Phe Asp Ser Thr Gly Ala Leu Ser Val
 340 345 350

Gly Asn Thr Gly Asp Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro
 355 360 365

Ser Pro Asn Cys Arg Ile His Ser Asp Lys Asp Cys Lys Phe Thr Leu
 370 375 380

Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Ser Val Ala Ala Leu
 385 390 395 400

Ala Val Ser Gly Asn Leu Ala Ser Ile Thr Gly Thr Val Ser Ser Val
 405 410 415

Thr Ile Phe Leu Arg Phe Asp Gln Asn Gly Val Leu Met Glu Asn Ser
 420 425 430

Ser Leu Asp Lys Gln Tyr Trp Asn Phe Arg Asn Gly Asn Ser Thr Asn
 435 440 445

Ala Thr Pro Tyr Thr Asn Ala Val Gly Phe Met Pro Asn Leu Ala Ala

eolf-seql

450

455

460

Tyr Pro Lys Thr Gln Ser Gln Thr Ala Lys Asn Asn Ile Val Ser Gln
465 470 475 480

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

Leu Asn Gly Thr Asn Glu Ser Ser Glu Thr Ser Gln Val Ser His Tyr
500 505 510

Ser Met Ser Phe Thr Trp Ala Trp Glu Ser Gly Gln Tyr Ala Thr Glu
515 520 525

Thr Phe Ala Thr Asn Ser Phe Thr Phe Ser Tyr Ile Ala Glu Gln
530 535 540

<210> 31

<211> 543

<212> PRT

<213> Simian adenovirus

<400> 31

Met Lys Arg Thr Lys Thr Ser Asp Glu Ser Phe Asn Pro Val Tyr Pro
1 5 10 15

Tyr Asp Thr Glu Asn Gly Pro Pro Ser Val Pro Phe Leu Thr Pro Pro
20 25 30

Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
35 40 45

Leu Asn Leu Ala Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60

Lys Met Gly Ser Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80

eolf-seql

Gln Asp Val Thr Thr Thr Thr Pro Pro Leu Lys Lys Thr Lys Thr Asn
85 90 95

Leu Ser Leu Glu Thr Ser Ala Pro Leu Thr Val Ser Thr Ser Gly Ala
100 105 110

Leu Thr Leu Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu
115 120 125

Thr Met Gln Ser Glu Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Thr
130 135 140

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

Gln Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val
165 170 175

Ser Ala Thr Pro Pro Ile Asn Val Ser Ser Gly Ser Leu Gly Leu Asp
180 185 190

Met Glu Asn Pro Met Tyr Thr His Asp Gly Lys Leu Gly Ile Arg Ile
195 200 205

Gly Gly Pro Leu Arg Val Val Asp Ser Leu His Thr Leu Thr Val Val
210 215 220

Thr Gly Asn Gly Ile Ala Val Asp Asn Asn Ala Leu Gln Thr Arg Val
225 230 235 240

Thr Gly Ala Leu Gly Tyr Asp Thr Ser Gly Asn Leu Gln Leu Arg Ala
245 250 255

Ala Gly Gly Met Arg Ile Asp Ala Asn Gly Gln Leu Ile Leu Asp Val
260 265 270

eolf-seql

Ala Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln
275 280 285

Gly Pro Leu Tyr Val Asn Thr Asp His Asn Leu Asp Leu Asn Cys Asn
290 295 300

Arg Gly Leu Thr Thr Thr Thr Thr Asn Asn Thr Lys Lys Leu Glu Thr
305 310 315 320

Lys Ile Gly Ser Gly Leu Asp Tyr Asp Thr Asn Gly Ala Val Ile Ile
325 330 335

Lys Leu Gly Thr Gly Val Ser Phe Asp Ser Thr Gly Ala Leu Ser Val
340 345 350

Gly Asn Thr Gly Asp Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro
355 360 365

Ser Pro Asn Cys Arg Ile His Ser Asp Lys Asp Cys Lys Phe Thr Leu
370 375 380

Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Ser Val Ala Ala Leu
385 390 395 400

