

Sequence Listing.txt  
SEQUENCE LISTING

<110> Friedrich-Alexander-Universität Erlangen-Nürnberg  
<120> NFkappaB-Signalweg-manipulierte dendritische Zellen  
<130> T3091 PCT  
<150> EP 10 18 8893.1  
<151> 2010-10-26  
<160> 10  
<170> PatentIn version 3.3  
<210> 1  
<211> 745  
<212> PRT  
<213> Homo sapiens  
<400> 1

Met Glu Arg Pro Pro Gly Leu Arg Pro Gly Ala Gly Gly Pro Trp Glu  
1 5 10 15

Met Arg Glu Arg Leu Gly Thr Gly Gly Phe Gly Asn Val Cys Leu Tyr  
20 25 30

Gln His Arg Glu Leu Asp Leu Lys Ile Ala Ile Lys Ser Cys Arg Leu  
35 40 45

Glu Leu Ser Thr Lys Asn Arg Glu Arg Trp Cys His Glu Ile Gln Ile  
50 55 60

Met Lys Lys Leu Asn His Ala Asn Val Val Lys Ala Cys Asp Val Pro  
65 70 75 80

Glu Glu Leu Asn Ile Leu Ile His Asp Val Pro Leu Leu Ala Met Glu  
85 90 95

Tyr Cys Ser Gly Gly Asp Leu Arg Lys Leu Leu Asn Lys Pro Glu Asn  
100 105 110

Cys Cys Gly Leu Lys Glu Ser Gln Ile Leu Ser Leu Leu Ser Asp Ile  
115 120 125

Gly Ser Gly Ile Arg Tyr Leu His Glu Asn Lys Ile Ile His Arg Asp  
130 135 140

Leu Lys Pro Glu Asn Ile Val Leu Gln Asp Val Gly Gly Lys Ile Ile  
145 150 155 160

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

Leu Cys Thr Ser Phe Val Gly Thr Leu Gln Tyr Leu Ala Pro Glu Leu  
180 185 190

Sequence Listing.txt

Phe Glu Asn Lys Pro Tyr Thr Ala Thr Val Asp Tyr Trp Ser Phe Gly  
 195 200 205  
 Thr Met Val Phe Glu Cys Ile Ala Gly Tyr Arg Pro Phe Leu His His  
 210 215 220  
 Leu Gln Pro Phe Thr Trp His Glu Lys Ile Lys Lys Lys Asp Pro Lys  
 225 230 235 240  
 Cys Ile Phe Ala Cys Glu Glu Met Ser Gly Glu Val Arg Phe Ser Ser  
 245 250 255  
 His Leu Pro Gln Pro Asn Ser Leu Cys Ser Leu Ile Val Glu Pro Met  
 260 265 270  
 Glu Asn Trp Leu Gln Leu Met Leu Asn Trp Asp Pro Gln Gln Arg Gly  
 275 280 285  
 Gly Pro Val Asp Leu Thr Leu Lys Gln Pro Arg Cys Phe Val Leu Met  
 290 295 300  
 Asp His Ile Leu Asn Leu Lys Ile Val His Ile Leu Asn Met Thr Ser  
 305 310 315 320  
 Ala Lys Ile Ile Ser Phe Leu Leu Pro Pro Asp Glu Ser Leu His Ser  
 325 330 335  
 Leu Gln Ser Arg Ile Glu Arg Glu Thr Gly Ile Asn Thr Gly Ser Gln  
 340 345 350  
 Glu Leu Leu Ser Glu Thr Gly Ile Ser Leu Asp Pro Arg Lys Pro Ala  
 355 360 365  
 Ser Gln Cys Val Leu Asp Gly Val Arg Gly Cys Asp Ser Tyr Met Val  
 370 375 380  
 Tyr Leu Phe Asp Lys Ser Lys Thr Val Tyr Glu Gly Pro Phe Ala Ser  
 385 390 395 400  
 Arg Ser Leu Ser Asp Cys Val Asn Tyr Ile Val Gln Asp Ser Lys Ile  
 405 410 415  
 Gln Leu Pro Ile Ile Gln Leu Arg Lys Val Trp Ala Glu Ala Val His  
 420 425 430  
 Tyr Val Ser Gly Leu Lys Glu Asp Tyr Ser Arg Leu Phe Gln Gly Gln  
 435 440 445  
 Arg Ala Ala Met Leu Ser Leu Leu Arg Tyr Asn Ala Asn Leu Thr Lys  
 450 455 460

# Sequence Listing.txt

Met Lys Asn Thr Leu Ile Ser Ala Ser Gln Gln Leu Lys Ala Lys Leu  
465 470 475 480

Glu Phe Phe His Lys Ser Ile Gln Leu Asp Leu Glu Arg Tyr Ser Glu  
485 490 495

Gln Met Thr Tyr Gly Ile Ser Ser Glu Lys Met Leu Lys Ala Trp Lys  
500 505 510

Glu Met Glu Glu Lys Ala Ile His Tyr Ala Glu Val Gly Val Ile Gly  
515 520 525

Tyr Leu Glu Asp Gln Ile Met Ser Leu His Ala Glu Ile Met Glu Leu  
530 535 540

Gln Lys Ser Pro Tyr Gly Arg Arg Gln Gly Asp Leu Met Glu Ser Leu  
545 550 555 560

Glu Gln Arg Ala Ile Asp Leu Tyr Lys Gln Leu Lys His Arg Pro Ser  
565 570 575

Asp His Ser Tyr Ser Asp Ser Thr Glu Met Val Lys Ile Ile Val His  
580 585 590

Thr Val Gln Ser Gln Asp Arg Val Leu Lys Glu Leu Phe Gly His Leu  
595 600 605

Ser Lys Leu Leu Gly Cys Lys Gln Lys Ile Ile Asp Leu Leu Pro Lys  
610 615 620

Val Glu Val Ala Leu Ser Asn Ile Lys Glu Ala Asp Asn Thr Val Met  
625 630 635 640

Phe Met Gln Gly Lys Arg Gln Lys Glu Ile Trp His Leu Leu Lys Ile  
645 650 655

Ala Cys Thr Gln Ser Ser Ala Arg Ser Leu Val Gly Ser Ser Leu Glu  
660 665 670

Gly Ala Val Thr Pro Gln Thr Ser Ala Trp Leu Pro Pro Thr Ser Ala  
675 680 685

Glu His Asp His Ser Leu Ser Cys Val Val Thr Pro Gln Asp Gly Glu  
690 695 700

Thr Ser Ala Gln Met Ile Glu Glu Asn Leu Asn Cys Leu Gly His Leu  
705 710 715 720

Ser Thr Ile Ile His Glu Ala Asn Glu Glu Gln Gly Asn Ser Met Met  
725 730 735

# Sequence Listing.txt

Asn Leu Asp Trp Ser Trp Leu Thr Glu  
740 745

<210> 2  
<211> 769  
<212> PRT  
<213> Artificial

<220>  
<223> IKKalpha konstitutiv aktive Mutante  
<400> 2

His His His His His Gly Asp Tyr Lys Asp Asp Asp Asp Lys Gly Asp  
1 5 10 15

Ile Glu Gly Arg Gly His Met Thr Met Glu Arg Pro Pro Gly Leu Arg  
20 25 30

Pro Gly Ala Gly Gly Pro Trp Glu Met Arg Glu Arg Leu Gly Thr Gly  
35 40 45

Gly Phe Gly Asn Val Cys Leu Tyr Gln His Arg Glu Leu Asp Leu Lys  
50 55 60

Ile Ala Ile Lys Ser Cys Arg Leu Glu Leu Ser Thr Lys Asn Arg Glu  
65 70 75 80

Arg Trp Cys His Glu Ile Gln Ile Met Lys Lys Leu Asn His Ala Asn  
85 90 95

Val Val Lys Ala Cys Asp Val Pro Glu Glu Leu Asn Ile Leu Ile His  
100 105 110

Asp Val Pro Leu Leu Ala Met Glu Tyr Cys Ser Gly Gly Asp Leu Arg  
115 120 125

Lys Leu Leu Asn Lys Pro Glu Asn Cys Cys Gly Leu Lys Glu Ser Gln  
130 135 140

Ile Leu Ser Leu Leu Ser Asp Ile Gly Ser Gly Ile Arg Tyr Leu His  
145 150 155 160

