

578-13 PCT 2 Sequence listing  
SEQUENCE LISTING

<110> Okairos AG

<120> Simian Adenovirus Nucleic Acid- and Amino Acid-Sequences, Vectors  
Containing Same, and Uses Thereof

<130> 578-13 PCT 2

<140>

<141> 2010-02-02

<150> PCT/EP2009/000672

<151> 2009-02-02

<150> US 61/172,624

<151> 2009-04-24

<150> US 61/174,852

<151> 2009-05-01

<150> US 61/266,342

<151> 2009-12-03

<160> 65

<170> PatentIn version 3.5

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<213> Human immunodeficiency virus

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# 578-13 PCT 2 Sequence listing

cgccgcccgg	catctggtgc	tggggcgggt	ggccgtgggg	cagcgagacc	gcgctgacga	9660
tgcattctta	caattgctgc	gtaggtagcg	cgccgaggga	cctgagggag	tccagatcca	9720
ccggatccga	aaacctttcg	aggaaggcat	ctaaccagtc	gcagtcgcaa	ggtaggctga	9780
gcaccgtggc	gggcggcggg	gggtgggggg	agtgtctggc	ggagggtgctg	ctgatgatgt	9840
aattgaagta	ggcgggtctt	acacggcgga	tggtcgacag	gagcaccata	tctttggggc	9900
cggcctgctg	gatgcggagg	cggtcggcca	tgccccaggc	ttcgttcttg	catctgcgca	9960
ggctctttgt	gtagtcttgc	atgagccttt	ccaccggcac	ctcttctcct	tcttcttctg	10020
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# 578-13 PCT 2 Sequence listing

aaccacgtgc	gcacgctggt	ggcgcgcgag	gaggtgacca	tcggcctgat	gcacctgtgg	11700
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ctgatagtgc	agcacagcag	ggacaacgag	gcgttcaggg	acgcgctgct	gaacatcacc	11820
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ggggcttcga	ggtccccgag	gccaacgacg	gcttcctgtg	ggacgacatg	gacgacagcg	13620
tgttctcccc	gcggccgcag	gcgctggcgg	aggcgtcgct	gctccgcctc	cccaagaagg	13680

# 578-13 PCT 2 Sequence listing

aagagagccg ccggcccagc agcgcggcgg cctctctgtc cgagctgggg gcggcgggccg	13740
cgcgggcccg gtccctgggg ggcagcccct ttcccagcct ggtgggggtct ctgcagagcg	13800
ggcgcaccac ccggccccgg ctgctggggc aggacgagta cctgaacaac tccctgatgc	13860
agccggtgcg ggagaaaaac ctgccccccg ccttccccaa caacgggata gagagcctgg	13920
tagacaagat gagcagatgg aagacctatg cgcaggagca cagggactcg cccgtgctcc	13980
gtccgcccac gcggcgccag cgccacgacc ggcagcgggg gctggtgtgg gatgacgagg	14040
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acctgcgccc ccgcctgggg aggatgtttc aataaaaaaa aaaaaaatc aagcatgatg	14160
caaggttttt taagcgata aataaaaaac tcaccaaggc catggcgacc gagcgttgtt	14220
ggtttcttgt tgtgttcct tagtatgcgg cgcgcggcga tgtaccacga gggacctcct	14280
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578-13 PCT 2 Sequence listing

tcccagctca	tccgccagtt	cacctctctg	accacgtgt	tcaatcgctt	tcctgagaac	15780
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# 578-13 PCT 2 Sequence listing

ctaccacccc agcatcgttt aaaaagcctg ttgtggttct tgcagatatg gccctcactt	17820
gccgcctccg tttcccgggtg ccgggatacc gaggaagatc gcgccgcagg aggggtatgg	17880
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ccgtgcccgg gatcgccctcc gtggccttgc aggcgtccca gaggcgttga cacagacttc	18060
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# 578-13 PCT 2 Sequence listing

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tcaggttgag atgcagttct tttccacttc tacaaatgcc acaaacgagc aaaacaacat	19920
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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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<210> 14  
 <211> 440  
 <212> PRT  
 <213> Adenoviridae - Mastadenovirus  
 <400> 14

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

# 578-13 PCT 2 Sequence listing

Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro  
20 25 30

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

Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu  
50 55 60

Lys Leu Gly Glu Gly Val Asp Leu Asp Asp Ser Gly Lys Leu Ile Ser  
65 70 75 80

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

Ile Ser Leu Asn Met Asp Ala Pro Leu Tyr Asn Asn Asn Gly Lys Leu  
100 105 110

Gly Ile Arg Ile Gly Ala Pro Leu Lys Val Val Asp Leu Leu Asn Thr  
115 120 125

Leu Ala Val Ala Tyr Gly Ser Gly Leu Gly Leu Lys Asn Asn Ala Leu  
130 135 140

Thr Val Gln Leu Val Ser Pro Leu Thr Phe Asp Asn Lys Gly Asn Val  
145 150 155 160

Lys Ile Asn Leu Gly Asn Gly Pro Leu Thr Val Ala Ala Asn Arg Leu  
165 170 175

Ser Val Thr Cys Lys Arg Gly Leu Tyr Val Thr Thr Thr Gly Asp Ala  
180 185 190

Leu Glu Ser Asn Ile Ser Trp Ala Lys Gly Ile Arg Phe Glu Gly Asn  
195 200 205

Ala Ile Ala Ala Asn Ile Gly Lys Gly Leu Glu Phe Gly Thr Thr Ser  
210 215 220

Ser Glu Ser Asp Val Ser Asn Ala Tyr Pro Ile Gln Val Lys Leu Gly  
225 230 235 240

Thr Gly Leu Thr Phe Asp Ser Thr Gly Ala Ile Val Ala Trp Asn Lys  
245 250 255

Glu Asp Asp Lys Leu Thr Leu Trp Thr Thr Ala Asp Pro Ser Pro Asn  
260 265 270

Cys His Ile Tyr Ser Asp Lys Asp Ala Lys Leu Thr Leu Cys Leu Thr  
275 280 285

# 578-13 PCT 2 Sequence listing

Lys Cys Gly Ser Gln Ile Leu Gly Thr Val Ser Leu Ile Ala Val Asp  
290 295 300

Thr Gly Ser Leu Asn Pro Ile Thr Gly Gln Val Thr Thr Ala Leu Val  
305 310 315 320

Ser Leu Lys Phe Asp Ala Asn Gly Val Leu Gln Thr Ser Ser Thr Leu  
325 330 335

Asp Lys Glu Tyr Trp Asn Phe Arg Lys Gly Asp Val Thr Pro Ala Glu  
340 345 350

Pro Tyr Thr Asn Ala Ile Gly Phe Met Pro Asn Ile Lys Ala Tyr Pro  
355 360 365

Lys Asn Thr Asn Ser Ala Ala Lys Ser His Ile Val Gly Lys Val Tyr  
370 375 380

Leu His Gly Glu Val Ser Lys Pro Leu Asp Leu Ile Ile Thr Phe Asn  
385 390 395 400

Glu Thr Ser Asn Glu Thr Cys Thr Tyr Cys Ile Asn Phe Gln Trp Gln  
405 410 415

Trp Gly Thr Asp Lys Tyr Lys Asn Glu Thr Leu Ala Val Ser Ser Phe  
420 425 430

Thr Phe Ser Tyr Ile Ala Gln Glu  
435 440

<210> 15  
<211> 443  
<212> PRT  
<213> Adenoviridae - Mastadenovirus

<400> 15

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

Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro  
20 25 30

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

Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu  
50 55 60

Lys Leu Gly Glu Gly Val Asp Leu Asp Asp Ser Gly Lys Leu Ile Ser  
65 70 75 80



# 578-13 PCT 2 Sequence listing

Lys Asn Ala Thr Lys Ala Thr Ala Pro Leu Ser Ile Ser Asn Ser Thr  
 85 90 95  
 Ile Ser Leu Asn Met Ala Ala Pro Phe Tyr Asn Asn Asn Gly Thr Leu  
 100 105 110  
 Ser Leu Asn Val Ser Thr Pro Leu Ala Val Phe Pro Thr Phe Asn Thr  
 115 120 125  
 Leu Gly Ile Ser Leu Gly Asn Gly Leu Gln Thr Ser Asn Lys Leu Leu  
 130 135 140  
 Ala Val Gln Leu Thr His Pro Leu Thr Phe Ser Ser Asn Ser Ile Thr  
 145 150 155 160  
 Val Lys Thr Asp Lys Gly Leu Tyr Ile Asn Ser Ser Gly Asn Arg Gly  
 165 170 175  
 Leu Glu Ala Asn Ile Ser Leu Lys Arg Gly Leu Ile Phe Asp Gly Asn  
 180 185 190  
 Ala Ile Ala Thr Tyr Leu Gly Ser Gly Leu Asp Tyr Gly Ser Tyr Asp  
 195 200 205  
 Ser Asp Gly Lys Thr Arg Pro Ile Ile Thr Lys Ile Gly Ala Gly Leu  
 210 215 220  
 Asn Phe Asp Ser Asn Asn Ala Met Ala Val Lys Leu Gly Thr Gly Leu  
 225 230 235 240  
 Ser Phe Asp Ser Ala Gly Ala Leu Thr Ala Gly Asn Lys Glu Asp Asp  
 245 250 255  
 Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Gln Leu  
 260 265 270  
 Leu Ser Asp Arg Asp Ala Lys Phe Thr Leu Cys Leu Thr Lys Cys Gly  
 275 280 285  
 Ser Gln Ile Leu Gly Thr Val Ala Val Ala Ala Val Thr Val Ser Ser  
 290 295 300  
 Ala Leu Asn Pro Ile Asn Asp Thr Val Lys Ser Ala Ile Val Phe Leu  
 305 310 315 320  
 Arg Phe Asp Ser Asp Gly Val Leu Met Ser Asn Ser Ser Met Val Gly  
 325 330 335  
 Asp Tyr Trp Asn Phe Arg Glu Gly Gln Thr Thr Gln Ser Val Ala Tyr  
 340 345 350

578-13 PCT 2 Sequence listing

Thr Asn Ala Val Gly Phe Met Pro Asn Leu Gly Ala Tyr Pro Lys Thr  
355 360 365

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

Gly Glu Thr Thr Met Pro Met Thr Leu Thr Ile Thr Phe Asn Gly Thr  
385 390 395 400

Asp Glu Lys Asp Thr Thr Pro Val Ser Thr Tyr Ser Met Thr Phe Thr  
405 410 415

Trp Gln Trp Thr Gly Asp Tyr Lys Asp Lys Asn Ile Thr Phe Ala Thr  
420 425 430

Asn Ser Phe Thr Phe Ser Tyr Met Ala Gln Glu  
435 440

<210> 16  
<211> 425  
<212> PRT  
<213> Adenoviridae - Mastadenovirus  
<400> 16

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

Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro  
20 25 30

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

Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu  
50 55 60

Lys Leu Gly Glu Gly Val Asp Leu Asp Ser Ser Gly Lys Leu Ile Ser  
65 70 75 80

Asn Thr Ala Thr Lys Ala Ala Ala Pro Leu Ser Phe Ser Asn Asn Thr  
85 90 95

Ile Ser Leu Asn Met Asp His Pro Phe Tyr Thr Lys Asp Gly Lys Leu  
100 105 110

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

Asn Thr Leu Ala Leu Gly Phe Gly Ser Gly Leu Gly Leu Arg Gly Ser  
130 135 140

Ala Leu Ala Val Gln Leu Val Ser Pro Leu Thr Phe Asp Thr Asp Gly  
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578-13 PCT 2 Sequence listing

145                      150                      155                      160

Asn Ile Lys Leu Thr Leu Asp Arg Gly Leu His Val Thr Thr Gly Asp  
165 170 175

Ala Ile Glu Ser Asn Ile Ser Trp Ala Lys Gly Leu Lys Phe Glu Asp  
180 185 190

Gly Ala Ile Ala Thr Asn Ile Gly Asn Gly Leu Glu Phe Gly Ser Ser  
195 200 205

Ser Thr Glu Thr Gly Val Asp Asp Ala Tyr Pro Ile Gln Val Lys Leu  
210 215 220

Gly Ser Gly Leu Ser Phe Asp Ser Thr Gly Ala Ile Met Ala Gly Asn  
225 230 235 240

Lys Glu Asp Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro  
245 250 255

Asn Cys Gln Ile Leu Ala Glu Asn Asp Ala Lys Leu Thr Leu Cys Leu  
260 265 270

Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Val Ser Val Leu Val Val  
275 280 285

Gly Ser Gly Asn Leu Asn Pro Ile Thr Gly Thr Val Ser Ser Ala Gln  
290 295 300

Val Phe Leu Arg Phe Asp Ala Asn Gly Val Leu Leu Thr Glu His Ser  
305 310 315 320