Ala Val Ser Gly Asn Leu Ala Ser Ile Thr Gly Thr Val Ser Ser Val
405 410 415

Thr Ile Phe Leu Arg Phe Asp Gln Asn Gly Val Leu Met Glu Asn Ser
420 425 430

Ser Leu Asp Lys Gln Tyr Trp Asn Phe Arg Asn Gly Asn Ser Thr Asn
435 440 445

Ala Thr Pro Tyr Thr Asn Ala Val Gly Phe Met Pro Asn Leu Ala Ala
450 455 460

eolf-seql

Tyr Pro Lys Thr Gln Ser Gln Thr Ala Lys Asn Asn Ile Val Ser Gln
465 470 475 480

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

Leu Asn Gly Thr Asn Glu Ser Ser Glu Thr Ser Gln Val Ser His Tyr
500 505 510

Ser Met Ser Phe Thr Trp Ala Trp Glu Ser Gly Gln Tyr Ala Thr Glu
515 520 525

Thr Phe Ala Thr Asn Ser Phe Thr Phe Ser Tyr Ile Ala Glu Gln
530 535 540

<210> 32

<211> 578

<212> PRT

<213> Simian adenovirus

<400> 32

Met Lys Arg Thr Lys Thr Ser Asp Glu Ser Phe Asn Pro Val Tyr Pro
1 5 10 15

Tyr Asp Thr Glu Asn Gly Pro Pro Ser Val Pro Phe Leu Thr Pro Pro
20 25 30

Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
35 40 45

Leu Asn Leu Ala Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60

Lys Met Gly Ser Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80

Gln Asp Val Thr Thr Thr Thr Pro Pro Leu Lys Lys Thr Lys Thr Asn

eolf-seql

85

90

95

Leu Ser Leu Glu Thr Ser Ala Pro Leu Thr Val Ser Thr Ser Gly Ala
 100 105 110

Leu Thr Leu Ala Ala Ala Val Pro Leu Ala Val Ala Gly Thr Ser Leu
 115 120 125

Thr Met Gln Ser Glu Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Thr
 130 135 140

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

Gln Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Ile
 165 170 175

Ser Ala Thr Pro Pro Leu Ser Thr Ser Asn Gly Ser Leu Gly Ile Asp
 180 185 190

Met Gln Ala Pro Ile Tyr Thr Thr Asn Gly Lys Leu Gly Leu Asn Phe
 195 200 205

Gly Ala Pro Leu His Val Val Asp Ser Leu Asn Ala Leu Thr Val Val
 210 215 220

Thr Gly Gln Gly Leu Thr Ile Asn Gly Thr Ala Leu Gln Thr Arg Val
 225 230 235 240

Ser Gly Ala Leu Asn Tyr Asp Ser Ser Gly Asn Leu Glu Leu Arg Ala
 245 250 255

Ala Gly Gly Met Arg Val Asp Ala Asn Gly Lys Leu Ile Leu Asp Val
 260 265 270

Ala Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln

eolf-seql

275

280

285

Gly Pro Leu Phe Val Asn Ser Ala His Asn Leu Asp Val Asn Tyr Asn
 290 295 300

Arg Gly Leu Tyr Leu Phe Thr Ser Gly Asn Thr Lys Lys Leu Glu Val
 305 310 315 320

Asn Ile Lys Thr Ala Lys Gly Leu Ile Tyr Asp Asp Thr Ala Ile Ala
 325 330 335

Ile Asn Pro Gly Asp Gly Leu Glu Phe Gly Ser Gly Ser Asp Thr Asn
 340 345 350

Pro Leu Lys Thr Lys Leu Gly Leu Gly Leu Glu Tyr Asp Ser Ser Arg
 355 360 365

Ala Ile Ile Ala Lys Leu Gly Thr Gly Leu Ser Phe Asp Asn Thr Gly
 370 375 380

Ala Ile Thr Val Gly Asn Lys Asn Asp Asp Lys Leu Thr Leu Trp Thr
 385 390 395 400

Thr Pro Asp Pro Ser Pro Asn Cys Arg Ile Tyr Ser Glu Lys Asp Ala
 405 410 415

Lys Phe Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Val Leu Ala Ser
 420 425 430

Val Ser Val Leu Ser Val Lys Gly Ser Leu Ala Pro Ile Ser Gly Thr
 435 440 445

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

Leu Ser Asn Ser Ser Leu Asp Pro Gln Tyr Trp Asn Tyr Arg Lys Gly

eolf-seql

Leu Asn Leu Ala Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60

Lys Met Gly Ser Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80

Gln Asp Ile Thr Thr Ala Ser Pro Pro Leu Lys Lys Thr Lys Thr Asn
85 90 95

Leu Ser Leu Glu Thr Ser Ser Pro Leu Thr Val Ser Thr Ser Gly Ala
100 105 110

Leu Thr Val Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu
115 120 125

Thr Met Gln Ser Glu Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Thr
130 135 140