Glu Asn Lys Ile Ile His Arg Asp Leu Lys Pro Glu Asn Ile Val Leu  
165 170 175

Gln Asp Val Gly Gly Lys Ile Ile His Lys Ile Ile Asp Leu Gly Tyr  
180 185 190

Ala Lys Asp Val Asp Gln Gly Glu Leu Cys Thr Glu Phe Val Gly Thr  
195 200 205

Sequence Listing.txt

Leu Gln Tyr Leu Ala Pro Glu Leu Phe Glu Asn Lys Pro Tyr Thr Ala  
210 215 220

Thr Val Asp Tyr Trp Ser Phe Gly Thr Met Val Phe Glu Cys Ile Ala  
225 230 235 240

Gly Tyr Arg Pro Phe Leu His His Leu Gln Pro Phe Thr Trp His Glu  
245 250 255

Lys Ile Lys Lys Lys Asp Pro Lys Cys Ile Phe Ala Cys Glu Glu Met  
260 265 270

Ser Gly Glu Val Arg Phe Ser Ser His Leu Pro Gln Pro Asn Ser Leu  
275 280 285

Cys Ser Leu Ile Val Glu Pro Met Glu Asn Trp Leu Gln Leu Met Leu  
290 295 300

Asn Trp Asp Pro Gln Gln Arg Gly Gly Pro Val Asp Leu Thr Leu Lys  
305 310 315 320

Gln Pro Arg Cys Phe Val Leu Met Asp His Ile Leu Asn Leu Lys Ile  
325 330 335

Val His Ile Leu Asn Met Thr Ser Ala Lys Ile Ile Ser Phe Leu Leu  
340 345 350

Pro Pro Asp Glu Ser Leu His Ser Leu Gln Ser Arg Ile Glu Arg Glu  
355 360 365

Thr Gly Ile Asn Thr Gly Ser Gln Glu Leu Leu Ser Glu Thr Gly Ile  
370 375 380

Ser Leu Asp Pro Arg Lys Pro Ala Ser Gln Cys Val Leu Asp Gly Val  
385 390 395 400

Arg Gly Cys Asp Ser Tyr Met Val Tyr Leu Phe Asp Lys Ser Lys Thr  
405 410 415

Val Tyr Glu Gly Pro Phe Ala Ser Arg Ser Leu Ser Asp Cys Val Asn  
420 425 430

Tyr Ile Val Gln Asp Ser Lys Ile Gln Leu Pro Ile Ile Gln Leu Arg  
435 440 445

Lys Ala Trp Ala Glu Ala Val His Tyr Val Ser Gly Leu Lys Glu Asp  
450 455 460

Tyr Ser Arg Leu Phe Gln Gly Gln Arg Ala Ala Met Leu Ser Leu Leu  
465 470 475 480

Sequence Listing.txt

Arg Tyr Asn Ala Asn Leu Thr Lys Met Lys Asn Thr Leu Ile Ser Ala  
485 490 495

Ser Gln Gln Leu Lys Ala Lys Leu Glu Phe Phe His Lys Ser Ile Gln  
500 505 510

Leu Asp Leu Glu Arg Tyr Ser Glu Gln Met Thr Tyr Gly Ile Ser Ser  
515 520 525

Glu Lys Met Leu Lys Ala Trp Lys Glu Met Glu Glu Lys Ala Ile His  
530 535 540

Tyr Ala Glu Val Gly Val Ile Gly Tyr Leu Glu Asp Gln Ile Met Ser  
545 550 555 560

Leu His Ala Glu Ile Met Glu Leu Gln Lys Ser Pro Tyr Gly Arg Arg  
565 570 575

Gln Gly Asp Leu Met Glu Ser Leu Glu Gln Arg Ala Ile Asp Leu Tyr  
580 585 590

Lys Gln Leu Lys His Arg Pro Ser Asp His Ser Tyr Ser Asp Ser Thr  
595 600 605

Glu Met Val Lys Ile Ile Val His Thr Val Gln Ser Gln Asp Arg Val  
610 615 620

Leu Lys Glu Leu Phe Gly His Leu Ser Lys Leu Leu Gly Cys Lys Gln  
625 630 635 640

Lys Ile Ile Asp Leu Leu Pro Lys Val Glu Val Ala Leu Ser Asn Ile  
645 650 655

Lys Glu Ala Asp Asn Thr Val Met Phe Met Gln Gly Lys Arg Gln Lys  
660 665 670

Glu Ile Trp His Leu Leu Lys Ile Ala Cys Thr Gln Ala Ala Ala Arg  
675 680 685

Ala Leu Val Gly Ala Ala Leu Glu Gly Ala Val Ala Pro Gln Ala Ala  
690 695 700

Ala Trp Leu Pro Pro Ala Ala Ala Glu His Asp His Ala Leu Ala Cys  
705 710 715 720