Thr Leu Lys Lys Tyr Trp Gly Tyr Arg Gln Gly Asp Ser Ile Asp Gly  
325 330 335

Thr Pro Tyr Val Asn Ala Val Gly Phe Met Pro Asn Leu Lys Ala Tyr  
340 345 350

Pro Lys Ser Gln Ser Ser Thr Thr Lys Asn Asn Ile Val Gly Gln Val  
355 360 365

Tyr Met Asn Gly Asp Val Ser Lys Pro Met Leu Leu Thr Ile Thr Leu  
370 375 380

Asn Gly Thr Asp Asp Ser Asn Ser Thr Tyr Ser Met Ser Phe Ser Tyr  
385 390 395 400

Thr Trp Thr Asn Gly Ser Tyr Val Gly Ala Thr Phe Gly Ala Asn Ser  
405 410 415

Tyr Thr Phe Ser Tyr Ile Ala Gln Glu

420 578-13 PCT 2 Sequence listing  
425

<210> 17  
<211> 425  
<212> PRT  
<213> Adenoviridae - Mastadenovirus

<400> 17

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

Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro  
20 25 30

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

Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Glu Ile Thr Leu  
50 55 60

Lys Leu Gly Glu Gly Leu Asp Leu Asp Ser Ser Gly Lys Leu Ile Ser  
65 70 75 80

Asn Thr Ala Thr Lys Ala Ala Ala Pro Leu Ser Phe Ser Asn Asn Thr  
85 90 95

Ile Ser Leu Asn Met Asp His Pro Phe Tyr Thr Lys Asp Gly Lys Leu  
100 105 110

Ser Leu Gln Val Ser Pro Pro Leu Asn Ile Leu Arg Thr Ser Ile Leu  
115 120 125

Asn Thr Leu Ala Leu Gly Phe Gly Ser Gly Leu Gly Leu Arg Gly Ser  
130 135 140

Ala Leu Ala Val Gln Leu Val Ser Pro Leu Thr Phe Asp Thr Asp Gly  
145 150 155 160

Asn Ile Lys Leu Thr Leu Asp Arg Gly Leu His Val Thr Thr Gly Asp  
165 170 175

Ala Ile Glu Ser Asn Ile Ser Trp Ala Lys Gly Leu Lys Phe Glu Asp  
180 185 190

Gly Ala Ile Ala Thr Asn Ile Gly Asn Gly Leu Glu Phe Gly Ser Ser  
195 200 205

Ser Thr Glu Thr Gly Val Asp Asp Ala Tyr Pro Ile Gln Val Lys Leu  
210 215 220

Gly Ser Gly Leu Ser Phe Asp Ser Thr Gly Ala Ile Met Ala Gly Asn  
225 230 235 240

# 578-13 PCT 2 Sequence listing

Lys Glu Asp Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro  
245 250 255

Asn Cys Gln Ile Leu Ala Glu Asn Asp Ala Lys Leu Thr Leu Cys Leu  
260 265 270

Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Val Ser Val Leu Val Val  
275 280 285

Gly Ser Gly Asn Leu Asn Pro Ile Thr Gly Thr Val Ser Ser Ala Gln  
290 295 300

Val Phe Leu Arg Phe Asp Ala Asn Gly Val Leu Leu Thr Glu His Ser  
305 310 315 320

Thr Leu Lys Lys Tyr Trp Gly Tyr Arg Gln Gly Asp Ser Ile Asp Gly  
325 330 335

Thr Pro Tyr Thr Asn Ala Val Gly Phe Met Pro Asn Leu Lys Ala Tyr  
340 345 350

Pro Lys Ser Gln Ser Ser Thr Thr Lys Asn Asn Ile Val Gly Gln Val  
355 360 365

Tyr Met Asn Gly Asp Val Ser Lys Pro Met Leu Leu Thr Ile Thr Leu  
370 375 380

Asn Gly Thr Asp Asp Ser Asn Ser Thr Tyr Ser Met Ser Phe Ser Tyr  
385 390 395 400

Thr Trp Thr Asn Gly Ser Tyr Val Gly Ala Thr Phe Gly Ala Asn Ser  
405 410 415

Tyr Thr Phe Ser Tyr Ile Ala Gln Glu  
420 425

<210> 18  
<211> 442  
<212> PRT  
<213> Adenoviridae - Mastadenovirus

<400> 18

Met Ser Lys Lys Arg Ala Arg Val Asp Asp Gly Phe Asp Pro Val Tyr  
1 5 10 15

Pro Tyr Asp Ala Asp Asn Ala Pro Thr Val Pro Phe Ile Asn Pro Pro  
20 25 30

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

# 578-13 PCT 2 Sequence listing

Leu Arg Leu Ala Asp Pro Val Thr Thr Lys Asn Gly Ala Val Pro Leu  
 50 55 60  
 Lys Leu Gly Glu Gly Val Asp Leu Asp Asp Ser Gly Lys Leu Ile Ser  
 65 70 75 80  
 Lys Lys Ser Thr Lys Ala Asn Ser Pro Leu Ser Ile Ser Asn Asn Thr  
 85 90 95  
 Ile Ser Leu Asn Met Asp Thr Pro Phe Tyr Thr Lys Asp Gly Lys Leu  
 100 105 110  
 Thr Met Gln Val Thr Ala Pro Leu Lys Leu Ala Asn Thr Ala Ile Leu  
 115 120 125  
 Asn Thr Leu Ala Met Ala Tyr Gly Asn Gly Leu Gly Leu Asn Asn Asn  
 130 135 140  
 Ala Leu Thr Val Gln Val Thr Ser Pro Leu Thr Phe Asp Asn Ser Lys  
 145 150 155 160  
 Val Lys Ile Asn Leu Gly Asn Gly Pro Leu Met Val Ser Ala Asn Lys  
 165 170 175  
 Leu Ser Ile Asn Cys Leu Arg Gly Leu Tyr Val Ala Pro Asn Asn Thr  
 180 185 190  
 Gly Leu Glu Thr Asn Ile Ser Trp Ala Asn Ala Met Arg Phe Glu Gly  
 195 200 205  
 Asn Ala Met Ala Val Tyr Ile Asp Thr Asn Lys Gly Leu Gln Phe Gly  
 210 215 220  
 Thr Thr Ser Thr Glu Thr Gly Val Thr Asn Ala Tyr Pro Ile Gln Val  
 225 230 235 240  
 Lys Leu Gly Ala Gly Leu Ala Phe Asp Ser Thr Gly Ala Ile Val Ala  
 245 250 255  
 Trp Asn Lys Glu Asn Asp Ser Leu Thr Leu Trp Thr Thr Pro Asp Pro  
 260 265 270  
 Ser Pro Asn Cys Lys Ile Ala Ser Glu Lys Asp Ala Lys Leu Thr Leu  
 275 280 285  
 Cys Leu Thr Lys Cys Gly Ser Gln Ile Leu Gly Thr Val Ser Leu Leu  
 290 295 300  
 Ala Val Ser Gly Ser Leu Ala Pro Ile Thr Gly Ala Val Ser Thr Ala  
 305 310 315 320

578-13 PCT 2 Sequence listing

Leu Val Ser Leu Lys Phe Asn Ala Asn Gly Ala Leu Leu Asp Lys Ser  
325 330 335

Thr Leu Asn Lys Glu Tyr Trp Asn Tyr Arg Gln Gly Asp Leu Ile Pro  
340 345 350

Gly Thr Pro Tyr Thr His Ala Val Gly Phe Met Pro Asn Lys Lys Ala  
355 360 365

Tyr Pro Lys Asn Thr Thr Ala Ala Ser Lys Ser His Ile Val Gly Asp  
370 375 380

Val Tyr Leu Asp Gly Asp Ala Asp Lys Pro Leu Ser Leu Ile Ile Thr  
385 390 395 400

Phe Asn Glu Thr Asp Asp Glu Thr Cys Asp Tyr Cys Ile Asn Phe Gln  
405 410 415

Trp Lys Trp Gly Ala Asp Gln Tyr Lys Asp Lys Thr Leu Ala Thr Ser  
420 425 430

Ser Phe Thr Phe Ser Tyr Ile Ala Gln Glu  
435 440

<210> 19  
<211> 577  
<212> PRT  
<213> Adenoviridae - Mastadenovirus  
<400> 19

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

578-13 PCT 2 Sequence listing

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



578-13 PCT 2 Sequence listing

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

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> 20  
<211> 937  
<212> PRT  
<213> Adenoviridae - Mastadenovirus

<400> 20

Met Ala Thr Pro Ser Met Leu Pro Gln Trp Ala Tyr Met His Ile Ala  
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 Ser Leu Gly Asn Lys Phe Arg Asn Pro  
page 33

35

## 578-13 PCT 2 Sequence listing

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 Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr  
65 70 75 80

Lys Val Arg Tyr 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 Ser  
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 Thr Ser Gln Trp Ile Thr Lys Asp Asn Gly Thr Asp Lys  
130 135 140

Thr Tyr Ser Phe Gly Asn Ala Pro Val Arg Gly Leu Asp Ile Thr Glu  
145 150 155 160

Glu Gly Leu Gln Ile Gly Pro Asp Glu Ser Gly Gly Glu Ser Lys Lys  
165 170 175

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

Glu Trp His Asp Thr Ile Gly Ala Glu Asp Lys Tyr Gly Gly Arg Ala  
195 200 205

Leu Lys Pro Ala Thr Asn Met Lys Pro Cys Tyr Gly Ser Phe Ala Lys  
210 215 220

Pro Thr Asn Ala Lys Gly Gly Gln Ala Lys Ser Arg Thr Lys Asp Asp  
225 230 235 240

Gly Thr Thr Glu Pro Asp Ile Asp Met Ala Phe Phe Asp Asp Arg Ser  
245 250 255

Gln Gln Ala Ser Phe Ser Pro Glu Leu Val Leu Tyr Thr Glu Asn Val  
260 265 270

Asp Leu Asp Thr Pro Asp Thr His Ile Ile Tyr Lys Pro Gly Thr Asp  
275 280 285

Glu Thr Ser Ser Ser Phe Asn Leu Gly Gln Gln Ser Met Pro Asn Arg  
290 295 300

Pro Asn Tyr Ile Gly Phe Arg Asp Asn Phe Ile Gly Leu Met Tyr Tyr  
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## 578-13 PCT 2 Sequence listing

305					310						315					320
Asn	Ser	Thr	Gly	Asn 325	Met	Gly	Val	Leu	Ala 330	Gly	Gln	Ala	Ser	Gln 335	Leu	
Asn	Ala	Val	Val 340	Asp	Leu	Gln	Asp	Arg 345	Asn	Thr	Glu	Leu	Ser 350	Tyr	Gln	
Leu	Leu	Leu 355	Asp	Ser	Leu	Gly	Asp 360	Arg	Thr	Arg	Tyr	Phe 365	Ser	Met	Trp	
Asn	Gln 370	Ala	Val	Asp	Ser	Tyr 375	Asp	Pro	Asp	Val	Arg 380	Ile	Ile	Glu	Asn	
His 385	Gly	Val	Glu	Asp	Glu 390	Leu	Pro	Asn	Tyr	Cys 395	Phe	Pro	Leu	Asn	Gly 400	
Val	Gly	Phe	Thr	Asp 405	Thr	Phe	Gln	Gly	Ile 410	Lys	Val	Lys	Thr	Thr 415	Asn	
Asn	Gly	Thr	Ala 420	Asn	Ala	Thr	Glu	Trp 425	Glu	Ser	Asp	Thr	Ser 430	Val	Asn	
Asn	Ala	Asn 435	Glu	Ile	Ala	Lys	Gly 440	Asn	Pro	Phe	Ala	Met 445	Glu	Ile	Asn	
Ile	Gln 450	Ala	Asn	Leu	Trp	Arg 455	Asn	Phe	Leu	Tyr	Ala 460	Asn	Val	Ala	Leu	
Tyr 465	Leu	Pro	Asp	Ser	Tyr 470	Lys	Tyr	Thr	Pro	Ala 475	Asn	Ile	Thr	Leu	Pro 480	
Thr	Asn	Thr	Asn	Thr 485	Tyr	Asp	Tyr	Met	Asn 490	Gly	Arg	Val	Val	Ala 495	Pro	
Ser	Leu	Val	Asp 500	Ala	Tyr	Ile	Asn	Ile 505	Gly	Ala	Arg	Trp	Ser 510	Leu	Asp	
Pro	Met	Asp 515	Asn	Val	Asn	Pro	Phe 520	Asn	His	His	Arg	Asn 525	Ala	Gly	Leu	
Arg	Tyr 530	Arg	Ser	Met	Leu	Leu 535	Gly	Asn	Gly	Arg	Tyr 540	Val	Pro	Phe	His	
Ile 545	Gln	Val	Pro	Gln	Lys 550	Phe	Phe	Ala	Ile	Lys 555	Ser	Leu	Leu	Leu	Leu 560	
Pro	Gly	Ser	Tyr	Thr 565	Tyr	Glu	Trp	Asn	Phe 570	Arg	Lys	Asp	Val	Asn 575	Met	
Ile	Leu	Gln	Ser	Ser	Leu	Gly	Asn	Asp	Leu	Arg	Thr	Asp	Gly	Ala	Ser	