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

Gln Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val
165 170 175

Ser Ala Thr Pro Pro Leu Ser Thr Ser Asn Gly Ser Leu Gly Ile Asp
180 185 190

Met Gln Ala Pro Ile Tyr Thr Thr Asn Gly Lys Leu Gly Leu Asn Phe
195 200 205

Gly Ala Pro Leu His Val Val Asp Ser Leu Asn Ala Leu Thr Val Val
210 215 220

Thr Gly Gln Gly Leu Thr Ile Asn Gly Thr Ala Leu Gln Thr Arg Val
225 230 235 240

eolf-seql

Ser Gly Ala Leu Asn Tyr Asp Thr Ser Gly Asn Leu Glu Leu Arg Ala
245 250 255

Ala Gly Gly Met Arg Val Asp Ala Asn Gly Gln Leu Ile Leu Asp Val
260 265 270

Ala Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln
275 280 285

Gly Pro Leu Phe Val Asn Ser Ala His Asn Leu Asp Val Asn Tyr Asn
290 295 300

Arg Gly Leu Tyr Leu Phe Thr Ser Gly Asn Thr Lys Lys Leu Glu Val
305 310 315 320

Asn Ile Lys Thr Ala Lys Gly Leu Ile Tyr Asp Asp Thr Ala Ile Ala
325 330 335

Ile Asn Ala Gly Asp Gly Leu Gln Phe Asp Ser Gly Ser Asp Thr Asn
340 345 350

Pro Leu Lys Thr Lys Leu Gly Leu Gly Leu Asp Tyr Asp Ser Ser Arg
355 360 365

Ala Ile Ile Ala Lys Leu Gly Thr Gly Leu Ser Phe Asp Asn Thr Gly
370 375 380

Ala Ile Thr Val Gly Asn Lys Asn Asp Asp Lys Leu Thr Leu Trp Thr
385 390 395 400

Thr Pro Asp Pro Ser Pro Asn Cys Arg Ile Tyr Ser Glu Lys Asp Ala
405 410 415

Lys Phe Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Val Leu Ala Ser
420 425 430

eolf-seql

Val Ser Val Leu Ser Val Lys Gly Ser Leu Ala Pro Ile Ser Gly Thr
435 440 445

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

Leu Ser Asn Ser Ser Leu Asp Pro Gln Tyr Trp Asn Tyr Arg Lys Gly
465 470 475 480

Asp Leu Thr Glu Gly Thr Ala Tyr Thr Asn Ala Val Gly Phe Met Pro
485 490 495

Asn Leu Thr Ala Tyr Pro Lys Thr Gln Ser Gln Thr Ala Lys Ser Asn
500 505 510

Ile Val Ser Gln Val Tyr Leu Asn Gly Asp Lys Ser Lys Pro Met Thr
515 520 525

Leu Thr Ile Thr Leu Asn Gly Thr Asn Glu Thr Gly Asp Ala Thr Val
530 535 540

Ser Thr Tyr Ser Met Ser Phe Ser Trp Asn Trp Asn Gly Ser Asn Tyr
545 550 555 560

Ile Asn Glu Thr Phe Gln Thr Asn Ser Phe Thr Phe Ser Tyr Ile Ala
565 570 575

Gln Glu

<210> 34

<211> 578

<212> PRT

<213> Simian adenovirus

<400> 34

Met Lys Arg Thr Lys Thr Ser Asp Glu Ser Phe Asn Pro Val Tyr Pro

eolf-seql

1	5	10	15
Tyr	Asp	Thr	Glu
	20	Ser	Gly
Pro	Pro	Ser	Val
	25	Pro	Phe
Leu	Thr	Pro	Pro
	30		
Phe	Val	Ser	Pro
	35	Asp	Gly
Phe	Gln	Glu	Ser
	40	Pro	Pro
Gly	Val	Leu	Ser
	45		
Leu	Asn	Leu	Ala
	50	Glu	Pro
Leu	Val	Thr	Ser
	55	His	Gly
Met	Leu	Ala	Leu
	60		
Lys	Met	Gly	Ser
	65	Gly	Leu
Ser	Leu	Asp	Asp
	70	Ala	Gly
Asn	Leu	Thr	Ser
	75		80
Gln	Asp	Ile	Thr
	85	Thr	Ala
Ser	Pro	Pro	Leu
	90	Lys	Lys
Thr	Lys	Thr	Lys
	95	Thr	Asn
Leu	Ser	Leu	Glu
	100	Thr	Ser
Ser	Ser	Pro	Leu
	105	Thr	Val
Ser	Thr	Ser	Gly
	110	Ala	
Leu	Thr	Val	Ala
	115	Ala	Ala
Ala	Ala	Ala	Pro
	120	Leu	Ala
Val	Ala	Gly	Thr
	125	Ser	Leu
Thr	Met	Gln	Ser
	130	Glu	Ala
Pro	Leu	Thr	Val
	135	Gln	Asp
Ala	Lys	Leu	Thr
	140		
Leu	Ala	Thr	Lys
	145	Gly	Pro
Leu	Thr	Val	Ser
	150	Glu	Gly
Lys	Leu	Ala	Leu
	155		160
Gln	Thr	Ser	Ala
	165	Pro	Leu
Thr	Ala	Ala	Asp
	170	Ser	Ser
Thr	Leu	Thr	Val
	175		
Ser	Ala	Thr	Pro
	180	Pro	Leu
Ser	Thr	Ser	Asn
	185	Gly	Ser
Leu	Gly	Ile	Asp
	190		
Met	Gln	Ala	Pro
	Ile	Tyr	Thr
Thr	Thr	Asn	Gly
	Lys	Leu	Gly
Leu	Asn	Phe	