Val Val Ala Pro Gln Asp Gly Glu Ala Ala Ala Gln Met Ile Glu Glu  
725 730 735

Asn Leu Asn Cys Leu Gly His Leu Ala Ala Ile Ile His Glu Ala Asn  
740 745 750

Glu

<210> 3  
 <211> 2238  
 <212> DNA  
 <213> Artificial

<220>  
 <223> IKKalpha konstitutiv aktive Mutante

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atagcaatta agtcttgtcg cctagagcta agtaccaaaa acagagaacg atggtgccat      180
gaaatccaga ttatgaagaa gttgaaccat gccaatgttg taaaggcctg tgatgttcct      240
gaagaattga atattttgat tcatgatgtg cctcttctag caatggaata ctgttctgga      300
ggagatctcc gaaagctgct caacaaacca gaaaattgtt gtggacttaa agaaagccag      360
atactttctt tactaagtga tatagggtct gggattcgat atttgcatga aaacaaaatt      420
atacatcgag atctaaaacc tgaaaacata gttcttcagg atgttggtgg aaagataata      480
cataaaataa ttgatctggg atatgccaaa gatgttgatc aaggagagct gtgtacagag      540
tttgtgggaa cactgcagta tctggcccca gagctctttg agaataagcc ttacacagcc      600
actgttgatt attggagctt tgggaccatg gtatttgaat gtattgctgg atataggcct      660
tttttgcata atctgcagcc atttacctgg catgagaaga ttaagaagaa ggatccaaag      720
tgtatatttg catgtgaaga gatgtcagga gaagttcggg ttagtagcca ttacacctaa      780
ccaaatagcc tttgtagttt aatagtagaa cccatggaaa actggctaca gttgatgttg      840
aattgggacc ctgagcagag aggaggacct gttgacctta ctttgaagca gccaagatgt      900
tttgtattaa tggatcacat tttgaatttg aagatagtac acatcctaaa tatgacttct      960
gcaaagataa tttcttttct gttaccacct gatgaaagtc ttcattcatt acagtctcgt     1020
attgagcgtg aaactggaat aaatactggg tctcaagaac ttctttcaga gacaggaatt     1080
tctctggatc ctcgaaacc agcctctcaa tgtgttctag atggagttag aggctgtgat     1140
agctatatgg tttatttggt tgataaaagt aaaactgtat atgaagggcc atttgcttcc     1200
agaagtttat ctgattgtgt aaattatatt gtacaggaca gcaaaatata gcttccaatt     1260
atacagctgc gtaaagcgtg ggctgaagca gtgcactatg tgtctggact aaaagaagac     1320
tatagcaggc tctttcaggg acaaagggca gcaatgttaa gtcttcttag atataatgct     1380
aacttaacaa aaatgaagaa cactttgatc tcagcatcac aacaactgaa agctaaattg     1440
gagttttttc acaaaagcat tcagcttgac ttggagagat acagcgagca gatgacgtat     1500
gggatatctt cagaaaaaat gctaaaagca tggaaaagaaa tggaagaaaa ggccatccac     1560
  
```

# Sequence Listing.txt

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tatgctgagg ttggtgtcat tggatacctg gaggatcaga ttatgtcttt gcatgctgaa 1620
atcatggagc tacagaagag cccctatgga agacgtcagg gagacttgat ggaatctctg 1680
gaacagcgtg ccattgatct atataagcag ttaaaacaca gaccttcaga tcactcctac 1740
agtgcagca cagagatggg gaaaatcatt gtgcacactg tgcagagtca ggaccgtgtg 1800
ctcaaggagc tgtttggtca ttgagcaag ttgttgggct gtaagcagaa gattattgat 1860
ctactcccta aggtggaagt ggcctcagt aatatcaaag aagctgacaa tactgtcatg 1920
ttcatgcagg gaaaaaggca gaaagaaatc tggcatctcc ttaaaattgc ctgtacacag 1980
gccgctgccc gcgcccttgt gggagccgct ctggaagggtg cagtggcccc acaggccgcc 2040
gcatggctgc cccctgctgc cgcagaacac gatcacgctc tggcctgtgt ggtggctcct 2100
caagatgggg aggctgccgc acaaatgatc gaagaaaatt tgaactgcct tggccacttg 2160
gccgctatta ttcacgaggc aaatgaggaa cagggcaata gtatgatgaa tcttgattgg 2220
agttggttga cagaatga 2238
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<210> 4
<211> 756
<212> PRT
<213> Homo sapiens
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<400> 4
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Met Ser Trp Ser Pro Ser Leu Thr Thr Gln Thr Cys Gly Ala Trp Glu
1 5 10 15
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```
Met Lys Glu Arg Leu Gly Thr Gly Gly Phe Gly Asn Val Ile Arg Trp
20 25 30
```

```
His Asn Gln Glu Thr Gly Glu Gln Ile Ala Ile Lys Gln Cys Arg Gln
35 40 45
```

```
Glu Leu Ser Pro Arg Asn Arg Glu Arg Trp Cys Leu Glu Ile Gln Ile
50 55 60
```

```
Met Arg Arg Leu Thr His Pro Asn Val Val Ala Ala Arg Asp Val Pro
65 70 75 80
```

```
Glu Gly Met Gln Asn Leu Ala Pro Asn Asp Leu Pro Leu Leu Ala Met
85 90 95
```

```
Glu Tyr Cys Gln Gly Gly Asp Leu Arg Lys Tyr Leu Asn Gln Phe Glu
100 105 110
```

```
Asn Cys Cys Gly Leu Arg Glu Gly Ala Ile Leu Thr Leu Leu Ser Asp
115 120 125
```

```
Ile Ala Ser Ala Leu Arg Tyr Leu His Glu Asn Arg Ile Ile His Arg
130 135 140
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Sequence Listing.txt

Asp Leu Lys Pro Glu Asn Ile Val Leu Gln Gln Gly Glu Gln Arg Leu  
 145 150 155 160  
 Ile His Lys Ile Ile Asp Leu Gly Tyr Ala Lys Glu Leu Asp Gln Gly  
 165 170 175  
 Ser Leu Cys Thr Ser Phe Val Gly Thr Leu Gln Tyr Leu Ala Pro Glu  
 180 185 190  
 Leu Leu Glu Gln Gln Lys Tyr Thr Val Thr Val Asp Tyr Trp Ser Phe  
 195 200 205  
 Gly Thr Leu Ala Phe Glu Cys Ile Thr Gly Phe Arg Pro Phe Leu Pro  
 210 215 220  
 Asn Trp Gln Pro Val Gln Trp His Ser Lys Val Arg Gln Lys Ser Glu  
 225 230 235 240  
 Val Asp Ile Val Val Ser Glu Asp Leu Asn Gly Thr Val Lys Phe Ser  
 245 250 255  
 Ser Ser Leu Pro Tyr Pro Asn Asn Leu Asn Ser Val Leu Ala Glu Arg  
 260 265 270  
 Leu Glu Lys Trp Leu Gln Leu Met Leu Met Trp His Pro Arg Gln Arg  
 275 280 285  
 Gly Thr Asp Pro Thr Tyr Gly Pro Asn Gly Cys Phe Lys Ala Leu Asp  
 290 295 300  
 Asp Ile Leu Asn Leu Lys Leu Val His Ile Leu Asn Met Val Thr Gly  
 305 310 315 320  
 Thr Ile His Thr Tyr Pro Val Thr Glu Asp Glu Ser Leu Gln Ser Leu  
 325 330 335  
 Lys Ala Arg Ile Gln Gln Asp Thr Gly Ile Pro Glu Glu Asp Gln Glu  
 340 345 350  
 Leu Leu Gln Glu Ala Gly Leu Ala Leu Ile Pro Asp Lys Pro Ala Thr  
 355 360 365  
 Gln Cys Ile Ser Asp Gly Lys Leu Asn Glu Gly His Thr Leu Asp Met  
 370 375 380  
 Asp Leu Val Phe Leu Phe Asp Asn Ser Lys Ile Thr Tyr Glu Thr Gln  
 385 390 395 400  
 Ile Ser Pro Arg Pro Gln Pro Glu Ser Val Ser Cys Ile Leu Gln Glu  
 405 410 415

Sequence Listing.txt

Pro Lys Arg Asn Leu Ala Phe Phe Gln Leu Arg Lys Val Trp Gly Gln  
420 425 430

Val Trp His Ser Ile Gln Thr Leu Lys Glu Asp Cys Asn Arg Leu Gln  
435 440 445

Gln Gly Gln Arg Ala Ala Met Met Asn Leu Leu Arg Asn Asn Ser Cys  
450 455 460

Leu Ser Lys Met Lys Asn Ser Met Ala Ser Met Ser Gln Gln Leu Lys  
465 470 475 480

Ala Lys Leu Asp Phe Phe Lys Thr Ser Ile Gln Ile Asp Leu Glu Lys  
485 490 495

Tyr Ser Glu Gln Thr Glu Phe Gly Ile Thr Ser Asp Lys Leu Leu Leu  
500 505 510

Ala Trp Arg Glu Met Glu Gln Ala Val Glu Leu Cys Gly Arg Glu Asn  
515 520 525

Glu Val Lys Leu Leu Val Glu Arg Met Met Ala Leu Gln Thr Asp Ile  
530 535 540

Val Asp Leu Gln Arg Ser Pro Met Gly Arg Lys Gln Gly Gly Thr Leu  
545 550 555 560

Asp Asp Leu Glu Glu Gln Ala Arg Glu Leu Tyr Arg Arg Leu Arg Glu  
565 570 575

Lys Pro Arg Asp Gln Arg Thr Glu Gly Asp Ser Gln Glu Met Val Arg  
580 585 590

Leu Leu Leu Gln Ala Ile Gln Ser Phe Glu Lys Lys Val Arg Val Ile  
595 600 605

Tyr Thr Gln Leu Ser Lys Thr Val Val Cys Lys Gln Lys Ala Leu Glu  
610 615 620

Leu Leu Pro Lys Val Glu Glu Val Val Ser Leu Met Asn Glu Asp Glu  
625 630 635 640

Lys Thr Val Val Arg Leu Gln Glu Lys Arg Gln Lys Glu Leu Trp Asn  
645 650 655

Leu Leu Lys Ile Ala Cys Ser Lys Val Arg Gly Pro Val Ser Gly Ser  
660 665 670

Pro Asp Ser Met Asn Ala Ser Arg Leu Ser Gln Pro Gly Gln Leu Met  
675 680 685

# Sequence Listing.txt

Ser Gln Pro Ser Thr Ala Ser Asn Ser Leu Pro Glu Pro Ala Lys Lys  
690 695 700

Ser Glu Glu Leu Val Ala Glu Ala His Asn Leu Cys Thr Leu Leu Glu  