578-13 PCT 2 Sequence listing

580 585 590

Ile Ala Phe Thr Ser Ile Asn Leu Tyr Ala Thr Phe Phe Pro Met Ala  
595 600 605

His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn Asp Thr Asn  
610 615 620

Asp Gln Ser Phe Asn Asp Tyr Leu Ser Ala Ala Asn Met Leu Tyr Pro  
625 630 635 640

Ile Pro Ala Asn Ala Thr Asn Val Pro Ile Ser Ile Pro Ser Arg Asn  
645 650 655

Trp Ala Ala Phe Arg Gly Trp Ser Phe Thr Arg Leu Lys Thr Arg Glu  
660 665 670

Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr Ser Gly  
675 680 685

Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr Phe Lys  
690 695 700

Lys Val Ser Ile Thr Phe Asp Ser Ser Val Ser Trp Pro Gly Asn Asp  
705 710 715 720

Arg Leu Leu Thr Pro Asn Glu Phe Glu Ile Lys Arg Thr Val Asp Gly  
725 730 735

Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp Phe Leu  
740 745 750

Val Gln Met Leu Ala His Tyr Asn Ile Gly Tyr Gln Gly Phe Tyr Val  
755 760 765

Pro Glu Gly Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn Phe Gln  
770 775 780

Pro Met Ser Arg Gln Val Val Asp Glu Val Asn Tyr Lys Asp Tyr Gln  
785 790 795 800

Ala Val Thr Leu Ala Tyr Gln His Asn Asn Ser Gly Phe Val Gly Tyr  
805 810 815

Leu Ala Pro Thr Met Arg Gln Gly Gln Pro Tyr Pro Ala Asn Tyr Pro  
820 825 830

Tyr Pro Leu Ile Gly Lys Ser Ala Val Ala Ser Val Thr Gln Lys Lys  
835 840 845

Phe Leu Cys Asp Arg Val Met Trp Arg Ile Pro Phe Ser Ser Asn Phe

578-13 PCT 2 Sequence listing

850  
 855 860  
 Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Met Leu Tyr Ala  
 865 870 875 880  
 Asn Ser Ala His Ala Leu Asp Met Asn Phe Glu Val Asp Pro Met Asp  
 885 890 895  
 Glu Ser Thr Leu Leu Tyr Val Val Phe Glu Val Phe Asp Val Val Arg  
 900 905 910  
 Val His Gln Pro His Arg Gly Val Ile Glu Ala Val Tyr Leu Arg Thr  
 915 920 925  
 Pro Phe Ser Ala Gly Asn Ala Thr Thr  
 930 935

<210> 21  
 <211> 937  
 <212> PRT  
 <213> Adenoviridae - Mastadenovirus  
 <400> 21

Met Ala Thr Pro Ser Met Leu Pro Gln Trp Ala Tyr Met His Ile Ala  
 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 Ser Leu Gly 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 Val Pro Val Asp Gly Glu Asp Asn Thr Tyr Ser Tyr  
 65 70 75 80  
 Lys Val Arg Tyr 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 Ser  
 100 105 110  
 Phe Lys Pro Tyr Ser Gly Thr Ala Tyr Asn Ala Leu Ala Pro Lys Gly  
 115 120 125  
 Ala Pro Asn Thr Ser Gln Trp Ile Thr Lys Asp Asn Gly Thr Asp Lys  
 130 135 140  
 Thr Tyr Ser Phe Gly Asn Ala Pro Val Arg Gly Leu Asp Ile Thr Glu  
 145 150 155 160

# 578-13 PCT 2 Sequence listing

Glu Gly Leu Gln Ile Arg Thr Asp Glu Ser Gly Gly Glu Ser Lys Lys  
 165 170 175  
 Ile Phe Ala Asp Lys Thr Tyr Gln Pro Glu Pro Gln Leu Gly Asp Glu  
 180 185 190  
 Glu Trp His Asp Thr Ile Gly Ala Glu Asp Lys Tyr Gly Gly Arg Ala  
 195 200 205  
 Leu Lys Pro Ala Thr Asn Met Lys Pro Cys Tyr Gly Ser Phe Ala Lys  
 210 215 220  
 Pro Thr Asn Ala Lys Gly Gly Gln Ala Lys Ser Arg Thr Lys Asp Asp  
 225 230 235 240  
 Gly Thr Thr Glu Pro Asp Ile Asp Met Ala Phe Phe Asp Asp Arg Ser  
 245 250 255  
 Gln Gln Ala Ser Phe Ser Pro Glu Leu Val Leu Tyr Thr Glu Asn Val  
 260 265 270  
 Asp Leu Asp Thr Pro Asp Thr His Ile Ile Tyr Lys Pro Gly Thr Asp  
 275 280 285  
 Glu Thr Ser Ser Ser Phe Asn Leu Gly Gln Gln Ser Met Pro Asn Arg  
 290 295 300  
 Pro Asn Tyr Ile Gly Phe Arg Asp Asn Phe Ile Gly Leu Met Tyr Tyr  
 305 310 315 320  
 Asn Ser Thr Gly Asn Met Gly Val Leu Ala Gly Gln Ala Ser Gln Leu  
 325 330 335  
 Asn Ala Val Val Asp Leu Gln Asp Arg Asn Thr Glu Leu Ser Tyr Gln  
 340 345 350  
 Leu Leu Leu Asp Ser Leu Gly Asp Arg Thr Arg Tyr Phe Ser Met Trp  
 355 360 365  
 Asn Gln Ala Val Asp Ser Tyr Asp Pro Asp Val Arg Ile Ile Glu Asn  
 370 375 380  
 His Gly Val Glu Asp Glu Leu Pro Asn Tyr Cys Phe Pro Leu Asn Gly  
 385 390 395 400  
 Val Gly Phe Thr Asp Thr Phe Gln Gly Ile Lys Val Lys Thr Thr Asn  
 405 410 415  
 Asn Gly Thr Ala Asn Ala Thr Glu Trp Glu Ser Asp Thr Ser Val Asn  
 420 425 430

# 578-13 PCT 2 Sequence listing

Asn Ala Asn Glu Ile Ala Lys Gly Asn Pro Phe Ala Met Glu Ile Asn  
 435 440 445  
 Ile Gln Ala Asn Leu Trp Arg Asn Phe Leu Tyr Ala Asn Val Ala Leu  
 450 455 460  
 Tyr Leu Pro Asp Ser Tyr Lys Tyr Thr Pro Ala Asn Ile Thr Leu Pro  
 465 470 475 480  
 Thr Asn Thr Asn Thr Tyr Asp Tyr Met Asn Gly Arg Val Val Ala Pro  
 485 490 495  
 Ser Leu Val Asp Ala Tyr Ile Asn Ile Gly Ala Arg Trp Ser Leu Asp  
 500 505 510  
 Pro Met Asp Asn Val Asn Pro Phe Asn His His Arg Asn Ala Gly Leu  
 515 520 525  
 Arg Tyr Arg Ser Met Leu Leu Gly Asn Gly Arg Tyr Val Pro Phe His  
 530 535 540  
 Ile Gln Val Pro Gln Lys Phe Phe Ala Ile Lys Ser Leu Leu Leu Leu  
 545 550 555 560  
 Pro Gly Ser Tyr Thr Tyr Glu Trp Asn Phe Arg Lys Asp Val Asn Met  
 565 570 575  
 Ile Leu Gln Ser Ser Leu Gly Asn Asp Leu Arg Thr Asp Gly Ala Ser  
 580 585 590  
 Ile Ala Phe Thr Ser Ile Asn Leu Tyr Ala Thr Phe Phe Pro Met Ala  
 595 600 605  
 His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn Asp Thr Asn  
 610 615 620  
 Asp Gln Ser Phe Asn Asp Tyr Leu Ser Ala Ala Asn Met Leu Tyr Pro  
 625 630 635 640  
 Ile Pro Ala Asn Ala Thr Asn Val Pro Ile Ser Ile Pro Ser Arg Asn  
 645 650 655  
 Trp Ala Ala Phe Arg Gly Trp Ser Phe Thr Arg Leu Lys Thr Arg Glu  
 660 665 670  
 Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr Ser Gly  
 675 680 685  
 Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr Phe Lys  
 690 695 700

# 578-13 PCT 2 Sequence listing

Lys Val Ser Ile Thr Phe Asp Ser Ser Val Ser Trp Pro Gly Asn Asp  
 705 710 715 720  
 Arg Leu Leu Thr Pro Asn Glu Phe Glu Ile Lys Arg Thr Val Asp Gly  
 725 730 735  
 Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp Phe Leu  
 740 745 750  
 Val Gln Met Leu Ala His Tyr Asn Ile Gly Tyr Gln Gly Phe Tyr Val  
 755 760 765  
 Pro Glu Gly Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn Phe Gln  
 770 775 780  
 Pro Met Ser Arg Gln Val Val Asp Glu Val Asn Tyr Lys Asp Tyr Gln  
 785 790 795 800  
 Ala Val Thr Leu Ala Tyr Gln His Asn Asn Ser Gly Phe Val Gly Tyr  
 805 810 815  
 Leu Ala Pro Thr Met Arg Gln Gly Gln Pro Tyr Pro Ala Asn Tyr Pro  
 820 825 830  
 Tyr Pro Leu Ile Gly Lys Ser Ala Val Ala Ser Val Thr Gln Lys Lys  
 835 840 845  
 Phe Leu Cys Asp Arg Val Met Trp Arg Ile Pro Phe Ser Ser Asn Phe  
 850 855 860  
 Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Met Leu Tyr Ala  
 865 870 875 880  
 Asn Ser Ala His Ala Leu Asp Met Asn Phe Glu Val Asp Pro Met Asp  
 885 890 895  
 Glu Ser Thr Leu Leu Tyr Val Val Phe Glu Val Phe Asp Val Val Arg  
 900 905 910  
 Val His Gln Pro His Arg Gly Val Ile Lys Ala Val Tyr Leu Arg Thr  
 915 920 925  
 Pro Phe Ser Ala Gly Asn Ala Thr Thr  
 930 935

<210> 22  
 <211> 937  
 <212> PRT  
 <213> Adenoviridae - Mastadenovirus  
 <400> 22



# 578-13 PCT 2 Sequence listing

Met Ala Thr Pro Ser Met Leu Pro Gln Trp Ala Tyr Met His Ile Ala  
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 Ser Leu Gly 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 Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr  
65 70 75 80

Lys Val Arg Tyr 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 Ser  
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 Thr Ser Gln Trp Ile Thr Lys Asp Asn Gly Thr Asp Lys  
130 135 140

Thr Tyr Ser Phe Gly Asn Ala Pro Val Arg Gly Leu Asp Ile Thr Glu  
145 150 155 160

Glu Gly Leu Gln Ile Gly Thr Asp Glu Ser Gly Gly Glu Ser Lys Lys  
165 170 175

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

Glu Trp His Asp Thr Ile Gly Ala Glu Asp Lys Tyr Gly Gly Arg Ala  
195 200 205

Leu Lys Pro Ala Thr Asn Met Lys Pro Cys Tyr Gly Ser Phe Ala Lys  
210 215 220

Pro Thr Asn Ala Lys Gly Gly Gln Ala Lys Ser Arg Thr Lys Asp Asp  
225 230 235 240

Gly Thr Thr Glu Pro Asp Ile Asp Met Ala Phe Phe Asp Asp Arg Ser  
245 250 255

Gln Gln Ala Ser Phe Ser Pro Glu Leu Val Leu Tyr Thr Glu Asn Val  
260 265 270

# 578-13 PCT 2 Sequence listing

Asp Leu Asp Thr Pro Asp Thr His Ile Ile Tyr Lys Pro Gly Thr Asp  
275 280 285

Glu Thr Ser Ser Ser Phe Asn Leu Gly Gln Gln Ser Met Pro Asn Arg  
290 295 300

Pro Asn Tyr Ile Gly Phe Arg Asp Asn Phe Ile Gly Leu Met Tyr Tyr  
305 310 315 320