eolf-seql

195

200

205

Gly Ala Pro Leu His Val Val Asp Ser Leu Asn Ala Leu Thr Val Val
 210 215 220

Thr Gly Gln Gly Leu Thr Ile Asn Gly Thr Ala Leu Gln Thr Arg Val
 225 230 235 240

Ser Gly Ala Leu Asn Tyr Asp Thr Ser Gly Asn Leu Glu Leu Arg Ala
 245 250 255

Ala Gly Gly Met Arg Val Asp Ala Asn Gly Gln Leu Ile Leu Asp Val
 260 265 270

Ala Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln
 275 280 285

Gly Pro Leu Phe Val Asn Ser Ala His Asn Leu Asp Val Asn Tyr Asn
 290 295 300

Arg Gly Leu Tyr Leu Phe Thr Ser Gly Asn Thr Lys Lys Leu Glu Val
 305 310 315 320

Asn Ile Lys Thr Ala Lys Gly Leu Ile Tyr Asp Asp Thr Ala Ile Ala
 325 330 335

Ile Asn Ala Gly Asp Gly Leu Gln Phe Asp Ser Gly Ser Asp Thr Asn
 340 345 350

Pro Leu Lys Thr Lys Leu Gly Leu Gly Leu Asp Tyr Asp Ser Ser Arg
 355 360 365

Ala Ile Ile Ala Lys Leu Gly Thr Gly Leu Ser Phe Asp Asn Thr Gly
 370 375 380

Ala Ile Thr Val Gly Asn Lys Asn Asp Asp Lys Leu Thr Leu Trp Thr

eolf-seql																		
385						390						395						400
Thr	Pro	Asp	Pro	Ser	Pro	Asn	Cys	Arg	Ile	Tyr	Ser	Glu	Lys	Asp	Ala			
				405					410					415				
Lys	Phe	Thr	Leu	Val	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Val	Leu	Ala	Ser			
			420					425					430					
Val	Ser	Val	Leu	Ser	Val	Lys	Gly	Ser	Leu	Ala	Pro	Ile	Ser	Gly	Thr			
		435					440					445						
Val	Thr	Ser	Ala	Gln	Ile	Val	Leu	Arg	Phe	Asp	Glu	Asn	Gly	Val	Leu			
	450					455					460							
Leu	Ser	Asn	Ser	Ser	Leu	Asp	Pro	Gln	Tyr	Trp	Asn	Tyr	Arg	Lys	Gly			
465					470					475					480			
Asp	Leu	Thr	Glu	Gly	Thr	Ala	Tyr	Thr	Asn	Ala	Val	Gly	Phe	Met	Pro			
				485					490					495				
Asn	Leu	Thr	Ala	Tyr	Pro	Lys	Thr	Gln	Ser	Gln	Thr	Ala	Lys	Ser	Asn			
			500					505					510					
Ile	Val	Ser	Gln	Val	Tyr	Leu	Asn	Gly	Asp	Lys	Ser	Lys	Pro	Met	Thr			
		515					520					525						
Leu	Thr	Ile	Thr	Leu	Asn	Gly	Thr	Asn	Glu	Thr	Gly	Asp	Ala	Thr	Val			
	530					535					540							
Ser	Thr	Tyr	Ser	Met	Ser	Phe	Ser	Trp	Asn	Trp	Asn	Gly	Ser	Asn	Tyr			
545				550						555					560			
Ile	Asn	Glu	Thr	Phe	Gln	Thr	Asn	Ser	Phe	Thr	Phe	Ser	Tyr	Ile	Ala			
				565					570					575				
Gln	Glu																	

eolf-seql

<210> 35

<211> 577

<212> PRT

<213> Simian adenovirus

<400> 35

Met Lys Arg Ala Lys Thr Ser Asp Glu Thr Phe Asn Pro Val Tyr Pro
1 5 10 15

Tyr Asp Thr Glu Asn Gly Pro Pro Ser Val Pro Phe Leu Thr Pro Pro
20 25 30

Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
35 40 45

Leu Arg Leu Ser Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60

Lys Met Gly Asn Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80

Gln Asp Val Thr Thr Val Thr Pro Pro Leu Lys Lys Thr Lys Thr Asn
85 90 95

Leu Ser Leu Gln Thr Ser Ala Pro Leu Thr Val Ser Ser Gly Ser Leu
100 105 110

Thr Val Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu Thr
115 120 125

Met Gln Ser Gln Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Gly Leu
130 135 140