705 710 715 720

Asn Ala Ile Gln Asp Thr Val Arg Glu Gln Asp Gln Ser Phe Thr Ala  
725 730 735

Leu Asp Trp Ser Trp Leu Gln Thr Glu Glu Glu Glu His Ser Cys Leu  
740 745 750

Glu Gln Ala Ser  
755

<210> 5  
<211> 773  
<212> PRT  
<213> Artificial

<220>  
<223> IKKbeta konstitutiv aktive Mutante

<400> 5

Met Asp Tyr Lys Asp Asp Asp Asp Lys Gly Asp Ile Glu Gly Arg Gly  
1 5 10 15

His Met Ser Trp Ser Pro Ser Leu Thr Thr Gln Thr Cys Gly Ala Trp  
20 25 30

Glu Met Lys Glu Arg Leu Gly Thr Gly Gly Phe Gly Asn Val Ile Arg  
35 40 45

Trp His Asn Gln Glu Thr Gly Glu Gln Ile Ala Ile Lys Gln Cys Arg  
50 55 60

Gln Glu Leu Ser Pro Arg Asn Arg Glu Arg Trp Cys Leu Glu Ile Gln  
65 70 75 80

Ile Met Arg Arg Leu Thr His Pro Asn Val Val Ala Ala Arg Asp Val  
85 90 95

Pro Glu Gly Met Gln Asn Leu Ala Pro Asn Asp Leu Pro Leu Leu Ala  
100 105 110

Met Glu Tyr Cys Gln Gly Gly Asp Leu Arg Lys Tyr Leu Asn Gln Phe  
115 120 125

Glu Asn Cys Cys Gly Leu Arg Glu Gly Ala Ile Leu Thr Leu Leu Ser  
130 135 140

Asp Ile Ala Ser Ala Leu Arg Tyr Leu His Glu Asn Arg Ile Ile His  
11

## Sequence Listing.txt

145                                      150                                      155                                      160  
 Arg Asp Leu Lys Pro Glu Asn Ile Val Leu Gln Gln Gly Glu Gln Arg  
    165                                      170                                      175  
 Leu Ile His Lys Ile Ile Asp Leu Gly Tyr Ala Lys Glu Leu Asp Gln  
    180                                      185                                      190  
 Gly Glu Leu Cys Thr Glu Phe Val Gly Thr Leu Gln Tyr Leu Ala Pro  
    195                                      200                                      205  
 Glu Leu Leu Glu Gln Gln Lys Tyr Thr Val Thr Val Asp Tyr Trp Ser  
    210                                      215                                      220  
 Phe Gly Thr Leu Ala Phe Glu Cys Ile Thr Gly Phe Arg Pro Phe Leu  
    225                                      230                                      235                                      240  
 Pro Asn Trp Gln Pro Val Gln Trp His Ser Lys Val Arg Gln Lys Ser  
    245                                      250                                      255  
 Glu Val Asp Ile Val Val Ser Glu Asp Leu Asn Gly Thr Val Lys Phe  
    260                                      265                                      270  
 Ser Ser Ser Leu Pro Tyr Pro Asn Asn Leu Asn Ser Val Leu Ala Glu  
    275                                      280                                      285  
 Arg Leu Glu Lys Trp Leu Gln Leu Met Leu Met Trp His Pro Arg Gln  
    290                                      295                                      300  
 Arg Gly Thr Asp Pro Thr Tyr Gly Pro Asn Gly Cys Phe Lys Ala Leu  
    305                                      310                                      315                                      320  
 Asp Asp Ile Leu Asn Leu Lys Leu Val His Ile Leu Asn Met Val Thr  
    325                                      330                                      335  
 Gly Thr Ile His Thr Tyr Pro Val Thr Glu Asp Glu Ser Leu Gln Ser  
    340                                      345                                      350  
 Leu Lys Ala Arg Ile Gln Gln Asp Thr Gly Ile Pro Glu Glu Asp Gln  
    355                                      360                                      365  
 Glu Leu Leu Gln Glu Ala Gly Leu Ala Leu Ile Pro Asp Lys Pro Ala  
    370                                      375                                      380  
 Thr Gln Cys Ile Ser Asp Gly Lys Leu Asn Glu Gly His Thr Leu Asp  
    385                                      390                                      395                                      400  
 Met Asp Leu Val Phe Leu Phe Asp Asn Ser Lys Ile Thr Tyr Glu Thr  
    405                                      410                                      415  
 Gln Ile Ser Pro Arg Pro Gln Pro Glu Ser Val Ser Cys Ile Leu Gln

## Sequence Listing.txt

420

425

430

Glu Pro Lys Arg Asn Leu Ala Phe Phe Gln Leu Arg Lys Val Trp Gly  
 435 440 445

Gln Val Trp His Ser Ile Gln Thr Leu Lys Glu Asp Cys Asn Arg Leu  
 450 455 460

Gln Gln Gly Gln Arg Ala Ala Met Met Asn Leu Leu Arg Asn Asn Ser  
 465 470 475 480

Cys Leu Ser Lys Met Lys Asn Ser Met Ala Ser Met Ser Gln Gln Leu  
 485 490 495

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

Lys Tyr Ser Glu Gln Thr Glu Phe Gly Ile Thr Ser Asp Lys Leu Leu  
 515 520 525

Leu Ala Trp Arg Glu Met Glu Gln Ala Val Glu Leu Cys Gly Arg Glu  
 530 535 540

Asn Glu Val Lys Leu Leu Val Glu Arg Met Met Ala Leu Gln Thr Asp  
 545 550 555 560

Ile Val Asp Leu Gln Arg Ser Pro Met Gly Arg Lys Gln Gly Gly Thr  
 565 570 575

Leu Asp Asp Leu Glu Glu Gln Ala Arg Glu Leu Tyr Arg Arg Leu Arg  
 580 585 590

Glu Lys Pro Arg Asp Gln Arg Thr Glu Gly Asp Ser Gln Glu Met Val  
 595 600 605

Arg Leu Leu Leu Gln Ala Ile Gln Ser Phe Glu Lys Lys Val Arg Val  
 610 615 620

Ile Tyr Thr Gln Leu Ser Lys Thr Val Val Cys Lys Gln Lys Ala Leu  
 625 630 635 640

Glu Leu Leu Pro Lys Val Glu Glu Val Val Ser Leu Met Asn Glu Asp  
 645 650 655

Glu Lys Thr Val Val Arg Leu Gln Glu Lys Arg Gln Lys Glu Leu Trp  
 660 665 670

Asn Leu Leu Lys Ile Ala Cys Ser Lys Val Arg Gly Pro Val Ala Gly  
 675 680 685

Ala Pro Asp Ala Met Asn Ala Ala Arg Leu Ala Gln Pro Gly Gln Leu

Sequence Listing.txt

690

695

700

Met Ala Gln Pro Ala Thr Ala Ala Asn Ala Leu Pro Glu Pro Ala Lys  
705 710 715 720

Lys Ala Glu Glu Leu Val Ala Glu Ala His Asn Leu Cys Thr Leu Leu  
725 730 735

Glu Asn Ala Ile Gln Asp Thr Val Arg Glu Gln Asp Gln Ser Phe Thr  
740 745 750

Ala Leu Asp Trp Ser Trp Leu Gln Thr Glu Glu Glu Glu His Ser Cys  
755 760 765

Leu Glu Gln Ala Ser  
770

<210> 6  
<211> 2319  
<212> DNA  
<213> Artificial

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gggggatttg gaaatgtcat ccgatggcac aatcaggaaa caggtgagca gattgccatc 180  
aagcagtgcc ggcaggagct cagcccccg aaccgagagc ggtggtgcct ggagatccag 240  
atcatgagaa ggctgaccca cccaatgtg gtggctgccc gagatgtccc tgaggggatg 300  
cagaacttgg cgcccaatga cctgcccctg ctggccatgg agtactgcca aggaggagat 360  
ctccggaagt acctgaacca gtttgagaac tgctgtggtc tgcgggaagg tgccatcctc 420  
accttgctga gtgacattgc ctctgcgctt agataccttc atgaaaacag aatcatccat 480  
cgggatctaa agccagaaaa catcgtcctg cagcaaggag aacagagggt aatacacaaa 540  
attattgacc taggatatgc caaggagctg gatcagggcg agctttgcac agagttcgtg 600  
gggaccctgc agtacctggc ccagagcta ctggagcagc agaagtacac agtgaccgtc 660  
gactactgga gcttcggcac cctggccttt gagtgcacat cgggcttccg gcccttcctc 720  
cccaactggc agcccgtgca gtggcattca aaagtgcggc agaagagtga ggtggacatt 780  
gttggttagcg aagacttgaa tggaacggtg aagttttcaa gctctttacc ctacccaat 840  
aatcttaaca gtgtcctggc tgagcgactg gagaagtggc tgcaactgat gctgatgtgg 900  
cacccccgac agagggggcac ggatcccacg tatgggcca atggctgctt caaggccctg 960  
gatgacatct taaacttaaa gctggttcat atcttgaaca tggtcacggg caccatccac 1020  
acctaccctg tgacagagga tgagagtctg cagagcttga aggccagaat ccaacaggac 1080

# Sequence Listing.txt