Asn Ser Thr Gly Asn Met Gly Val Leu Ala Gly Gln Ala Ser Gln Leu  
325 330 335

Asn Ala Val Val Asp Leu Gln Asp Arg Asn Thr Glu Leu Ser Tyr Gln  
340 345 350

Leu Leu Leu Asp Ser Leu Gly Asp Arg Thr Arg Tyr Phe Ser Met Trp  
355 360 365

Asn Gln Ala Val Asp Ser Tyr Asp Pro Asp Val Arg Ile Ile Glu Asn  
370 375 380

His Gly Val Glu Asp Glu Leu Pro Asn Tyr Cys Phe Pro Leu Asn Gly  
385 390 395 400

Val Gly Phe Thr Asp Thr Phe Gln Gly Ile Lys Val Lys Thr Thr Asn  
405 410 415

Asn Gly Thr Ala Asn Ala Thr Glu Trp Glu Ser Asp Thr Ser Val Asn  
420 425 430

Asn Ala Asn Glu Ile Ala Lys Gly Asn Pro Phe Ala Met Glu Ile Asn  
435 440 445

Ile Gln Ala Asn Leu Trp Arg Asn Phe Leu Tyr Ala Asn Val Ala Leu  
450 455 460

Tyr Leu Pro Asp Ser Tyr Lys Tyr Thr Pro Ala Asn Ile Thr Leu Pro  
465 470 475 480

Thr Asn Thr Asn Thr Tyr Asp Tyr Met Asn Gly Arg Val Val Ala Pro  
485 490 495

Ser Leu Val Asp Ala Tyr Ile Asn Ile Gly Ala Arg Trp Ser Leu Asp  
500 505 510

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

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

# 578-13 PCT 2 Sequence listing

Ile Gln Val Pro Gln Lys Phe Phe Ala Ile Lys Ser Leu Leu Leu Leu  
545 550 555 560

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

Ile Leu Gln Ser Ser Leu Gly Asn Asp Leu Arg Thr Asp Gly Ala Ser  
580 585 590

Ile Ala Phe Thr Ser Ile Asn Leu Tyr Ala Thr Phe Phe Pro Met Ala  
595 600 605

His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn Asp Thr Asn  
610 615 620

Asp Gln Ser Phe Asn Asp Tyr Leu Ser Ala Ala Asn Met Leu Tyr Pro  
625 630 635 640

Ile Pro Ala Asn Ala Thr Asn Val Pro Ile Ser Ile Pro Ser Arg Asn  
645 650 655

Trp Ala Ala Phe Arg Gly Trp Ser Phe Thr Arg Leu Lys Thr Arg Glu  
660 665 670

Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr Ser Gly  
675 680 685

Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr Phe Lys  
690 695 700

Lys Val Ser Ile Thr Phe Asp Ser Ser Val Ser Trp Pro Gly Asn Asp  
705 710 715 720

Arg Leu Leu Thr Pro Asn Glu Phe Glu Ile Lys Arg Thr Val Asp Gly  
725 730 735

Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp Phe Leu  
740 745 750

Val Gln Met Leu Ala His Tyr Asn Ile Gly Tyr Gln Gly Phe Tyr Val  
755 760 765

Pro Glu Gly Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn Phe Gln  
770 775 780

Pro Met Ser Arg Gln Val Val Asp Glu Val Asn Tyr Lys Asp Tyr Gln  
785 790 795 800

Ala Val Thr Leu Ala Tyr Gln His Asn Asn Ser Gly Phe Val Gly Tyr  
805 810 815

# 578-13 PCT 2 Sequence listing

Leu Ala Pro Thr Met Arg Gln Gly Gln Pro Tyr Pro Ala Asn Tyr Pro  
820 825 830

Tyr Pro Leu Ile Gly Lys Ser Ala Val Ala Ser Val Thr Gln Lys Lys  
835 840 845

Phe Leu Cys Asp Arg Val Met Trp Arg Ile Pro Phe Ser Ser Asn Phe  
850 855 860

Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Met Leu Tyr Ala  
865 870 875 880

Asn Ser Ala His Ala Leu Asp Met Asn Phe Glu Val Asp Pro Met Asp  
885 890 895

Glu Ser Thr Leu Leu Tyr Val Val Phe Glu Val Phe Asp Val Val Arg  
900 905 910

Val His Gln Pro His Arg Gly Val Ile Glu Ala Val Tyr Leu Arg Thr  
915 920 925

Pro Phe Ser Ala Gly Asn Ala Thr Thr  
930 935

<210> 23  
<211> 937  
<212> PRT  
<213> Adenoviridae - Mastadenovirus

<220>  
<221> misc\_feature  
<222> (296)..(296)  
<223> xaa can be any naturally occurring amino acid

<400> 23

Met Ala Thr Pro Ser Met Leu Pro Gln Trp Ala Tyr Met His Ile Ala  
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 Ser Leu Gly 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 Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr  
65 70 75 80

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

# 578-13 PCT 2 Sequence listing

Ala Ser Thr Tyr Phe Asp Ile Arg Gly Val Leu Asp Arg Gly Pro Ser  
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 Thr Ser Gln Trp Ile Thr Lys Asp Asn Gly Thr Asp Lys  
130 135 140

Thr Tyr Ser Phe Gly Asn Ala Pro Val Arg Gly Leu Asp Ile Thr Glu  
145 150 155 160

Glu Gly Leu Gln Ile Gly Thr Asp Glu Ser Gly Gly Lys Ser Lys Lys  
165 170 175

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

Glu Trp His Asp Thr Ile Gly Ala Glu Asp Lys Tyr Gly Gly Arg Ala  
195 200 205

Leu Lys Pro Ala Thr Asn Met Lys Pro Cys Tyr Gly Ser Phe Ala Lys  
210 215 220

Pro Thr Asn Ala Lys Gly Gly Gln Ala Lys Ser Arg Thr Lys Asp Asp  
225 230 235 240

Gly Thr Thr Glu Pro Asp Ile Asp Met Ala Phe Phe Asp Asp Arg Ser  
245 250 255

Gln Gln Ala Ser Phe Ser Pro Glu Leu Val Leu Tyr Thr Glu Asn Val  
260 265 270

Asp Leu Asp Thr Pro Asp Thr His Ile Ile Tyr Lys Pro Gly Thr Asp  
275 280 285

Glu Thr Ser Ser Ser Phe Asn Xaa Gly Gln Gln Ser Met Pro Asn Arg  
290 295 300

Pro Asn Tyr Ile Gly Phe Arg Asp Asn Phe Ile Gly Leu Met Tyr Tyr  
305 310 315 320

Asn Ser Thr Gly Asn Met Gly Val Leu Ala Gly Gln Ala Ser Gln Leu  
325 330 335

Asn Ala Val Val Asp Leu Gln Asp Arg Asn Thr Glu Leu Ser Tyr Gln  
340 345 350

Leu Leu Leu Asp Ser Leu Gly Asp Arg Thr Arg Tyr Phe Ser Met Trp  
355 360 365

# 578-13 PCT 2 Sequence listing

Asn Gln Ala Val Asp Ser Tyr Asp Pro Asp Val Arg Ile Ile Glu Asn  
 370 375 380  
 His Gly Val Glu Asp Glu Leu Pro Asn Tyr Cys Phe Pro Leu Asn Gly  
 385 390 395 400  
 Val Gly Phe Thr Asp Thr Phe Gln Gly Ile Lys Val Lys Thr Thr Asn  
 405 410 415  
 Asn Gly Thr Ala Asn Ala Thr Glu Trp Glu Ser Asp Thr Ser Val Asn  
 420 425 430  
 Asn Ala Asn Glu Ile Ala Lys Gly Asn Pro Phe Ala Met Glu Ile Asn  
 435 440 445  
 Ile Gln Ala Asn Leu Trp Arg Asn Phe Leu Tyr Ala Asn Val Ala Leu  
 450 455 460  
 Tyr Leu Pro Asp Ser Tyr Lys Tyr Thr Pro Ala Asn Ile Thr Leu Pro  
 465 470 475 480  
 Thr Asn Thr Asn Thr Tyr Asp Tyr Met Asn Gly Arg Val Val Ala Pro  
 485 490 495  
 Ser Leu Val Asp Ala Tyr Ile Asn Ile Gly Ala Arg Trp Ser Leu Asp  
 500 505 510  
 Pro Met Asp Asn Val Asn Pro Phe Asn His His Arg Asn Ala Gly Leu  
 515 520 525  
 Arg Tyr Arg Ser Met Leu Leu Gly Asn Gly Arg Tyr Val Pro Phe His  
 530 535 540  
 Ile Gln Val Pro Gln Lys Phe Phe Ala Ile Lys Asn Leu Leu Leu Leu  
 545 550 555 560  
 Pro Gly Ser Tyr Thr Tyr Glu Trp Asn Phe Arg Lys Asp Val Asn Met  
 565 570 575  
 Ile Leu Gln Ser Ser Leu Gly Asn Asp Leu Arg Thr Asp Gly Ala Ser  
 580 585 590  
 Ile Ala Phe Thr Ser Ile Asn Leu Tyr Ala Thr Phe Phe Pro Met Ala  
 595 600 605  
 His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn Asp Thr Asn  
 610 615 620  
 Asp Gln Ser Phe Asn Asp Tyr Leu Ser Ala Ala Asn Met Leu Tyr Pro  
 625 630 635 640

# 578-13 PCT 2 Sequence listing

Ile Pro Ala Asn Ala Thr Asn Val Pro Ile Ser Ile Pro Ser Arg Asn  
645 650 655

Trp Ala Ala Phe Arg Gly Trp Ser Phe Thr Arg Leu Lys Thr Arg Glu  
660 665 670

Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr Ser Gly  
675 680 685

Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr Phe Lys  
690 695 700

Lys Val Ser Ile Thr Phe Asp Ser Ser Val Ser Trp Pro Gly Asn Asp  
705 710 715 720

Arg Leu Leu Thr Pro Asn Glu Phe Glu Ile Lys Arg Thr Val Asp Gly  
725 730 735

Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp Phe Leu  
740 745 750

Val Gln Met Leu Ala His Tyr Asn Ile Gly Tyr Gln Gly Phe Tyr Val  
755 760 765

Pro Glu Gly Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn Phe Gln  
770 775 780

Pro Met Ser Arg Gln Val Val Asp Glu Val Asn Tyr Lys Asp Tyr Gln  
785 790 795 800

Ala Val Thr Leu Ala Tyr Gln His Asn Asn Ser Gly Phe Val Gly Tyr  
805 810 815

Leu Ala Pro Thr Met Arg Gln Gly Gln Pro Tyr Pro Ala Asn Tyr Pro  
820 825 830

Tyr Pro Leu Ile Gly Lys Ser Ala Val Ala Ser Val Thr Gln Lys Lys  
835 840 845

Phe Leu Cys Asp Arg Val Met Trp Arg Ile Pro Phe Ser Ser Asn Phe  
850 855 860

Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Met Leu Tyr Ala  
865 870 875 880

Asn Ser Ala His Ala Leu Asp Met Asn Phe Glu Val Asp Pro Met Asp  
885 890 895

Glu Ser Thr Leu Leu Tyr Val Val Phe Glu Val Phe Asp Val Val Arg  
900 905 910

# 578-13 PCT 2 Sequence listing

Val His Gln Pro His Arg Gly Val Ile Glu Ala Val Tyr Leu Arg Thr  
915 920 925

Pro Phe Ser Ala Gly Asn Ala Thr Thr  
930 935

<210> 24  
<211> 937  
<212> PRT  
<213> Adenoviridae - Mastadenovirus

<220>  
<221> misc\_feature  
<222> (538)..(538)  
<223> Xaa can be any naturally occurring amino acid

<400> 24

Met Ala Thr Pro Ser Met Leu Pro Gln Trp Ala Tyr Met His Ile Ala  
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 Ser Leu Gly 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 Val Pro Val Asp Arg Glu Asp Asn Thr Tyr Ser Tyr  
65 70 75 80

Lys Val Arg Tyr 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 Ser  
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 Thr Ser Gln Trp Val Thr Lys Asp Asn Gly Thr Asp Lys  
130 135 140

Thr Tyr Ser Phe Gly Asn Ala Pro Val Arg Gly Leu Asp Ile Thr Glu  
145 150 155 160

Glu Gly Leu Gln Ile Gly Thr Asp Asp Ser Ser Thr Glu Ser Lys Lys  
165 170 175

Ile Phe Ala Asp Lys Thr Tyr Gln Pro Glu Pro Gln Val Gly Asp Glu  
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180 185 190

Glu Trp His Asp Thr Ile Gly Ala Glu Asp Lys Tyr Gly Gly Arg Ala  
195 200 205

Leu Lys Pro Ala Thr Asn Met Lys Pro Cys Tyr Gly Ser Phe Ala Lys  
210 215 220

Pro Thr Asn Ala Lys Gly Gly Gln Ala Lys Thr Arg Thr Lys Asp Asp  
225 230 235 240