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

eolf-seql

Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val Ser
165 170 175

Ala Thr Pro Pro Leu Ser Thr Ser Asn Gly Ser Leu Ser Ile Asp Met
180 185 190

Gln Ala Pro Ile Tyr Thr Thr Asn Gly Lys Leu Ala Leu Asn Ile Gly
195 200 205

Ala Pro Leu His Val Val Asp Thr Leu Asn Ala Leu Thr Val Val Thr
210 215 220

Gly Gln Gly Leu Thr Ile Asn Gly Arg Ala Leu Gln Thr Arg Val Thr
225 230 235 240

Gly Ala Leu Ser Tyr Asp Thr Glu Gly Asn Ile Gln Leu Gln Ala Gly
245 250 255

Gly Gly Met Arg Ile Asp Asn Asn Gly Gln Leu Ile Leu Asn Val Ala
260 265 270

Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln Gly
275 280 285

Pro Leu Ile Val Asn Ser Ala His Asn Leu Asp Leu Asn Leu Asn Arg
290 295 300

Gly Leu Tyr Leu Phe Thr Ser Gly Asn Thr Lys Lys Leu Glu Val Asn
305 310 315 320

Ile Lys Thr Ala Lys Gly Leu Phe Tyr Asp Gly Thr Ala Ile Ala Ile
325 330 335

Asn Ala Gly Asp Gly Leu Gln Phe Gly Ser Gly Ser Asp Thr Asn Pro
340 345 350

eolf-seql

Leu Gln Thr Lys Leu Gly Leu Gly Leu Glu Tyr Asp Ser Asn Lys Ala
 355 360 365

Ile Ile Thr Lys Leu Gly Thr Gly Leu Ser Phe Asp Asn Thr Gly Ala
 370 375 380

Ile Thr Val Gly Asn Lys Asn Asp Asp Lys Leu Thr Leu Trp Thr Thr
 385 390 395 400

Pro Asp Pro Ser Pro Asn Cys Arg Ile Asn Ser Glu Lys Asp Ala Lys
 405 410 415

Leu Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Val Leu Ala Ser Val
 420 425 430