```

acgggcatcc cagaggagga ccaggagctg ctgcaggaag cgggcctggc gttgatcccc 1140
gataagcctg ccactcagtg tatttcagac ggcaagttaa atgagggcca cacattggac 1200
atggatcttg tttttctctt tgacaacagt aaaatcacct atgagactca gatctcccca 1260
cggccccaac ctgaaagtgt cagctgtatc cttcaagagc ccaagaggaa tctcgccttc 1320
ttccagctga ggaagggtgt gggccagggtc tggcacagca tccagaccct gaaggaagat 1380
tgcaaccggc tgcagcaggg acagcgagcc gccatgatga atctcctccg aaacaacagc 1440
tgccctctca aaatgaagaa ttccatggct tccatgtctc agcagctcaa ggccaagtgt 1500
gatttcttca aaaccagcat ccagattgac ctggagaagt acagcgagca aaccgagttt 1560
gggatcacat cagataaact gctgctggcc tggagggaaa tggagcaggc tgtggagctc 1620
tgtgggcggg agaacgaagt gaaactcctg gtagaacgga tgatggctct gcagaccgac 1680
attgtggact tacagaggag ccccatgggc cggaagcagg ggggaacgct ggacgaccta 1740
gaggagcaag caaggagct gtacaggaga ctaagggaaa aacctcgaga ccagcgaact 1800
gagggtgaca gtcaggaaat ggtacggctg ctgcttcagg caattcagag cttcgagaag 1860
aaagtgcgag tgatctatac gcagctcagt aaaactgtgg ttgcaagca gaaggcgctg 1920
gaactgttgc ccaagggtga agagggtgtg agcttaatga atgaggatga gaagactgtt 1980
gtccggctgc aggagaagcg gcagaaggag ctctggaatc tcctgaagat tgctttagc 2040
aagggtccgtg gtcctgtcgc tggagccccg gatgccatga atgccgctcg acttgcccag 2100
cctgggcagc tgatggctca gcccgccacg gccgccaacg ccttacctga gccagccaag 2160
aaggctgaag aactggtggc tgaagcacat aacctctgca ccctgctaga aaatgccata 2220
caggacactg tgaggggaaca agaccagagt ttcacggccc tagactggag ctgggttacag 2280
acggaagaag aagagcacag ctgcctggag caggcctca 2319

```

```

<210> 7
<211> 768
<212> PRT
<213> Artificial

```

```

<220>
<223> IKKalpha hemmende Mutante

```

```

<400> 7

```

```

His His His His Gly Asp Tyr Lys Asp Asp Asp Asp Lys Gly Asp Ile
1          5          10          15

```

```

Glu Gly Arg Gly His Met Thr Met Glu Arg Pro Pro Gly Leu Arg Pro
20          25          30

```

```

Gly Ala Gly Gly Pro Trp Glu Met Arg Glu Arg Leu Gly Thr Gly Gly
35          40          45

```

```

Phe Gly Asn Val Cys Leu Tyr Gln His Arg Glu Leu Asp Leu Lys Ile
50          55          60

```

Sequence Listing.txt

Ala Ile Met Ser Cys Arg Leu Glu Leu Ser Thr Lys Asn Arg Glu Arg  
65 70 75 80

Trp Cys His Glu Ile Gln Ile Met Lys Lys Leu Asn His Ala Asn Val  
85 90 95

Val Lys Ala Cys Asp Val Pro Glu Glu Leu Asn Ile Leu Ile His Asp  
100 105 110

Val Pro Leu Leu Ala Met Glu Tyr Cys Ser Gly Gly Asp Leu Arg Lys  
115 120 125

Leu Leu Asn Lys Pro Glu Asn Cys Cys Gly Leu Lys Glu Ser Gln Ile  
130 135 140

Leu Ser Leu Leu Ser Asp Ile Gly Ser Gly Ile Arg Tyr Leu His Glu  
145 150 155 160

Asn Lys Ile Ile His Arg Asp Leu Lys Pro Glu Asn Ile Val Leu Gln  
165 170 175

Asp Val Gly Gly Lys Ile Ile His Lys Ile Ile Asp Leu Gly Tyr Ala  
180 185 190

Lys Asp Val Asp Gln Gly Ser Leu Cys Thr Ser Phe Val Gly Thr Leu  
195 200 205

Gln Tyr Leu Ala Pro Glu Leu Phe Glu Asn Lys Pro Tyr Thr Ala Thr  
210 215 220

Val Asp Tyr Trp Ser Phe Gly Thr Met Val Phe Glu Cys Ile Ala Gly  
225 230 235 240

Tyr Arg Pro Phe Leu His His Leu Gln Pro Phe Thr Trp His Glu Lys  
245 250 255

Ile Lys Lys Lys Asp Pro Lys Cys Ile Phe Ala Cys Glu Glu Met Ser  
260 265 270

Gly Glu Val Arg Phe Ser Ser His Leu Pro Gln Pro Asn Ser Leu Cys  
275 280 285

Ser Leu Ile Val Glu Pro Met Glu Asn Trp Leu Gln Leu Met Leu Asn  
290 295 300

Trp Asp Pro Gln Gln Arg Gly Gly Pro Val Asp Leu Thr Leu Lys Gln  
305 310 315 320

Pro Arg Cys Phe Val Leu Met Asp His Ile Leu Asn Leu Lys Ile Val  
325 330 335



Sequence Listing.txt

His Ile Leu Asn Met Thr Ser Ala Lys Ile Ile Ser Phe Leu Leu Pro  
340 345 350

Pro Asp Glu Ser Leu His Ser Leu Gln Ser Arg Ile Glu Arg Glu Thr  
355 360 365

Gly Ile Asn Thr Gly Ser Gln Glu Leu Leu Ser Glu Thr Gly Ile Ser  
370 375 380

Leu Asp Pro Arg Lys Pro Ala Ser Gln Cys Val Leu Asp Gly Val Arg  
385 390 395 400

Gly Cys Asp Ser Tyr Met Val Tyr Leu Phe Asp Lys Ser Lys Thr Val  
405 410 415

Tyr Glu Gly Pro Phe Ala Ser Arg Ser Leu Ser Asp Cys Val Asn Tyr  
420 425 430

Ile Val Gln Asp Ser Lys Ile Gln Leu Pro Ile Ile Gln Leu Arg Lys  
435 440 445

Ala Trp Ala Glu Ala Val His Tyr Val Ser Gly Leu Lys Glu Asp Tyr  
450 455 460

Ser Arg Leu Phe Gln Gly Gln Arg Ala Ala Met Leu Ser Leu Leu Arg  
465 470 475 480

Tyr Asn Ala Asn Leu Thr Lys Met Lys Asn Thr Leu Ile Ser Ala Ser  
485 490 495

Gln Gln Leu Lys Ala Lys Leu Glu Phe Phe His Lys Ser Ile Gln Leu  
500 505 510

Asp Leu Glu Arg Tyr Ser Glu Gln Met Thr Tyr Gly Ile Ser Ser Glu  
515 520 525

Lys Met Leu Lys Ala Trp Lys Glu Met Glu Glu Lys Ala Ile His Tyr  
530 535 540

Ala Glu Val Gly Val Ile Gly Tyr Leu Glu Asp Gln Ile Met Ser Leu  
545 550 555 560

His Ala Glu Ile Met Glu Leu Gln Lys Ser Pro Tyr Gly Arg Arg Gln  
565 570 575

Gly Asp Leu Met Glu Ser Leu Glu Gln Arg Ala Ile Asp Leu Tyr Lys  
580 585 590

Gln Leu Lys His Arg Pro Ser Asp His Ser Tyr Ser Asp Ser Thr Glu  
595 600 605

# Sequence Listing.txt

Met Val Lys Ile Ile Val His Thr Val Gln Ser Gln Asp Arg Val Leu  
610 615 620

Lys Glu Leu Phe Gly His Leu Ser Lys Leu Leu Gly Cys Lys Gln Lys  
625 630 635 640

Ile Ile Asp Leu Leu Pro Lys Val Glu Val Ala Leu Ser Asn Ile Lys  
645 650 655

Glu Ala Asp Asn Thr Val Met Phe Met Gln Gly Lys Arg Gln Lys Glu  
660 665 670

Ile Trp His Leu Leu Lys Ile Ala Cys Thr Gln Ala Ala Ala Arg Ala  
675 680 685

Leu Val Gly Ala Ala Leu Glu Gly Ala Val Ala Pro Gln Ala Ala Ala  
690 695 700

Trp Leu Pro Pro Ala Ala Ala Glu His Asp His Ala Leu Ala Cys Val  
705 710 715 720

Val Ala Pro Gln Asp Gly Glu Ala Ala Ala Gln Met Ile Glu Glu Asn  
725 730 735

Leu Asn Cys Leu Gly His Leu Ala Ala Ile Ile His Glu Ala Asn Glu  
740 745 750

Glu Gln Gly Asn Ser Met Met Asn Leu Asp Trp Ser Trp Leu Thr Glu  
755 760 765

<210> 8  
<211> 2238  
<212> DNA  
<213> Artificial

<220>  
<223> IKKalpha hemmende Mutante

<400> 8  
atggagcggc ccccggggct gcggccgggc gcgggcgggc cctgggagat gcgggagcgg 60  
ctgggcaccg gcggcttcgg gaacgtctgt ctgtaccagc atcgggaact tgatctcaaa 120  
atagcaatta tgtcttgtcg cctagagcta agtaccaaaa acagagaacg atggtgccat 180  
gaaatccaga ttatgaagaa gttgaaccat gccaatgttg taaaggcctg tgatgttcct 240  
gaagaattga atattttgat tcatgatgtg cctcttctag caatggaata ctgttctgga 300  
ggagatctcc gaaagctgct caacaaacca gaaaattgtt gtggacttaa agaaagccag 360  
atactttctt tactaagtga tataggtctt gggattcgat atttgcataa aaacaaaatt 420  
atacatcgag atctaaaacc tgaaaacata gttcttcagg atgttggtgg aaagataata 480  
cataaaataa ttgatctggg atatgccaaa gatgttgatc aagggaagtct gtgtacatct 540

# Sequence Listing.txt