Gly Thr Thr Glu Pro Asp Ile Asp Met Ala Phe Phe Asp Asp Arg Ser  
245 250 255

Gln Gln Ala Ser Phe Ser Pro Glu Leu Val Leu Tyr Thr Glu Asn Val  
260 265 270

Asp Leu Glu Thr Pro Asp Thr His Ile Ile Tyr Lys Pro Gly Thr Asp  
275 280 285

Glu Thr Ser Ser Ser Phe Asn Leu Gly Gln Gln Ser Met Pro Asn Arg  
290 295 300

Pro Asn Tyr Ile Gly Phe Arg Asp Asn Phe Ile Gly Leu Met Tyr Tyr  
305 310 315 320

Asn Ser Thr Gly Asn Met Gly Val Leu Ala Gly Gln Ala Ser Gln Leu  
325 330 335

Asn Ala Val Val Asp Leu Gln Asp Arg Asn Thr Glu Leu Ser Tyr Gln  
340 345 350

Leu Leu Leu Asp Ser Leu Gly Asp Arg Thr Arg Tyr Phe Ser Met Trp  
355 360 365

Asn Gln Ala Val Asp Ser Tyr Asp Pro Asp Val Arg Ile Ile Glu Asn  
370 375 380

His Gly Val Glu Asp Glu Leu Pro Asn Tyr Cys Phe Pro Leu Asn Gly  
385 390 395 400

Val Gly Phe Thr Asp Thr Phe Gln Gly Ile Lys Val Lys Thr Thr Asn  
405 410 415

Asn Gly Thr Ala Asn Ala Thr Glu Trp Glu Ser Asp Thr Ser Val Asn  
420 425 430

Asn Ala Asn Glu Ile Ala Lys Gly Asn Pro Phe Ala Met Glu Ile Asn  
435 440 445

Ile Gln Ala Asn Leu Trp Arg Asn Phe Leu Tyr Ala Asn Val Ala Leu

578-13 PCT 2 Sequence listing

450  
465 Tyr Leu Pro Asp Ser Tyr Lys Tyr Thr Pro Ala Asn Val Thr Leu Pro  
470 475 480

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

Ser Leu Val Asp Ser Tyr Ile Asn Ile Gly Ala Arg Trp Ser Leu Asp  
500 505 510

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

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

Ile Gln Val Pro Gln Lys Phe Phe Ala Ile Lys Ser Leu Leu Leu Leu  
545 550 555 560

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

Ile Leu Gln Ser Ser Leu Gly Asn Asp Leu Arg Thr Asp Gly Ala Ser  
580 585 590

Ile Ser Phe Thr Ser Ile Asn Leu Tyr Ala Thr Phe Phe Pro Met Ala  
595 600 605

His Asn Thr Ala Ser Thr Leu Glu Ala Met Leu Arg Asn Asp Thr Asn  
610 615 620

Asp Gln Ser Phe Asn Asp Tyr Leu Ser Ala Ala Asn Met Leu Tyr Pro  
625 630 635 640

Ile Pro Ala Asn Ala Thr Asn Val Pro Ile Ser Ile Pro Ser Arg Asn  
645 650 655

Trp Ala Ala Phe Arg Gly Trp Ser Phe Thr Arg Leu Lys Thr Lys Glu  
660 665 670

Thr Pro Ser Leu Gly Ser Gly Phe Asp Pro Tyr Phe Val Tyr Ser Gly  
675 680 685

Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr Phe Lys  
690 695 700

Lys Val Ser Ile Thr Phe Asp Ser Ser Val Ser Trp Pro Gly Asn Asp  
705 710 715 720

Arg Leu Leu Thr Pro Asn Glu Phe Glu Ile Lys Arg Thr Val Asp Gly

## 578-13 PCT 2 Sequence listing

Glu Gly Tyr Asn Val Ala Gln Cys Asn Met Thr Lys Asp Trp Phe Leu  
740 745 750

Val Gln Met Leu Ala His Tyr Asn Ile Gly Tyr Gln Gly Phe Tyr Val  
755 760 765

Pro Glu Gly Tyr Lys Asp Arg Met Tyr Ser Phe Phe Arg Asn Phe Gln  
770 775 780

Pro Met Ser Arg Gln Val Val Asp Glu Val Asn Tyr Lys Asp Tyr Gln  
785 790 795 800

Ala Val Thr Leu Ala Tyr Gln His Asn Asn Ser Gly Phe Val Gly Tyr  
805 810 815

Leu Ala Pro Thr Met Arg Gln Gly Gln Pro Tyr Pro Ala Asn Tyr Pro  
820 825 830

Tyr Pro Leu Ile Gly Lys Ser Ala Val Thr Ser Val Thr Gln Lys Lys  
835 840 845

Phe Leu Cys Asp Arg Val Met Trp Arg Ile Pro Phe Ser Ser Asn Phe  
850 855 860

Met Ser Met Gly Ala Leu Thr Asp Leu Gly Gln Asn Met Leu Tyr Ala  
865 870 875 880

Asn Ser Ala His Ala Leu Asp Met Asn Phe Glu Val Asp Pro Met Asp  
885 890 895

Glu Ser Thr Leu Leu Tyr Val Val Phe Glu Val Phe Asp Val Val Arg  
900 905 910

Val His Gln Pro His Arg Gly Val Ile Glu Ala Val Tyr Leu Arg Thr  
915 920 925

Pro Phe Ser Ala Gly Asn Ala Thr Thr  
930 935

<210> 25

**<211> 962**

<212> PRT

<213> Adenoviridae - Mastadenovirus

<400> 25

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

# 578-13 PCT 2 Sequence listing

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

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

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

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

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

Thr Ala Ala Gly Gly Thr Lys Asp Leu Phe Ala Asp Pro Thr Phe Gln  
195 200 205

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

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

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

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

Phe Phe Ser Thr Ser Thr Asn Ala Thr Asn Glu Gln Asn Asn Ile Gln  
275 280 285

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

# 578-13 PCT 2 Sequence listing

Thr His Ile Ser Tyr Lys Pro Thr Lys Ser Asp Asp Asn Ser Lys Val  
 305 310 315 320  
 Met Leu Gly Gln Gln Ser Met Pro Asn Arg Pro Asn Tyr Ile Ala Phe  
 325 330 335  
 Arg Asp Asn Phe Ile Gly Leu Met Tyr 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 Leu Leu Asp Ser Met  
 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 Thr 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 Ala Ile Lys Thr Asn Gly Asn Gly Ala Gly Asp Gln Ala Thr  
 435 440 445  
 Thr Trp Gln Lys Asp Ser Gln Phe Ala Asp Arg Asn Glu Ile Gly Val  
 450 455 460  
 Gly Asn Asn Phe Ala Met Glu Ile Asn Leu Ser Ala Asn Leu Trp Arg  
 465 470 475 480  
 Asn Phe Leu Tyr Ser Asn Val Ala Leu Tyr Leu Pro Asp Lys Leu Lys  
 485 490 495  
 Tyr Asn Pro Ser Asn Val Glu Ile Ser Asp Asn Pro Asn Thr Tyr Asp  
 500 505 510  
 Tyr Met Asn Lys Arg Val Val Ala Pro Gly Leu Val Asp Cys Tyr Ile  
 515 520 525  
 Asn Leu Gly Ala Arg Trp Ser Leu Asp Tyr Met Asp Asn Val Asn Pro  
 530 535 540  
 Phe Asn His His Arg Asn Ala Gly Leu Arg Tyr Arg Ser Met Leu Leu  
 545 550 555 560  
 Gly Asn Gly Arg Tyr Val Pro Phe His Ile Gln Val Pro Gln Lys Phe  
 565 570 575

# 578-13 PCT 2 Sequence listing

Phe Ala Ile Lys Asn Leu Leu Leu Leu Pro Gly Ser Tyr Thr Tyr Glu  
 580 585 590  
 Trp Asn Phe Arg Lys Asp Val Asn Met Val Leu Gln Ser Ser Leu Gly  
 595 600 605  
 Asn Asp Leu Arg Val Asp Gly Ala Ser Ile Lys Phe Glu Ser Ile Cys  
 610 615 620  
 Leu Tyr Ala Thr Phe Phe Pro Met Ala His Asn Thr Ala Ser Thr Leu  
 625 630 635 640  
 Glu Ala Met Leu Arg Asn Asp Thr Asn Asp Gln Ser Phe Asn Asp Tyr  
 645 650 655  
 Leu Ser Ala Ala Asn Met Leu Tyr Pro Ile Pro Ala Asn Ala Thr Asn  
 660 665 670  
 Val Pro Ile Ser Ile Pro Ser Arg Asn Trp Ala Ala Phe Arg Gly Trp  
 675 680 685  
 Ala Phe Thr Arg Leu Lys Thr Lys Glu Thr Pro Ser Leu Gly Ser Gly  
 690 695 700  
 Phe Asp Pro Tyr Tyr Thr Tyr Ser Gly Ser Ile Pro Tyr Leu Asp Gly  
 705 710 715 720  
 Thr Phe Tyr Leu Asn His Thr Phe Lys Lys Val Ser Val Thr Phe Asp  
 725 730 735  
 Ser Ser Val Ser Trp Pro Gly Asn Asp Arg Leu Leu Thr Pro Asn Glu  
 740 745 750  
 Phe Glu Ile Lys Arg Ser Val Asp Gly Glu Gly Tyr Asn Val Ala Gln  
 755 760 765  
 Cys Asn Met Thr Lys Asp Trp Phe Leu Ile Gln Met Leu Ala Asn Tyr  
 770 775 780  
 Asn Ile Gly Tyr Gln Gly Phe Tyr Ile Pro Glu Ser Tyr Lys Asp Arg  
 785 790 795 800  
 Met Tyr Ser Phe Phe Arg Asn Phe Gln Pro Met Ser Arg Gln Val Val  
 805 810 815  
 Asp Glu Thr Lys Tyr Lys Asp Tyr Gln Gln Val Gly Ile Ile His Gln  
 820 825 830  
 His Asn Asn Ser Gly Phe Val Gly Tyr Leu Ala Pro Thr Met Arg Glu  
 835 840 845

578-13 PCT 2 Sequence listing

Gly Gln Ala Tyr Pro Ala Asn Phe Pro Tyr Pro Leu Ile Gly Lys Thr  
850 855 860

Ala Val Asp Ser Ile Thr Gln Lys Lys Phe Leu Cys Asp Arg Thr Leu  
865 870 875 880

Trp Arg Ile Pro Phe Ser Ser Asn Phe Met Ser Met Gly Ala Leu Thr  
885 890 895

Asp Leu Gly Gln Asn Leu Leu Tyr Ala Asn Ser Ala His Ala Leu Asp  
900 905 910

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

Leu Phe Glu Val Phe Asp Val Val Arg Val His Gln Pro His Arg Gly  
930 935 940

Val Ile Glu Thr Val Tyr Leu Arg Thr Pro Phe Ser Ala Gly Asn Ala  
945 950 955 960

Thr Thr

<210> 26  
<211> 531  
<212> PRT  
<213> Adenoviridae - Mastadenovirus

<400> 26

Met Met Arg Arg Val Tyr Pro Glu Gly Pro Pro Pro Ser Tyr Glu Ser  
1 5 10 15

Val Met Gln Gln Ala Val Ala Ala Ala Met Gln Pro Pro Leu Glu Ala  
20 25 30

Pro Tyr Val Pro Pro Arg Tyr Leu Ala Pro Thr Glu Gly Arg Asn Ser  
35 40 45

Ile Arg Tyr Ser Glu Leu Ala Pro Leu Tyr Asp Thr Thr Arg Leu Tyr  
50 55 60

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

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

Pro Thr Glu Ala Ser Thr Gln Thr Ile Asn Phe Asp Glu Arg Ser Arg  
100 105 110

# 578-13 PCT 2 Sequence listing

Trp Gly Gly Gln Leu Lys Thr Ile Met His Thr Asn Met Pro Asn Val  
115 120 125

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

Arg Lys Thr Pro Asn Gly Val Ala Val Gly Asp Asp Tyr Asp Gly Gly  
145 150 155 160