Ser Val Leu Ser Val Lys Gly Ser Leu Ala Pro Ile Ser Gly Thr Val
 435 440 445

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

Ser Asn Ser Ser Leu Asp Pro Gln Tyr Trp Asn Tyr Arg Lys Gly Asp
 465 470 475 480

Ser Thr Glu Gly Thr Ala Tyr Thr Asn Ala Val Gly Phe Met Pro Asn
 485 490 495

Leu Thr Ala Tyr Pro Lys Thr Gln Ser Gln Thr Ala Lys Ser Asn Ile
 500 505 510

Val Ser Gln Val Tyr Leu Asn Gly Asp Lys Thr Lys Pro Met Thr Leu
 515 520 525

Thr Ile Thr Leu Asn Gly Thr Asn Glu Thr Gly Asp Ala Thr Val Ser
 530 535 540

eolf-seql

Thr Tyr Ser Met Ser Phe Ser Trp Asn Trp Asn Gly Ser Asn Tyr Ile
545 550 555 560

Asn Asp Thr Phe Gln Thr Asn Ser Phe Thr Phe Ser Tyr Ile Ala Gln
565 570 575

Glu

<210> 36

<211> 577

<212> PRT

<213> Simian adenovirus

<400> 36

Met Lys Arg Ala Lys Thr Ser Asp Glu Thr Phe Asn Pro Val Tyr Pro
1 5 10 15

Tyr Asp Thr Glu Asn Gly Pro Pro Ser Val Pro Phe Leu Thr Pro Pro
20 25 30

Phe Val Ser Pro Asp Gly Phe Gln Glu Ser Pro Pro Gly Val Leu Ser
35 40 45

Leu Arg Leu Ser Glu Pro Leu Val Thr Ser His Gly Met Leu Ala Leu
50 55 60

Lys Met Gly Asn Gly Leu Ser Leu Asp Asp Ala Gly Asn Leu Thr Ser
65 70 75 80

Gln Asp Val Thr Thr Val Thr Pro Pro Leu Lys Lys Thr Lys Thr Asn
85 90 95

Leu Ser Leu Gln Thr Ser Ala Pro Leu Thr Val Ser Ser Gly Ser Leu
100 105 110

Thr Val Ala Ala Ala Ala Pro Leu Ala Val Ala Gly Thr Ser Leu Thr

eolf-seql

115

120

125

Met Gln Ser Gln Ala Pro Leu Thr Val Gln Asp Ala Lys Leu Gly Leu
 130 135 140

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

Thr Ser Ala Pro Leu Thr Ala Ala Asp Ser Ser Thr Leu Thr Val Ser
 165 170 175

Ala Thr Pro Pro Leu Ser Thr Ser Asn Gly Ser Leu Ser Ile Asp Met
 180 185 190

Gln Ala Pro Ile Tyr Thr Thr Asn Gly Lys Leu Ala Leu Asn Ile Gly
 195 200 205

Ala Pro Leu His Val Val Asp Thr Leu Asn Ala Leu Thr Val Val Thr
 210 215 220

Gly Gln Gly Leu Thr Ile Asn Gly Arg Ala Leu Gln Thr Arg Val Thr
 225 230 235 240

Gly Ala Leu Ser Tyr Asp Thr Glu Gly Asn Ile Gln Leu Gln Ala Gly
 245 250 255

Gly Gly Met Arg Ile Asp Asn Asn Gly Gln Leu Ile Leu Asn Val Ala
 260 265 270

Tyr Pro Phe Asp Ala Gln Asn Asn Leu Ser Leu Arg Leu Gly Gln Gly
 275 280 285

Pro Leu Ile Val Asn Ser Ala His Asn Leu Asp Leu Asn Leu Asn Arg
 290 295 300

Gly Leu Tyr Leu Phe Thr Ser Gly Asn Thr Lys Lys Leu Glu Val Asn

eolf-seql

305		310		315		320									
Ile	Lys	Thr	Ala	Lys	Gly	Leu	Phe	Tyr	Asp	Gly	Thr	Ala	Ile	Ala	Ile
				325					330					335	
Asn	Ala	Gly	Asp	Gly	Leu	Gln	Phe	Gly	Ser	Gly	Ser	Asp	Thr	Asn	Pro
			340					345					350		
Leu	Gln	Thr	Lys	Leu	Gly	Leu	Gly	Leu	Glu	Tyr	Asp	Ser	Asn	Lys	Ala
			355				360						365		
Ile	Ile	Thr	Lys	Leu	Gly	Thr	Gly	Leu	Ser	Phe	Asp	Asn	Thr	Gly	Ala
	370					375					380				
Ile	Thr	Val	Gly	Asn	Lys	Asn	Asp	Asp	Lys	Leu	Thr	Leu	Trp	Thr	Thr
385					390					395					400
Pro	Asp	Pro	Ser	Pro	Asn	Cys	Arg	Ile	Asn	Ser	Glu	Lys	Asp	Ala	Lys
				405					410					415	
Leu	Thr	Leu	Val	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Val	Leu	Ala	Ser	Val
			420					425					430		
Ser	Val	Leu	Ser	Val	Lys	Gly	Ser	Leu	Ala	Pro	Ile	Ser	Gly	Thr	Val
		435					440					445			
Thr	Ser	Ala	Gln	Ile	Val	Leu	Arg	Phe	Asp	Glu	Asn	Gly	Val	Leu	Leu
		450				455					460				
Ser	Asn	Ser	Ser	Leu	Asp	Pro	Gln	Tyr	Trp	Asn	Tyr	Arg	Lys	Gly	Asp
465					470					475					480
Ser	Thr	Glu	Gly	Thr	Ala	Tyr	Thr	Asn	Ala	Val	Gly	Phe	Met	Pro	Asn
				485					490					495	
Leu	Thr	Ala	Tyr	Pro	Lys	Thr	Gln	Ser	Gln	Thr	Ala	Lys	Ser	Asn	Ile

eolf-seql

500

505

510

Val Ser Gln Val Tyr Leu Asn Gly Asp Lys Thr Lys Pro Met Thr Leu
515 520 525

Thr Ile Thr Leu Asn Gly Thr Asn Glu Thr Gly Asp Ala Thr Val Ser
530 535 540

Thr Tyr Ser Met Ser Phe Ser Trp Asn Trp Asn Gly Ser Asn Tyr Ile
545 550 555 560

Asn Asp Thr Phe Gln Thr Asn Ser Phe Thr Phe Ser Tyr Ile Ala Gln
565 570 575

Glu

<210> 37

<211> 1145

<212> PRT

<213> Respiratory syncytial virus

<400> 37

Met Glu Leu Leu Ile Leu Lys Ala Asn Ala Ile Thr Thr Ile Leu Thr
1 5 10 15

Ala Val Thr Phe Cys Phe Ala Ser Gly Gln Asn Ile Thr Glu Glu Phe
20 25 30

Tyr Gln Ser Thr Cys Ser Ala Val Ser Lys Gly Tyr Leu Ser Ala Leu
35 40 45

Arg Thr Gly Trp Tyr Thr Ser Val Ile Thr Ile Glu Leu Ser Asn Ile
50 55 60

Lys Glu Asn Lys Cys Asn Gly Thr Asp Ala Lys Val Lys Leu Ile Lys
65 70 75 80

eolf-seql

Gln Glu Leu Asp Lys Tyr Lys Asn Ala Val Thr Glu Leu Gln Leu Leu
85 90 95

Met Gln Ser Thr Pro Ala Thr Asn Asn Arg Ala Arg Arg Glu Leu Pro
100 105 110

Arg Phe Met Asn Tyr Thr Leu Asn Asn Ala Lys Lys Thr Asn Val Thr
115 120 125

Leu Ser Lys Lys Arg Lys Arg Arg Phe Leu Gly Phe Leu Leu Gly Val
130 135 140

Gly Ser Ala Ile Ala Ser Gly Val Ala Val Ser Lys Val Leu His Leu
145 150 155 160

Glu Gly Glu Val Asn Lys Ile Lys Ser Ala Leu Leu Ser Thr Asn Lys
165 170 175

Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr Ser Lys Val
180 185 190

Leu Asp Leu Lys Asn Tyr Ile Asp Lys Gln Leu Leu Pro Ile Val Asn
195 200 205

Lys Gln Ser Cys Ser Ile Ser Asn Ile Glu Thr Val Ile Glu Phe Gln
210 215 220

Gln Lys Asn Asn Arg Leu Leu Glu Ile Thr Arg Glu Phe Ser Val Asn
225 230 235 240

Ala Gly Val Thr Thr Pro Val Ser Thr Tyr Met Leu Thr Asn Ser Glu
245 250 255

Leu Leu Ser Leu Asn Asp Met Pro Ile Thr Asn Asp Gln Lys Lys Leu
260 265 270

eolf-seql

Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser Tyr Ser Ile Met
275 280 285