```

tttgtgggaa cactgcagta tctggcccca gagctctttg agaataagcc ttacacagcc 600
actgttgatt attggagctt tgggaccatg gtatttgaat gtattgctgg atataggcct 660
tttttgcata atctgcagcc atttacctgg catgagaaga ttaagaagaa ggatccaaag 720
tgtatatttg catgtgaaga gatgtcacga gaagttcggg ttagtagcca ttacaccaa 780
ccaaatagcc tttgtagttt aatagtagaa cccatggaaa actggctaca gttgatgttg 840
aattgggacc ctacagcagag aggaggacct gttgacctta ctttgaagca gccaagatgt 900
tttgtattaa tggatcacat tttgaatttg aagatagtag acatcctaaa tatgacttct 960
gcaaagataa tttcttttct gttaccacct gatgaaagtc ttcattcatt acagtctcgt 1020
attgagcgtg aaactggaat aaatactggg tctcaagaac ttctttcaga gacaggaatt 1080
tctctggatc ctcggaacc agcctctcaa tgtgttctag atggagttag aggctgtgat 1140
agctatatgg tttatttggt tgataaaagt aaaactgtat atgaagggcc atttgcttcc 1200
agaagtttat ctgatttgtt aaattatatt gtacaggaca gcaaaataca gcttccaatt 1260
atacagctgc gtaaagcgtg ggctgaagca gtgcactatg tgtctggact aaaagaagac 1320
tatagcaggc tctttcaggg acaaagggca gcaatgttaa gtcttcttag atataatgct 1380
aacttaacaa aaatgaagaa cactttgatc tcagcatcac acaactgaa agctaaattg 1440
gagttttttc acaaaagcat tcagcttgac ttggagagat acagcgagca gatgacgtat 1500
gggatatctt cagaaaaaat gctaaaagca tggaaagaaa tggaaagaaa ggccatccac 1560
tatgctgagg ttggtgtcat tggatacctg gaggatcaga ttatgtcttt gcatgctgaa 1620
atcatggagc tacagaagag cccctatgga agacgtcagg gagacttgat ggaatctctg 1680
gaacagcgtg ccattgatct atataagcag ttaaaacaca gaccttcaga tcactcctac 1740
agtgacagca cagagatggg gaaaatcatt gtgcacactg tgcagagtca ggaccgtgtg 1800
ctcaaggagc tgttttgtca tttgagcaag ttgttgggct gtaagcagaa gattattgat 1860
ctactcccta aggtggaagt ggccctcagt aatatcaaag aagctgacaa tactgtcatg 1920
ttcatgcagg gaaaaaggca gaaagaaatc tggcatctcc ttaaaattgc ctgtacacag 1980
gccgctgccc gcgcccctgt gggagccgct ctggaagggtg cagtggcccc acaggccgcc 2040
gcatggctgc cccctgctgc cgcagaacac gatcacgctc tggcctgtgt ggtggctcct 2100
caagatgggg aggctgccgc acaaatgatc gaagaaaatt tgaactgcct tggccacttg 2160
gccgctatta ttcacgaggc aaatgaggaa cagggcaata gtatgatgaa tcttgattgg 2220
agttgggtga cagaatga 2238

```