Gln Asp Glu Leu Thr Tyr Glu Trp Val Glu Phe Glu Leu Pro Glu Gly  
165 170 175

Asn Phe Ser Val Thr Met Thr Ile Asp Leu Met Asn Asn Ala Ile Ile  
180 185 190

Asp Asn Tyr Leu Ala Val Gly Arg Gln Asn Gly Val Leu Glu Ser Asp  
195 200 205

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

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

Pro Asp Ile Val Leu Leu Pro Gly Cys Gly Val Asp Phe Thr Glu Ser  
245 250 255

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

Gly Phe Gln Ile Leu Tyr Glu Asp Leu Glu Gly Gly Asn Ile Pro Ala  
275 280 285

Leu Leu Asp Val Glu Ala Tyr Glu Lys Ser Lys Glu Glu Ser Ala Ala  
290 295 300

Ala Ala Thr Ala Ala Val Ala Thr Ala Ser Thr Glu Val Arg Gly Asp  
305 310 315 320

Asn Phe Ala Ser Ala Ala Ala Val Ala Glu Ala Ala Glu Thr Glu Ser  
325 330 335

Lys Ile Val Ile Gln Pro Val Glu Lys Asp Ser Lys Asp Arg Ser Tyr  
340 345 350

Asn Val Leu Ala Asp Lys Lys Asn Thr Ala Tyr Arg Ser Trp Tyr Leu  
355 360 365

Ala Tyr Asn Tyr Gly Asp Pro Glu Lys Gly Val Arg Ser Trp Thr Leu  
370 375 380



578-13 PCT 2 Sequence listing

Leu Thr Thr Ser Asp Val Thr Cys Gly Val Glu Gln Val Tyr Trp Ser  
385 390 395 400

Leu Pro Asp Met Met Gln Asp Pro Val Thr Phe Arg Ser Thr Arg Gln  
405 410 415

Val Ser Asn Tyr Pro Val Val Gly Ala Glu Leu Leu Pro Val Tyr Ser  
420 425 430

Lys Ser Phe Phe Asn Glu Gln Ala Val Tyr Ser Gln Gln Leu Arg Ala  
435 440 445

Phe Thr Ser Leu Thr His Val Phe Asn Arg Phe Pro Glu Asn Gln Ile  
450 455 460

Leu Val Arg Pro Pro Ala Pro Thr Ile Thr Thr Val Ser Glu Asn Val  
465 470 475 480

Pro Ala Leu Thr Asp His Gly Thr Leu Pro Leu Arg Ser Ser Ile Arg  
485 490 495

Gly Val Gln Arg Val Thr Val Thr Asp Ala Arg Arg Arg Thr Cys Pro  
500 505 510

Tyr Val Tyr Lys Ala Leu Gly Val Val Ala Pro Arg Val Leu Ser Ser  
515 520 525

Arg Thr Phe  
530

<210> 27  
<211> 541  
<212> PRT  
<213> Adenoviridae - Mastadenovirus  
<400> 27

Met Met Arg Arg Val Tyr Pro Glu Gly Pro Pro Pro Ser Tyr Glu Ser  
1 5 10 15

Val Met Gln Gln Ala Val Ala Val Ala Met Gln Pro Pro Leu Glu Ala  
20 25 30

Pro Tyr Val Pro Pro Arg Tyr Leu Ala Pro Thr Glu Gly Arg Asn Ser  
35 40 45

Ile Arg Tyr Ser Glu Leu Ala Pro Leu Tyr Asp Thr Thr Arg Leu Tyr  
50 55 60

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

578-13 PCT 2 Sequence listing

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

Pro Thr Glu Ala Ser Thr Gln Thr Ile Asn Phe Asp Glu Arg Ser Arg  
100 105 110

Trp Gly Gly Gln Leu Lys Thr Ile Met His Thr Asn Met Pro Asn Val  
115 120 125

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

Arg Lys Thr Pro Asn Gly Val Thr Val Gly Asp Asp Tyr Asp Gly Ser  
145 150 155 160

Gln Asp Glu Leu Thr Tyr Glu Trp Val Glu Phe Glu Leu Pro Glu Gly  
165 170 175

Asn Phe Ser Val Thr Met Thr Ile Asp Leu Met Asn Asn Ala Ile Ile  
180 185 190

Asp Asn Tyr Leu Ala Val Gly Arg Gln Asn Gly Val Leu Glu Ser Asp  
195 200 205

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

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

Pro Asp Ile Val Leu Leu Pro Gly Cys Gly Val Asp Phe Thr Glu Ser  
245 250 255

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

Gly Phe Gln Ile Leu Tyr Glu Asp Leu Glu Gly Gly Asn Ile Pro Ala  
275 280 285

Leu Leu Asp Val Glu Ala Tyr Glu Lys Ser Lys Glu Asp Ser Ala Ala  
290 295 300

Ala Thr Thr Ala Ala Val Ala Thr Ala Ala Thr Thr Asp Ala Asp Ala  
305 310 315 320

Thr Thr Thr Arg Gly Asp Thr Phe Ala Thr Gln Ala Glu Glu Ala Ala  
325 330 335

Ala Leu Ala Ala Thr Asp Asp Ser Glu Ser Lys Ile Val Ile Lys Pro  
340 345 350

# 578-13 PCT 2 Sequence listing

Val Glu Lys Asp Ser Lys Asp Arg Ser Tyr Asn Val Leu Ala Asp Lys  
355 360 365

Lys Asn Thr Ala Tyr Arg Ser Trp Tyr Leu Ala Tyr Asn Tyr Gly Asp  
370 375 380

Pro Glu Lys Gly Val Arg Ser Trp Thr Leu Leu Thr Thr Ser Asp Val  
385 390 395 400

Thr Cys Gly Val Glu Gln Val Tyr Trp Ser Leu Pro Asp Met Met Gln  
405 410 415

Asp Pro Val Thr Phe Arg Ser Thr Arg Gln Val Ser Asn Tyr Pro Val  
420 425 430

Val Gly Ala Glu Leu Leu Pro Val Tyr Ser Lys Ser Phe Phe Asn Glu  
435 440 445

Gln Ala Val Tyr Ser Gln Gln Leu Arg Ala Phe Thr Ser Leu Thr His  
450 455 460

Val Phe Asn Arg Phe Pro Glu Asn Gln Ile Leu Val Arg Pro Pro Ala  
465 470 475 480

Pro Thr Ile Thr Thr Val Ser Glu Asn Val Pro Ala Leu Thr Asp His  
485 490 495

Gly Thr Leu Pro Leu Arg Ser Ser Ile Arg Gly Val Gln Arg Val Thr  
500 505 510

Val Thr Asp Ala Arg Arg Arg Thr Cys Pro Tyr Val Tyr Lys Ala Leu  
515 520 525

Gly Val Val Ala Pro Arg Val Leu Ser Ser Arg Thr Phe  
530 535 540

<210> 28

<211> 532

<212> PRT

<213> Adenoviridae - Mastadenovirus

<400> 28

Met Met Arg Arg Val Tyr Pro Glu Gly Pro Pro Pro Ser Tyr Glu Ser  
1 5 10 15

Val Met Gln Gln Ala Val Ala Ala Ala Met Gln Pro Pro Leu Glu Ala  
20 25 30

Pro Tyr Val Pro Pro Arg Tyr Leu Ala Pro Thr Glu Gly Arg Asn Ser  
35 40 45

Ile Arg Tyr Ser Glu Leu Ala Pro Leu Tyr Asp Thr Thr Arg Leu Tyr  
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50

## 578-13 PCT 2 Sequence listing

55

60

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

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

Pro Thr Glu Ala Ser Thr Gln Thr Ile Asn Phe Asp Glu Arg Ser Arg  
100 105 110

Trp Gly Gly Gln Leu Lys Thr Ile Met His Thr Asn Met Pro Asn Val  
115 120 125

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

Arg Lys Thr Pro Asn Gly Val Thr Val Thr Asp Gly Ser Gln Asp Glu  
145 150 155 160

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

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

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

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

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

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

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

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

Val Glu Ala Tyr Glu Lys Ser Lys Glu Asp Ser Thr Ala Val Ala Thr  
290 295 300

Ala Ala Thr Val Ala Asp Ala Thr Val Thr Arg Gly Asp Thr Phe Ala  
305 310 315 320

Thr Gln Ala Glu Glu Ala Ala Ala Leu Ala Ala Thr Asp Asp Ser Glu  
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578-13 PCT 2 Sequence listing

325  
 Ser Lys Ile Val Ile Lys Pro Val Glu Lys Asp Ser Lys Asp Arg Ser  
 340 345 350  
 Tyr Asn Val Leu Ser Asp Gly Lys Asn Thr Ala Tyr Arg Ser Trp Tyr  
 355 360 365  
 Leu Ala Tyr Asn Tyr Gly Asp Pro Glu Lys Gly Val Arg Ser Trp Thr  
 370 375 380  
 Leu Leu Thr Thr Ser Asp Val Thr Cys Gly Val Glu Gln Val Tyr Trp  
 385 390 395 400  
 Ser Leu Pro Asp Met Met Gln Asp Pro Val Thr Phe Arg Ser Thr Arg  
 405 410 415  
 Gln Val Ser Asn Tyr Pro Val Val Gly Ala Glu Leu Leu Pro Val Tyr  
 420 425 430  
 Ser Lys Ser Phe Phe Asn Glu Gln Ala Val Tyr Ser Gln Gln Leu Arg  
 435 440 445  
 Ala Phe Thr Ser Leu Thr His Val Phe Asn Arg Phe Pro Glu Asn Gln  
 450 455 460  
 Ile Leu Val Arg Pro Pro Ala Pro Thr Ile Thr Thr Val Ser Glu Asn  
 465 470 475 480  
 Val Pro Ala Leu Thr Asp His Gly Thr Leu Pro Leu Arg Ser Ser Ile  
 485 490 495  
 Arg Gly Val Gln Arg Val Thr Val Thr Asp Ala Arg Arg Arg Thr Cys  
 500 505 510  
 Pro Tyr Val Tyr Lys Ala Leu Gly Val Val Ala Pro Arg Val Leu Ser  
 515 520 525  
 Ser Arg Thr Phe  
 530

<210> 29  
 <211> 528  
 <212> PRT  
 <213> Adenoviridae - Mastadenovirus

<400> 29

Met Met Arg Arg Val Tyr Pro Glu Gly Pro Pro Pro Ser Tyr Glu Ser  
 1 5 10 15

Val Met Gln Gln Ala Val Ala Ala Ala Met Gln Pro Pro Leu Glu Ala  
 20 25 30

# 578-13 PCT 2 Sequence listing

Pro Tyr Val<sub>35</sub> Pro Pro Arg Tyr Leu<sub>40</sub> Ala Pro Thr Glu Gly<sub>45</sub> Arg Asn Ser  
Ile Arg Tyr Ser Glu Leu Ala<sub>55</sub> Pro Leu Tyr Asp Thr<sub>60</sub> Thr Arg Leu Tyr  
Leu Val Asp Asn Lys Ser<sub>70</sub> Ala Asp Ile Ala Ser<sub>75</sub> Leu Asn Tyr Gln Asn<sub>80</sub>  
Asp His Ser Asn Phe<sub>85</sub> Leu Thr Thr Val Val<sub>90</sub> Gln Asn Asn Asp Phe Thr<sub>95</sub>  
Pro Thr Glu Ala<sub>100</sub> Ser Thr Gln Thr Ile<sub>105</sub> Asn Phe Asp Glu Arg<sub>110</sub> Ser Arg  
Trp Gly Gly<sub>115</sub> Gln Leu Lys Thr Ile<sub>120</sub> Met His Thr Asn Met<sub>125</sub> Pro Asn Val  
Asn Glu<sub>130</sub> Phe Leu Tyr Ser Asn<sub>135</sub> Lys Phe Lys Ala Arg<sub>140</sub> Val Met Val Ser  
Arg Lys Thr Pro Asn Gly<sub>150</sub> Val Thr Val Thr Asp<sub>155</sub> Gly Ser Gln Asp Glu<sub>160</sub>  
Leu Thr Tyr Glu Trp<sub>165</sub> Val Glu Phe Glu Leu<sub>170</sub> Pro Glu Gly Asn Phe Ser<sub>175</sub>  
Val Thr Met Thr<sub>180</sub> Ile Asp Leu Met Asn<sub>185</sub> Asn Ala Ile Ile Asp<sub>190</sub> Asn Tyr  
Leu Ala Val<sub>195</sub> Gly Arg Gln Asn Gly<sub>200</sub> Val Leu Glu Ser Asp<sub>205</sub> Ile Gly Val  
Lys Phe Asp Thr Arg Asn Phe<sub>215</sub> Arg Leu Gly Trp Asp<sub>220</sub> Pro Val Thr Glu  
Leu Val Met Pro Gly Val<sub>230</sub> Tyr Thr Asn Glu Ala<sub>235</sub> Phe His Pro Asp Ile<sub>240</sub>  
Val Leu Leu Pro Gly<sub>245</sub> Cys Gly Val Asp Phe<sub>250</sub> Thr Glu Ser Arg Leu Ser<sub>255</sub>  
Asn Leu Leu Gly<sub>260</sub> Ile Arg Lys Arg Gln<sub>265</sub> Pro Phe Gln Glu Gly<sub>270</sub> Phe Gln  
Ile Met Tyr<sub>275</sub> Glu Asp Leu Glu Gly<sub>280</sub> Gly Asn Ile Pro Ala<sub>285</sub> Leu Leu Asp  
Val Glu<sub>290</sub> Ala Tyr Glu Lys Ser<sub>295</sub> Lys Glu Asp Ser Ala<sub>300</sub> Ala Ala Ala Thr