Ser Ile Ile Lys Glu Glu Val Leu Ala Tyr Val Val Gln Leu Pro Leu
290 295 300

Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu His Thr Ser Pro Leu
305 310 315 320

Cys Thr Thr Asn Thr Lys Glu Gly Ser Asn Ile Cys Leu Thr Arg Thr
325 330 335

Asp Arg Gly Trp Tyr Cys Asp Asn Ala Gly Ser Val Ser Phe Phe Pro
340 345 350

Gln Ala Glu Thr Cys Lys Val Gln Ser Asn Arg Val Phe Cys Asp Thr
355 360 365

Met Asn Ser Leu Thr Leu Pro Ser Glu Val Asn Leu Cys Asn Val Asp
370 375 380

Ile Phe Asn Pro Lys Tyr Asp Cys Lys Ile Met Thr Ser Lys Thr Asp
385 390 395 400

Val Ser Ser Ser Val Ile Thr Ser Leu Gly Ala Ile Val Ser Cys Tyr
405 410 415

Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg Gly Ile Ile Lys
420 425 430

Thr Phe Ser Asn Gly Cys Asp Tyr Val Ser Asn Lys Gly Val Asp Thr
435 440 445

Val Ser Val Gly Asn Thr Leu Tyr Tyr Val Asn Lys Gln Glu Gly Lys
450 455 460

eolf-seql

Ser Leu Tyr Val Lys Gly Glu Pro Ile Ile Asn Phe Tyr Asp Pro Leu
465 470 475 480

Val Phe Pro Ser Asp Glu Phe Asp Ala Ser Ile Ser Gln Val Asn Glu
485 490 495

Lys Ile Asn Gln Ser Leu Ala Phe Ile Arg Lys Ser Asp Glu Leu Leu
500 505 510

His Asn Val Asn Ala Gly Lys Ser Thr Thr Asn Arg Lys Arg Arg Ala
515 520 525

Pro Val Lys Gln Thr Leu Asn Phe Asp Leu Leu Lys Leu Ala Gly Asp
530 535 540

Val Glu Ser Asn Pro Gly Pro Met Ala Leu Ser Lys Val Lys Leu Asn
545 550 555 560

Asp Thr Leu Asn Lys Asp Gln Leu Leu Ser Ser Ser Lys Tyr Thr Ile
565 570 575

Gln Arg Ser Thr Gly Asp Ser Ile Asp Thr Pro Asn Tyr Asp Val Gln
580 585 590

Lys His Ile Asn Lys Leu Cys Gly Met Leu Leu Ile Thr Glu Asp Ala
595 600 605

Asn His Lys Phe Thr Gly Leu Ile Gly Met Leu Tyr Ala Met Ser Arg
610 615 620

Leu Gly Arg Glu Asp Thr Ile Lys Ile Leu Arg Asp Ala Gly Tyr His
625 630 635 640

Val Lys Ala Asn Gly Val Asp Val Thr Thr His Arg Gln Asp Ile Asn
645 650 655

eolf-seql

Gly Lys Glu Met Lys Phe Glu Val Leu Thr Leu Ala Ser Leu Thr Thr
660 665 670

Glu Ile Gln Ile Asn Ile Glu Ile Glu Ser Arg Lys Ser Tyr Lys Lys
675 680 685

Met Leu Lys Glu Met Gly Glu Val Ala Pro Glu Tyr Arg His Asp Ser
690 695 700

Pro Asp Cys Gly Met Ile Ile Leu Cys Ile Ala Ala Leu Val Ile Thr
705 710 715 720

Lys Leu Ala Ala Gly Asp Arg Ser Gly Leu Thr Ala Val Ile Arg Arg
725 730 735

Ala Asn Asn Val Leu Lys Asn Glu Met Lys Arg Tyr Lys Gly Leu Leu
740 745 750

Pro Lys Asp Ile Ala Asn Ser Phe Tyr Glu Val Phe Glu Lys Tyr Pro
755 760 765

His Phe Ile Asp Val Phe Val His Phe Gly Ile Ala Gln Ser Ser Thr
770 775 780

Arg Gly Gly Ser Arg Val Glu Gly Ile Phe Ala Gly Leu Phe Met Asn
785 790 795 800

Ala Tyr Gly Ala Gly Gln Val Met Leu Arg Trp Gly Val Leu Ala Lys
805 810 815

Ser Val Lys Asn Ile Met Leu Gly His Ala Ser Val Gln Ala Glu Met
820 825 830

Glu Gln Val Val Glu Val Tyr Glu Tyr Ala Gln Lys Leu Gly Gly Glu
835 840 845

eolf-seql

Ala Gly Phe Tyr His Ile Leu Asn Asn Pro Lys Ala Ser Leu Leu Ser
850 855 860

Leu Thr Gln Phe Pro His Phe Ser Ser Val Val Leu Gly Asn Ala Ala
865 870 875 880

Gly Leu Gly Ile Met Gly Glu Tyr Arg Gly Thr Pro Arg Asn Gln Asp
885 890 895

Leu Tyr Asp Ala Ala Lys Ala Tyr Ala Glu Gln Leu Lys Glu Asn Gly