```

<210> 9
<211> 779
<212> PRT
<213> Artificial

<220>
<223> IKKbeta hemmende Mutante

<400> 9

```

# Sequence Listing.txt

```

Ser His His His His His Gly Asp Tyr Lys Asp Asp Asp Asp Lys Gly
1      5      10      15
Asp Ile Glu Gly Arg Gly His Met Ser Trp Ser Pro Ser Leu Thr Thr
20      25      30
Gln Thr Cys Gly Ala Trp Glu Met Lys Glu Arg Leu Gly Thr Gly Gly
35      40      45
Phe Gly Asn Val Ile Arg Trp His Asn Gln Glu Thr Gly Glu Gln Ile
50      55      60
Ala Ile Met Gln Cys Arg Gln Glu Leu Ser Pro Arg Asn Arg Glu Arg
65      70      75      80
Trp Cys Leu Glu Ile Gln Ile Met Arg Arg Leu Thr His Pro Asn Val
85      90      95
Val Ala Ala Arg Asp Val Pro Glu Gly Met Gln Asn Leu Ala Pro Asn
100     105     110
Asp Leu Pro Leu Leu Ala Met Glu Tyr Cys Gln Gly Gly Asp Leu Arg
115     120     125
Lys Tyr Leu Asn Gln Phe Glu Asn Cys Cys Gly Leu Arg Glu Gly Ala
130     135     140
Ile Leu Thr Leu Leu Ser Asp Ile Ala Ser Ala Leu Arg Tyr Leu His
145     150     155     160
Glu Asn Arg Ile Ile His Arg Asp Leu Lys Pro Glu Asn Ile Val Leu
165     170     175
Gln Gln Gly Glu Gln Arg Leu Ile His Lys Ile Ile Asp Leu Gly Tyr
180     185     190
Ala Lys Glu Leu Asp Gln Gly Ser Leu Cys Thr Ser Phe Val Gly Thr
195     200     205
Leu Gln Tyr Leu Ala Pro Glu Leu Leu Glu Gln Gln Lys Tyr Thr Val
210     215     220
Thr Val Asp Tyr Trp Ser Phe Gly Thr Leu Ala Phe Glu Cys Ile Thr
225     230     235     240
Gly Phe Arg Pro Phe Leu Pro Asn Trp Gln Pro Val Gln Trp His Ser
245     250     255
Lys Val Arg Gln Lys Ser Glu Val Asp Ile Val Val Ser Glu Asp Leu
260     265     270

```

Sequence Listing.txt

Asn Gly Thr Val Lys Phe Ser Ser Ser Leu Pro Tyr Pro Asn Asn Leu  
275 280 285

Asn Ser Val Leu Ala Glu Arg Leu Glu Lys Trp Leu Gln Leu Met Leu  
290 295 300

Met Trp His Pro Arg Gln Arg Gly Thr Asp Pro Thr Tyr Gly Pro Asn  
305 310 315 320

Gly Cys Phe Lys Ala Leu Asp Asp Ile Leu Asn Leu Lys Leu Val His  
325 330 335

Ile Leu Asn Met Val Thr Gly Thr Ile His Thr Tyr Pro Val Thr Glu  
340 345 350

Asp Glu Ser Leu Gln Ser Leu Lys Ala Arg Ile Gln Gln Asp Thr Gly  
355 360 365

Ile Pro Glu Glu Asp Gln Glu Leu Leu Gln Glu Ala Gly Leu Ala Leu  
370 375 380

Ile Pro Asp Lys Pro Ala Thr Gln Cys Ile Ser Asp Gly Lys Leu Asn  
385 390 395 400

Glu Gly His Thr Leu Asp Met Asp Leu Val Phe Leu Phe Asp Asn Ser  
405 410 415

Lys Ile Thr Tyr Glu Thr Gln Ile Ser Pro Arg Pro Gln Pro Glu Ser  
420 425 430

Val Ser Cys Ile Leu Gln Glu Pro Lys Arg Asn Leu Ala Phe Phe Gln  
435 440 445

Leu Arg Lys Val Trp Gly Gln Val Trp His Ser Ile Gln Thr Leu Lys  
450 455 460

Glu Asp Cys Asn Arg Leu Gln Gln Gly Gln Arg Ala Ala Met Met Asn  
465 470 475 480

Leu Leu Arg Asn Asn Ser Cys Leu Ser Lys Met Lys Asn Ser Met Ala  
485 490 495

Ser Met Ser Gln Gln Leu Lys Ala Lys Leu Asp Phe Phe Lys Thr Ser  
500 505 510

Ile Gln Ile Asp Leu Glu Lys Tyr Ser Glu Gln Thr Glu Phe Gly Ile  
515 520 525

Thr Ser Asp Lys Leu Leu Leu Ala Trp Arg Glu Met Glu Gln Ala Val  
530 535 540

Sequence Listing.txt

Glu Leu Cys Gly Arg Glu Asn Glu Val Lys Leu Leu Val Glu Arg Met  
 545 550 555 560  
 Met Ala Leu Gln Thr Asp Ile Val Asp Leu Gln Arg Ser Pro Met Gly  
 565 570 575  
 Arg Lys Gln Gly Gly Thr Leu Asp Asp Leu Glu Glu Gln Ala Arg Glu  
 580 585 590  
 Leu Tyr Arg Arg Leu Arg Glu Lys Pro Arg Asp Gln Arg Thr Glu Gly  
 595 600 605  
 Asp Ser Gln Glu Met Val Arg Leu Leu Leu Gln Ala Ile Gln Ser Phe  
 610 615 620  
 Glu Lys Lys Val Arg Val Ile Tyr Thr Gln Leu Ser Lys Thr Val Val  
 625 630 635 640  
 Cys Lys Gln Lys Ala Leu Glu Leu Leu Pro Lys Val Glu Glu Val Val  
 645 650 655  
 Ser Leu Met Asn Glu Asp Glu Lys Thr Val Val Arg Leu Gln Glu Lys  
 660 665 670  
 Arg Gln Lys Glu Leu Trp Asn Leu Leu Lys Ile Ala Cys Ser Lys Val  
 675 680 685  
 Arg Gly Pro Val Ala Gly Ala Pro Asp Ala Met Asn Ala Ala Arg Leu  
 690 695 700  
 Ala Gln Pro Gly Gln Leu Met Ala Gln Pro Ala Thr Ala Ala Asn Ala  
 705 710 715 720  
 Leu Pro Glu Pro Ala Lys Lys Ala Glu Glu Leu Val Ala Glu Ala His  
 725 730 735  
 Asn Leu Cys Thr Leu Leu Glu Asn Ala Ile Gln Asp Thr Val Arg Glu  
 740 745 750  
 Gln Asp Gln Ser Phe Thr Ala Leu Asp Trp Ser Trp Leu Gln Thr Glu  
 755 760 765  
 Glu Glu Glu His Ser Cys Leu Glu Gln Ala Ser  
 770 775

<210> 10  
 <211> 2271  
 <212> PRT  
 <213> Artificial

<220>  
 <223> IKKbeta hemmende Mutante

# Sequence Listing.txt

<400> 10

Ala Thr Gly Ala Gly Cys Thr Gly Gly Thr Cys Ala Cys Cys Thr Thr  
1 5 10 15

Cys Cys Cys Thr Gly Ala Cys Ala Ala Cys Gly Cys Ala Gly Ala Cys  
20 25 30

Ala Thr Gly Cys Gly Gly Gly Gly Cys Cys Thr Gly Gly Gly Ala Ala  
35 40 45

Ala Thr Gly Ala Ala Ala Gly Ala Gly Cys Gly Cys Cys Thr Thr Gly  
50 55 60

Gly Gly Ala Cys Ala Gly Gly Gly Gly Gly Ala Thr Thr Thr Gly Gly  
65 70 75 80

Ala Ala Ala Thr Gly Thr Cys Ala Thr Cys Cys Gly Ala Thr Gly Gly  
85 90 95

Cys Ala Cys Ala Ala Thr Cys Ala Gly Gly Ala Ala Ala Cys Ala Gly  
100 105 110

Gly Thr Gly Ala Gly Cys Ala Gly Ala Thr Thr Gly Cys Cys Ala Thr  
115 120 125

Cys Ala Thr Gly Cys Ala Gly Thr Gly Cys Cys Gly Gly Cys Ala Gly  
130 135 140

Gly Ala Gly Cys Thr Cys Ala Gly Cys Cys Cys Cys Cys Gly Gly Ala  
145 150 155 160

Ala Cys Cys Gly Ala Gly Ala Gly Cys Gly Gly Thr Gly Gly Thr Gly  
165 170 175

Cys Cys Thr Gly Gly Ala Gly Ala Thr Cys Cys Ala Gly Ala Thr Cys  
180 185 190

Ala Thr Gly Ala Gly Ala Ala Gly Gly Cys Thr Gly Ala Cys Cys Cys  
195 200 205

Ala Cys Cys Cys Cys Ala Ala Thr Gly Thr Gly Gly Thr Gly Gly Cys  
210 215 220