# 578-13 PCT 2 Sequence listing

Ala Ala Val Ala Thr Ala Ser Thr Glu Val Arg Gly Asp Asn Phe Ala  
305 310 315 320

Ser Ala Ala Ala Val Ala Glu Ala Ala Glu Thr Glu Ser Lys Ile Val  
325 330 335

Ile Gln Pro Val Glu Lys Asp Ser Lys Asp Arg Ser Tyr Asn Val Leu  
340 345 350

Ala Asp Lys Lys Asn Thr Ala Tyr Arg Ser Trp Tyr Leu Ala Tyr Asn  
355 360 365

Tyr Gly Asp Pro Glu Lys Gly Val Arg Ser Trp Thr Leu Leu Thr Thr  
370 375 380

Ser Asp Val Thr Cys Gly Val Glu Gln Val Tyr Trp Ser Leu Pro Asp  
385 390 395 400

Met Met Gln Asp Pro Val Thr Phe Arg Ser Thr Arg Gln Val Ser Asn  
405 410 415

Tyr Pro Val Val Gly Ala Glu Leu Leu Pro Val Tyr Ser Lys Ser Phe  
420 425 430

Phe Asn Glu Gln Ala Val Tyr Ser Gln Gln Leu Arg Ala Phe Thr Ser  
435 440 445

Leu Thr His Val Phe Asn Arg Phe Pro Glu Asn Gln Ile Leu Val Arg  
450 455 460

Pro Pro Ala Pro Thr Ile Thr Thr Val Ser Glu Asn Val Pro Ala Leu  
465 470 475 480

Thr Asp His Gly Thr Leu Pro Leu Arg Ser Ser Ile Arg Gly Val Gln  
485 490 495

Arg Val Thr Val Thr Asp Ala Arg Arg Arg Thr Cys Pro Tyr Val Tyr  
500 505 510

Lys Ala Leu Gly Val Val Ala Pro Arg Val Leu Ser Ser Arg Thr Phe  
515 520 525

<210> 30  
<211> 535  
<212> PRT  
<213> Adenoviridae - Mastadenovirus

<400> 30

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

578-13 PCT 2 Sequence listing

Val Met Gln Gln Ala Met Ala Ala Ala Ala Ala Met Gln Pro Pro Leu  
 20 25 30  
 Glu Ala Pro Tyr Val Pro Pro Arg Tyr Leu Ala Pro Thr Glu Gly Arg  
 35 40 45  
 Asn Ser Ile Arg Tyr Ser Glu Leu Ala Pro Leu Tyr Asp Thr Thr Arg  
 50 55 60  
 Leu Tyr Leu Val Asp Asn Lys Ser Ala Asp Ile Ala Ser Leu Asn Tyr  
 65 70 75 80  
 Gln Asn Asp His Ser Asn Phe Leu Thr Thr Val Val Gln Asn Asn Asp  
 85 90 95  
 Phe Thr Pro Thr Glu Ala Ser Thr Gln Thr Ile Asn Phe Asp Glu Arg  
 100 105 110  
 Ser Arg Trp Gly Gly Gln Leu Lys Thr Ile Met His Thr Asn Met Pro  
 115 120 125  
 Asn Val Asn Glu Phe Met Tyr Ser Asn Lys Phe Lys Ala Arg Val Met  
 130 135 140  
 Val Ser Arg Lys Thr Pro Asn Gly Val Thr Val Thr Glu Asp Tyr Asp  
 145 150 155 160  
 Gly Ser Gln Asp Glu Leu Lys Tyr Glu Trp Val Glu Phe Glu Leu Pro  
 165 170 175  
 Glu Gly Asn Phe Ser Val Thr Met Thr Ile Asp Leu Met Asn Asn Ala  
 180 185 190  
 Ile Ile Asp Asn Tyr Leu Ala Val Gly Arg Gln Asn Gly Val Leu Glu  
 195 200 205  
 Ser Asp Ile Gly Val Lys Phe Asp Thr Arg Asn Phe Arg Leu Gly Trp  
 210 215 220  
 Asp Pro Val Thr Glu Leu Val Met Pro Gly Val Tyr Thr Asn Glu Ala  
 225 230 235 240  
 Phe His Pro Asp Ile Val Leu Leu Pro Gly Cys Gly Val Asp Phe Thr  
 245 250 255  
 Glu Ser Arg Leu Ser Asn Leu Leu Gly Ile Arg Lys Arg Gln Pro Phe  
 260 265 270  
 Gln Glu Gly Phe Gln Ile Met Tyr Glu Asp Leu Glu Gly Gly Asn Ile  
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# 578-13 PCT 2 Sequence listing

Pro Ala Leu Leu Asp Val Asp Ala Tyr Glu Lys Ser Lys Glu Glu Ser  
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Ala Ala Ala Ala Thr Ala Ala Val Ala Thr Ala Ser Thr Glu Val Arg  
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Gly Asp Asn Phe Ala Ser Ala Ala Ala Val Ala Ala Ala Glu Ala Ala  
325 330 335

Glu Thr Glu Ser Lys Ile Val Ile Gln Pro Val Glu Lys Asp Ser Lys  
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Asp Arg Ser Tyr Asn Val Leu Pro Asp Lys Ile Asn Thr Ala Tyr Arg  
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Ser Trp Tyr Leu Ala Tyr Asn Tyr Gly Asp Pro Glu Lys Gly Val Arg  
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Ser Trp Thr Leu Leu Thr Thr Ser Asp Val Thr Cys Gly Val Glu Gln  
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Val Tyr Trp Ser Leu Pro Asp Met Met Gln Asp Pro Val Thr Phe Arg  
405 410 415

Ser Thr Arg Gln Val Ser Asn Tyr Pro Val Val Gly Ala Glu Leu Leu  
420 425 430

Pro Val Tyr Ser Lys Ser Phe Phe Asn Glu Gln Ala Val Tyr Ser Gln  
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Gln Leu Arg Ala Phe Thr Ser Leu Thr His Val Phe Asn Arg Phe Pro  
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Glu Asn Gln Ile Leu Val Arg Pro Pro Ala Pro Thr Ile Thr Thr Val  
465 470 475 480

Ser Glu Asn Val Pro Ala Leu Thr Asp His Gly Thr Leu Pro Leu Arg  
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Ser Ser Ile Arg Gly Val Gln Arg Val Thr Val Thr Asp Ala Arg Arg  
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Val Leu Ser Ser Arg Thr Phe  
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<212> PRT

578-13 PCT 2 Sequence listing

<213> Adenoviridae - Mastadenovirus

<400> 31

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Pro Pro Tyr Val Pro Pro Arg Tyr Leu Arg Pro Thr Gly Gly Arg Asn
35      40      45
Ser Ile Arg Tyr Ser Glu Leu Ala Pro Leu Tyr Asp Thr Thr Arg Val
50      55      60
Tyr Leu Val Asp Asn Lys Ser Ala Asp Val Ala Ser Leu Asn Tyr Gln
65      70      75      80
Asn Asp His Ser Asn Phe Leu Thr Thr Val Ile Gln Asn Asn Asp Tyr
85      90      95
Thr Pro Ser Glu Ala Ser Thr Gln Thr Ile Asn Leu Asp Asp Arg Ser
100     105     110
His Trp Gly Gly Asp Leu Lys Thr Ile Leu His Thr Asn Met Pro Asn
115     120     125
Val Asn Glu Phe Met Phe Thr Asn Lys Phe Lys Ala Arg Val Met Val
130     135     140
Ser Arg Ser His Thr Lys Asp Asp Arg Val Glu Leu Lys Tyr Glu Trp
145     150     155     160
Val Glu Phe Glu Leu Pro Glu Gly Asn Tyr Ser Glu Thr Met Thr Ile
165     170     175
Asp Leu Met Asn Asn Ala Ile Val Glu His Tyr Leu Lys Val Gly Arg
180     185     190
Gln Asn Gly Val Leu Glu Ser Asp Ile Gly Val Lys Phe Asp Thr Arg
195     200     205
Asn Phe Arg Leu Gly Leu Asp Pro Val Thr Gly Leu Val Met Pro Gly
210     215     220
Val Tyr Thr Asn Glu Ala Phe His Pro Asp Ile Ile Leu Leu Pro Gly
225     230     235     240
Cys Gly Val Asp Phe Thr Tyr Ser Arg Leu Ser Asn Leu Leu Gly Ile
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578-13 PCT 2 Sequence listing

Arg Lys Arg Gln Pro Phe Gln Glu Gly Phe Arg Ile Thr Tyr Glu Asp  
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Leu Glu Gly Gly Asn Ile Pro Ala Leu Leu Asp Val Glu Ala Tyr Gln  
275 280 285

Asp Ser Leu Lys Glu Glu Glu Ala Gly Glu Gly Ser Gly Gly Gly Ala  
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Gly Gln Glu Glu Gly Gly Ala Ser Ser Glu Ala Ser Ala Asp Pro Ala  
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325 330 335

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

Arg Gly Glu Glu Lys Lys Ala Glu Ala Glu Ala Ala Ala Glu Glu Ala  
355 360 365

Ala Ala Ala Ala Ala Ala Val Glu Ala Ala Ala Glu Ala Glu Lys Pro  
370 375 380

Pro Lys Glu Pro Val Ile Lys Pro Leu Thr Glu Asp Ser Lys Lys Arg  
385 390 395 400

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

His Ser Lys Ser Phe Tyr Asn Asp Gln Ala Val Tyr Ser Gln Leu Ile  
485 490 495

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

578-13 PCT 2 Sequence listing  
 Asn Val Pro Ala Leu Thr Asp His Gly Thr Leu Pro Leu Arg Asn Ser  
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Ile Gly Gly Val Gln Arg Val Thr Val Thr Asp Ala Arg Arg Arg Thr  
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Cys Pro Tyr Val Tyr Lys Ala Leu Gly Ile Val Ser Pro Arg Val Leu  
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Ser Ser Arg Thr Phe  
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 gaaaagcccc tgggggtggt gtccctgcga ctggctgacc ccgtcaccac caagaacggg 180  
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 aataatgccc ttacagttca gttagtttct ccactcactt ttgataacaa aggcaatgta 480  
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# 578-13 PCT 2 Sequence listing

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 gcagtatttc ccacttttaa cactttaggt atcagtcttg gcaacggtct tcaaacttct 420  
 aataagttgc tggctgtaca gttaactcat cctcttacat tcagctcaaa tagcatcaca 480  
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 <212> DNA  
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 gagaagcccc tgggggtggt gtccctgcga ctggccgacc ccgtcaccac caagaacggg 180  
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578-13 PCT 2 Sequence listing

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gagaagcccc tgggggtgct gtccctgcga ctggccgacc ccgtcaccac caagaacggg	180
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aacataaagc ttaccttaga cagaggtttg catgtttaca caggagatgc aattgaaagc	540
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# 578-13 PCT 2 Sequence listing

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## 578-13 PCT 2 Sequence listing

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 aacgtggcgc tgtacctgcc cgactcctac aagtacacgc cggccaacat cacgctgccc 1440  
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# 578-13 PCT 2 Sequence listing

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<212> DNA

<213> Adenoviridae - Mastadenovirus

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<212> DNA

<213> Adenoviridae - Mastadenovirus

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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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<211> 2886

<212> DNA

<213> Adenoviridae - Mastadenovirus



# 578-13 PCT 2 Sequence listing

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578-13 PCT 2 Sequence listing

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 <213> Adenoviridae - Mastadenovirus

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# 578-13 PCT 2 Sequence listing

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<213> Adenoviridae - Mastadenovirus

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578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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 <213> Adenoviridae - Mastadenovirus

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578-13 PCT 2 Sequence listing

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 <211> 1608  
 <212> DNA  
 <213> Adenoviridae - Mastadenovirus

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578-13 PCT 2 Sequence listing