900 905 910

Val Ile Asn Tyr Ser Val Leu Asp Leu Thr Ala Glu Glu Leu Glu Ala
915 920 925

Ile Lys His Gln Leu Asn Pro Lys Asp Asn Asp Val Glu Leu Gly Gly
930 935 940

Gly Gly Ser Gly Gly Gly Gly Met Ser Arg Arg Asn Pro Cys Lys Phe
945 950 955 960

Glu Ile Arg Gly His Cys Leu Asn Gly Lys Arg Cys His Phe Ser His
965 970 975

Asn Tyr Phe Glu Trp Pro Pro His Ala Leu Leu Val Arg Gln Asn Phe
980 985 990

Met Leu Asn Arg Ile Leu Lys Ser Met Asp Lys Ser Ile Asp Thr Leu
995 1000 1005

Ser Glu Ile Ser Gly Ala Ala Glu Leu Asp Arg Thr Glu Glu Tyr
1010 1015 1020

Ala Leu Gly Val Val Gly Val Leu Glu Ser Tyr Ile Gly Ser Ile
1025 1030 1035

eolf-seql

Asn Asn Ile Thr Lys Gln Ser Ala Cys Val Ala Met Ser Lys Leu
1040 1045 1050

Leu Thr Glu Leu Asn Ser Asp Asp Ile Lys Lys Leu Arg Asp Asn
1055 1060 1065

Glu Glu Leu Asn Ser Pro Lys Ile Arg Val Tyr Asn Thr Val Ile
1070 1075 1080

Ser Tyr Ile Glu Ser Asn Arg Lys Asn Asn Lys Gln Thr Ile His
1085 1090 1095

Leu Leu Lys Arg Leu Pro Ala Asp Val Leu Lys Lys Thr Ile Lys
1100 1105 1110

Asn Thr Leu Asp Ile His Lys Ser Ile Thr Ile Asn Asn Pro Lys
1115 1120 1125

Glu Ser Thr Val Ser Asp Thr Asn Asp His Ala Lys Asn Asn Asp
1130 1135 1140

Thr Thr
1145

<210> 38
<211> 1502
<212> DNA
<213> Human immunodeficiency virus

<400> 38
atgggtgcta gggcttctgt gctgtctggt ggtgagctgg acaagtggga gaagatcagg 60
ctgaggcctg gtggcaagaa gaagtacaag ctaaagcaca ttgtgtgggc ctccagggag 120
ctggagaggt ttgctgtgaa ccctggcctg ctggagacct ctgaggggtg caggcagatc 180
ctgggccagc tccagccctc cctgcaaaca ggctctgagg agctgaggtc cctgtacaac 240
acagtggcta ccctgtactg tgtgcaccag aagattgatg tgaaggacac caaggaggcc 300

eolf-seql

ctggagaaga ttgaggagga gcagaacaag tccaagaaga aggcccagca ggctgctgct	360
ggcacaggca actccagcca ggtgtcccag aactaccca ttgtgcagaa cctccagggc	420
cagatggtgc accaggccat ctccccccgg accctgaatg cctgggtgaa ggtggtggag	480
gagaggcctt ctcccctgag gtgatcccca tgttctctgc cctgtctgag ggtgccaccc	540
cccaggacct gaacaccatg ctgaacacag tggggggcca tcaggctgcc atgcagatgc	600
tgaaggagac catcaatgag gaggctgctg agtgggacag gctgcatcct gtgcacgctg	660
gccccattgc ccccgccag atgaggggagc ccaggggctc tgacattgct ggaccacct	720
ccaccctcca ggagcagatt ggctggatga ccaacaaccc ccccatccct gtgggggaaa	780
tctacaagag gtggatcatc ctgggcctga acaagattgt gaggatgtac tccccacct	840
ccatcctgga catcaggcag ggccccaagg agcccttcag ggactatgtg gacaggttct	900
acaagacctt gagggctgag caggcctccc aggaggtgaa gaactggatg acagagaccc	960
tgctggtgca gaatgccaac cctgactgca agaccatcct gaaggccctg ggccctgctg	1020
ccaccctgga ggagatgatg acagcctgcc aggggggtggg gggccctggt cacaaggcca	1080
gggtgctggc tgaggccatg tcccagggtga ccaactccgc caccatcatg atgcagaggg	1140
gcaacttcag gaaccagagg aagacagtga agtgcttcaa ctgtggcaag gtgggccaca	1200
ttgccaagaa ctgtagggcc cccaggaaga agggctgctg gaagtgtggc aaggagggcc	1260
accagatgaa ggactgcaat gagaggcagg ccaacttcct gggcaaaatc tggccctccc	1320
acaagggcag gcctggcaac ttcctccagt ccaggcctga gccacagcc cctcccagg	1380
agtccttcag gtttggggag gagaagacca cccccagcca gaagcaggag cccattgaca	1440
aggagctgta ccccctggcc tccctgaggt ccctgtttgg caacgacccc tcctcccagt	1500
aa	1502