<210> 49  
<211> 1743  
<212> DNA  
<213> Adenoviridae - Mastadenovirus

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gccgaggccg cggcagagga ggcggcagca gcggcgggcg cagtagaggc ggcgccgag     1140
gcggagaagc cccccaagga gcccgtgatt aagcccctga ccgaagatag caagaagcgc     1200
agttacaacg tgtcaagga cagcaccaac accgagtacc gcagctggta cctggcctac     1260
aactacggcg acccggcgac ggggggtgcgc tcctggaccc tgctgtgtac gccggacgtg     1320
acctgcggct cggagcaggt gtactggtcg ctgcccgaca tgatgcaaga ccccgtagcc     1380
ttccgctcca cgcggcaggt cagcaacttc cgggtgggtg gcgccgagct gctgcccgtg     1440
cactccaaga gtttctacaa cgaccaggcc gtctactccc agtcatccg ccagttcacc     1500
tctctgacct acgtgttcaa tcgctttcct gagaaccaga ttctggcgcg cccgcccgcc     1560
cccaccatca ccaccgtcag tgaaaacgtt cctgctctca cagatcacgg gacgctaccg     1620
ctgcgcaaca gcatcgagg agtccagcga gtgaccgtaa ctgacgccag acgccgcacc     1680
tgcccctacg tttacaaggc cctgggcata gtctcgccgc gcgtcctttc cagccgcact     1740
ttt                                                                1743

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<210> 50

578-13 PCT 2 Sequence listing

<211> 577

<212> PRT

<213> Adenoviridae - Mastadenovirus

<400> 50

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

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



# 578-13 PCT 2 Sequence listing

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  
 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

# 578-13 PCT 2 Sequence listing

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> 51  
<211> 955  
<212> PRT  
<213> Adenoviridae - Mastadenovirus

<400> 51

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

Ala Pro Asn Pro Cys Glu Trp Asp Glu Ala Val Thr Ala Val Asp Ile  
130 135 140

Asn Leu Asp Glu Leu Gly Glu Asp Glu Asp Asp Ala Glu Gly Glu Ala  
145 150 155 160

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

# 578-13 PCT 2 Sequence listing

Asn Ile Thr Lys Glu Gly Ile Gln Ile Gly Val Asp Thr Thr Ser Gln  
 180 185 190  
 Ala Gln Thr Pro Leu Tyr Ala Asp Lys Thr Phe Gln Pro Glu Pro Gln  
 195 200 205  
 Val Gly Glu Ser Gln Trp Asn Glu Thr Glu Ile Asn Tyr Gly Ala Gly  
 210 215 220  
 Arg Val Leu Lys Lys Thr Thr Leu Met Lys Pro Cys Tyr Gly Ser Tyr  
 225 230 235 240  
 Ala Arg Pro Thr Asn Glu Asn Gly Gly Gln Gly Ile Leu Leu Glu Lys  
 245 250 255  
 Glu Gly Gly Lys Pro Glu Ser Gln Val Glu Met Gln Phe Phe Ser Thr  
 260 265 270  
 Thr Gln Ala Ala Ala Ala Gly Asn Ser Asp Asn Leu Thr Pro Lys Val  
 275 280 285  
 Val Leu Tyr Ser Glu Asp Val His Leu Glu Thr Pro Asp Thr His Ile  
 290 295 300  
 Ser Tyr Met Pro Thr Ser Asn Glu Ala Asn Ser Arg Glu Leu Leu Gly  
 305 310 315 320  
 Gln Gln Ala Met Pro Asn Arg Pro Asn Tyr Ile Ala Phe Arg Asp Asn  
 325 330 335  
 Phe Ile Gly Leu Met Tyr Tyr Asn Ser Thr Gly Asn Met Gly Val Leu  
 340 345 350  
 Ala Gly Gln Ala Ser Gln Leu Asn Ala Val Val Asp Leu Gln Asp Arg  
 355 360 365  
 Asn Thr Glu Leu Ser Tyr Gln Leu Leu Leu Asp Ser Met Gly Asp Arg  
 370 375 380  
 Thr Arg Tyr Phe Ser Met Trp Asn Gln Ala Val Asp Ser Tyr Asp Pro  
 385 390 395 400  
 Asp Val Arg Ile Ile Glu Asn His Gly Thr Glu Asp Glu Leu Pro Asn  
 405 410 415  
 Tyr Cys Phe Pro Leu Gly Gly Ile Ile Asn Thr Glu Thr Leu Thr Lys  
 420 425 430  
 Val Lys Pro Lys Thr Gly Gln Asp Ala Gln Trp Glu Lys Asp Thr Glu  
 435 440 445

# 578-13 PCT 2 Sequence listing

Phe Ser Glu Lys Asn Glu Ile Arg Val Gly Asn Asn Phe Ala Met Glu  
 450 455 460  
 Ile Asn Leu Asn Ala Asn Leu Trp Arg Asn Phe Leu Tyr Ser Asn Val  
 465 470 475 480  
 Ala Leu Tyr Leu Pro Asp Lys Leu Lys Tyr Thr Pro Ala Asn Val Gln  
 485 490 495  
 Ile Ser Ser Asn Ser Asn Ser Tyr Asp Tyr Met Asn Lys Arg Val Val  
 500 505 510  
 Ala Pro Gly Leu Val Asp Cys Tyr Ile Asn Leu 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 Leu 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 Glu Ser Ile Cys 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 Ala Ala Asn Met Leu  
 645 650 655  
 Tyr Pro Ile Pro Ala Asn 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 Tyr Thr Tyr  
 690 695 700  
 Ser Gly Ser Ile Pro Tyr Leu Asp Gly Thr Phe Tyr Leu Asn His Thr  
 705 710 715 720

# 578-13 PCT 2 Sequence listing

Phe Lys Lys Val Ser Val Thr Phe Asp Ser Ser Val Ser Trp Pro Gly  
 725 730 735  
 Asn Asp Arg Leu Leu Thr Pro Asn Glu Phe Glu Ile Lys Arg Ser 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 Ile 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 Lys Tyr Lys Asp  
 805 810 815  
 Tyr Gln Gln Val Gly Ile Ile 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 Val Leu 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> 52  
 <211> 582  
 <212> PRT  
 <213> Adenoviridae - Mastadenovirus  
 <400> 52

578-13 PCT 2 Sequence listing

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

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

Pro Pro Tyr Val Pro Pro Arg Tyr Leu Arg Pro Thr Gly Gly Arg Asn  
35 40 45

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

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

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

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

His Trp Gly Gly Asp Leu Lys Thr Ile Leu His Thr Asn Met Pro Asn  
115 120 125

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

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

Val Glu Phe Glu Leu Pro Glu Gly Asn Tyr Ser Glu Thr Met Thr Ile  
165 170 175

Asp Leu Met Asn Asn Ala Ile Val Glu His Tyr Leu Lys Val Gly Arg  
180 185 190

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

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

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

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

Arg Lys Arg Gln Pro Phe Gln Glu Gly Phe Arg Ile Thr Tyr Glu Asp  
260 265 270

578-13 PCT 2 Sequence listing

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

Asn Ser Leu Lys Glu Glu Glu Ala Gly Glu Gly Ser Gly Gly Gly Gly  
290 295 300

Ala Gly Gln Glu Glu Gly Gly Ala Ser Ser Glu Ala Ser Ala Asp Ala  
305 310 315 320

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

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

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

Ala Ala Ala Ala Ala Ala Ala Val Glu Ala Ala Ala Glu Ala Glu Lys  
370 375 380

Pro Pro Lys Glu Pro Val Ile Lys Pro Leu Thr Glu Asp Ser Lys Lys  
385 390 395 400

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

Trp Tyr Leu Ala Tyr Asn Tyr Gly Asp Pro Ala Thr Gly Val Arg Ser  
420 425 430

Trp Thr Leu Leu Cys Thr Pro Asp Val Thr Cys Gly Ser Glu Gln Val  
435 440 445

Tyr Trp Ser Leu Pro Asp Met Met Gln Asp Pro Val Thr Phe Arg Ser  
450 455 460

Thr Arg Gln Val Ser Asn Phe Pro Val Val Gly Ala Glu Leu Leu Pro  
465 470 475 480

Val His Ser Lys Ser Phe Tyr Asn Asp Gln Ala Val Tyr Ser Gln Leu  
485 490 495

Ile Arg Gln Phe Thr Ser Leu Thr His Val Phe Asn Arg Phe Pro Glu  
500 505 510

Asn Gln Ile Leu Ala Arg Pro Pro Ala Pro Thr Ile Thr Thr Val Ser  
515 520 525

Glu Asn Val Pro Ala Leu Thr Asp His Gly Thr Leu Pro Leu Arg Asn  
530 535 540

578-13 PCT 2 Sequence listing

Ser Ile Gly Gly Val Gln Arg Val Thr Val Thr Asp Ala Arg Arg  
545 550 555 560

Thr Cys Pro Tyr Val Tyr Lys Ala Leu Gly Ile Val Ser Pro Arg Val  
565 570 575

Leu Ser Ser Arg Thr Phe  
580

<210> 53  
<211> 542  
<212> PRT  
<213> Adenoviridae - Mastadenovirus  
<400> 53

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

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  
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## 578-13 PCT 2 Sequence listing

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  
 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 Cys Lys Phe Thr Leu Val  
 370 375 380

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

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

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

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

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

Pro Lys Thr Gln Ser Gln Thr Ala Lys Asn Asn Ile Val Ser Glu Val  
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578-13 PCT 2 Sequence listing

465 470 475 480

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

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

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

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

<210> 54  
<211> 964  
<212> PRT  
<213> Adenoviridae - Mastadenovirus

<400> 54

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 Ser Tyr Phe Ser Leu 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 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

# 578-13 PCT 2 Sequence listing

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  
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  
420 425 430

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

# 578-13 PCT 2 Sequence listing

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  
 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

578-13 PCT 2 Sequence listing

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  
805 810 815

Val Val Asp Glu Thr Lys Tyr Lys Asp Tyr Gln Gln Val Gly Ile Ile  
820 825 830

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  
865 870 875 880

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  
900 905 910

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  
930 935 940

Arg Gly Val Ile Glu Thr Val Tyr Leu Arg Thr Pro Phe Ser Ala Gly  
945 950 955 960

Asn Ala Thr Thr

<210> 55  
<211> 584

578-13 PCT 2 Sequence listing

<212> PRT

<213> Adenoviridae - Mastadenovirus

<400> 55

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

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

Pro Pro Tyr Val Pro Pro Arg Tyr Leu Arg Pro Thr Gly Gly Arg Asn
35          40          45

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

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

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

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

His Trp Gly Gly Asp Leu Lys Thr Ile Leu His Thr Asn Met Pro Asn
115         120         125

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

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

Val Glu Phe Glu Leu Pro Glu Gly Asn Tyr Ser Glu Thr Met Thr Ile
165         170         175

Asp Leu Met Asn Asn Ala Ile Val Glu His Tyr Leu Lys Val Gly Arg
180         185         190

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

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

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

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

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# 578-13 PCT 2 Sequence listing

Arg Lys Arg Gln Pro Phe Gln Glu Gly Phe Arg Ile Thr Tyr Glu Asp  
260 265 270

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

Asp Ser Leu Lys Glu Glu Glu Ala Gly Glu Gly Ser Gly Gly Gly Gly  
290 295 300

Gly Ala Gly Gln Glu Glu Gly Gly Ala Ser Ser Glu Ala Ser Ala Asp  
305 310 315 320

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

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

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

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

Gln Leu Ile Arg Gln Phe Thr Ser Leu Thr His Val Phe Asn Arg Phe  
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Pro Glu Asn Gln Ile Leu Ala Arg Pro Pro Ala Pro Thr Ile Thr Thr  
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# 578-13 PCT 2 Sequence listing

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Arg Asn Ser Ile Gly Gly Val Gln Arg Val Thr Val Thr Asp Ala Arg  
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# 578-13 PCT 2 Sequence listing

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## 578-13 PCT 2 Sequence listing

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&lt;210&gt; 58

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&lt;213&gt; Adenoviridae - Mastadenovirus

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# 578-13 PCT 2 Sequence listing

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578-13 PCT 2 Sequence listing

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## 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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# 578-13 PCT 2 Sequence listing

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## 578-13 PCT 2 Sequence listing

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## 578-13 PCT 2 Sequence listing

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## 578-13 PCT 2 Sequence listing

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## 578-13 PCT 2 Sequence listing

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## 578-13 PCT 2 Sequence listing

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catttccctt	aacatggatc	acccctttta	cactaaagat	ggaaaattag	ccttacaagt	32520
ttctccacca	ttaaatatac	tgagaacaag	cattctaatac	acactagctt	taggttttgg	32580

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atcagggttta	ggactccgtg	gctctgcctt	ggcagtagag	ttagtctctc	cacttacatt	32640
tgatactgat	ggaaacataa	agcttacctt	agacagaggt	ttgcatgtta	caacaggaga	32700
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acagcgtggt aagggggccg gccgatacgg gtgatggcgg gacgcggctg atcgtgttcg	34680
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