Thr Gly Cys Cys Cys Gly Ala Gly Ala Thr Gly Thr Cys Cys Cys Thr  
225 230 235 240

Gly Ala Gly Gly Gly Gly Ala Thr Gly Cys Ala Gly Ala Ala Cys Thr  
245 250 255

Thr Gly Gly Cys Gly Cys Cys Cys Ala Ala Thr Gly Ala Cys Cys Thr  
23

## Sequence Listing.txt

260

265

270

Gly Cys Cys<sub>275</sub> Cys Cys Thr Gly Cys<sub>280</sub> Thr Gly Gly Cys Cys<sub>285</sub> Ala Thr Gly

Gly Ala<sub>290</sub> Gly Thr Ala Cys Thr<sub>295</sub> Gly Cys Cys Ala Ala<sub>300</sub> Gly Gly Ala Gly

Gly Ala<sub>305</sub> Gly Ala Thr Cys<sub>310</sub> Thr Cys Cys Gly Gly<sub>315</sub> Ala Ala Gly Thr Ala<sub>320</sub>

Cys Cys Thr Gly Ala<sub>325</sub> Ala Cys Cys Ala Gly<sub>330</sub> Thr Thr Thr Gly Ala<sub>335</sub> Gly

Ala Ala Cys Thr<sub>340</sub> Gly Cys Thr Gly Thr<sub>345</sub> Gly Gly Thr Cys Thr<sub>350</sub> Gly Cys

Gly Gly Gly<sub>355</sub> Ala Ala Gly Gly Thr<sub>360</sub> Gly Cys Cys Ala Thr<sub>365</sub> Cys Cys Thr

Cys Ala<sub>370</sub> Cys Cys Thr Thr Gly<sub>375</sub> Cys Thr Gly Ala Gly<sub>380</sub> Thr Gly Ala Cys

Ala Thr Thr Gly Cys Cys<sub>390</sub> Thr Cys Thr Gly Cys<sub>395</sub> Gly Cys Thr Thr Ala<sub>400</sub>

Gly Ala Thr Ala Cys<sub>405</sub> Cys Thr Thr Cys Ala<sub>410</sub> Thr Gly Ala Ala Ala<sub>415</sub> Ala

Cys Ala Gly Ala<sub>420</sub> Ala Thr Cys Ala Thr<sub>425</sub> Cys Cys Ala Thr Cys<sub>430</sub> Gly Gly

Gly Ala Thr<sub>435</sub> Cys Thr Ala Ala Ala<sub>440</sub> Gly Cys Cys Ala Gly<sub>445</sub> Ala Ala Ala

Ala Cys<sub>450</sub> Ala Thr Cys Gly Thr<sub>455</sub> Cys Cys Thr Gly Cys<sub>460</sub> Ala Gly Cys Ala

Ala Gly Gly Ala Gly Ala<sub>470</sub> Ala Cys Ala Gly Ala<sub>475</sub> Gly Gly Thr Thr Ala<sub>480</sub>

Ala Thr Ala Cys Ala<sub>485</sub> Cys Ala Ala Ala Ala<sub>490</sub> Thr Thr Ala Thr Thr<sub>495</sub> Gly

Ala Cys Cys Thr<sub>500</sub> Ala Gly Gly Ala Thr<sub>505</sub> Ala Thr Gly Cys Cys<sub>510</sub> Ala Ala

Gly Gly Ala<sub>515</sub> Gly Cys Thr Gly Gly<sub>520</sub> Ala Thr Cys Ala Gly<sub>525</sub> Gly Gly Cys

Ala Gly Thr Cys Thr Thr Thr Gly Cys Ala Cys Ala Thr Cys Ala Thr



Sequence Listing.txt

530

535

540

Thr Cys Gly Thr Gly Gly Gly Gly Ala Cys Cys Cys Thr Gly Cys Ala  
545 550 555 560

Gly Thr Ala Cys Cys Thr Gly Gly Cys Cys Cys Cys Ala Gly Ala Gly  
565 570 575

Cys Thr Ala Cys Thr Gly Gly Ala Gly Cys Ala Gly Cys Ala Gly Ala  
580 585 590

Ala Gly Thr Ala Cys Ala Cys Ala Gly Thr Gly Ala Cys Cys Gly Thr  
595 600 605

Cys Gly Ala Cys Thr Ala Cys Thr Gly Gly Ala Gly Cys Thr Thr Cys  
610 615 620

Gly Gly Cys Ala Cys Cys Cys Thr Gly Gly Cys Cys Thr Thr Thr Gly  
625 630 635 640

Ala Gly Thr Gly Cys Ala Thr Cys Ala Cys Gly Gly Gly Cys Thr Thr  
645 650 655

Cys Cys Gly Gly Cys Cys Cys Thr Thr Cys Cys Thr Cys Cys Cys Cys  
660 665 670

Ala Ala Cys Thr Gly Gly Cys Ala Gly Cys Cys Cys Gly Thr Gly Cys  
675 680 685

Ala Gly Thr Gly Gly Cys Ala Thr Thr Cys Ala Ala Ala Ala Gly Thr  
690 695 700

Gly Cys Gly Gly Cys Ala Gly Ala Ala Gly Ala Gly Thr Gly Ala Gly  
705 710 715 720

Gly Thr Gly Gly Ala Cys Ala Thr Thr Gly Thr Thr Gly Thr Thr Ala  
725 730 735

Gly Cys Gly Ala Ala Gly Ala Cys Thr Thr Gly Ala Ala Thr Gly Gly  
740 745 750

Ala Ala Cys Gly Gly Thr Gly Ala Ala Gly Thr Thr Thr Thr Cys Ala  
755 760 765

Ala Gly Cys Thr Cys Thr Thr Thr Ala Cys Cys Cys Thr Ala Cys Cys  
770 775 780

Cys Cys Ala Ala Thr Ala Ala Thr Cys Thr Thr Ala Ala Cys Ala Gly  
785 790 795 800

Thr Gly Thr Cys Cys Thr Gly Gly Cys Thr Gly Ala Gly Cys Gly Ala  
25

## 815

26

## Sequence Listing.txt

1070

1075

1080

Ala Thr Cys Cys Cys Cys Gly	Ala Thr Ala Ala Gly Cys Cys Thr
1085 1090	1095
Gly Cys Cys Ala Cys Thr Cys	Ala Gly Thr Gly Thr Ala Thr Thr
1100 1105	1110
Thr Cys Ala Gly Ala Cys Gly	Gly Cys Ala Ala Gly Thr Thr Ala
1115 1120	1125
Ala Ala Thr Gly Ala Gly Gly	Gly Cys Cys Ala Cys Ala Cys Ala
1130 1135	1140
Thr Thr Gly Gly Ala Cys Ala	Thr Gly Gly Ala Thr Cys Thr Thr
1145 1150	1155
Gly Thr Thr Thr Thr Thr Cys	Thr Cys Thr Thr Thr Gly Ala Cys
1160 1165	1170
Ala Ala Cys Ala Gly Thr Ala	Ala Ala Ala Thr Cys Ala Cys Cys
1175 1180	1185
Thr Ala Thr Gly Ala Gly Ala	Cys Thr Cys Ala Gly Ala Thr Cys
1190 1195	1200
Thr Cys Cys Cys Cys Ala Cys	Gly Gly Cys Cys Cys Cys Ala Ala
1205 1210	1215
Cys Cys Thr Gly Ala Ala Ala	Gly Thr Gly Thr Cys Ala Gly Cys
1220 1225	1230
Thr Gly Thr Ala Thr Cys Cys	Thr Thr Cys Ala Ala Gly Ala Gly
1235 1240	1245
Cys Cys Cys Ala Ala Gly Ala	Gly Gly Ala Ala Thr Cys Thr Cys
1250 1255	1260
Gly Cys Cys Thr Thr Cys Thr	Thr Cys Cys Ala Gly Cys Thr Gly
1265 1270	1275
Ala Gly Gly Ala Ala Gly Gly	Thr Gly Thr Gly Gly Gly Cys
1280 1285	1290
Cys Ala Gly Gly Thr Cys Thr	Gly Gly Cys Ala Cys Ala Gly Cys
1295 1300	1305
Ala Thr Cys Cys Ala Gly Ala	Cys Cys Cys Thr Gly Ala Ala Gly
1310 1315	1320
Gly Ala Ala Gly Ala Thr Thr	Gly Cys Ala Ala Cys Cys Gly Gly

Sequence Listing.txt

1325		1330		1335
Cys Thr Gly Cys Ala Gly Cys	Ala Gly Gly Gly Ala Cys Ala Gly	1340	1345	1350
Cys Gly Ala Gly Cys Cys Gly	Cys Cys Ala Thr Gly Ala Thr Gly	1355	1360	1365
Ala Ala Thr Cys Thr Cys Cys	Thr Cys Cys Gly Ala Ala Ala Cys	1370	1375	1380
Ala Ala Cys Ala Gly Cys Thr	Gly Cys Cys Thr Cys Thr Cys Cys	1385	1390	1395
Ala Ala Ala Ala Thr Gly Ala	Ala Gly Ala Ala Thr Thr Cys Cys	1400	1405	1410
Ala Thr Gly Gly Cys Thr Thr	Cys Cys Ala Thr Gly Thr Cys Thr	1415	1420	1425
Cys Ala Gly Cys Ala Gly Cys	Thr Cys Ala Ala Gly Gly Cys Cys	1430	1435	1440
Ala Ala Gly Thr Thr Gly Gly	Ala Thr Thr Thr Cys Thr Thr Cys	1445	1450	1455
Ala Ala Ala Ala Cys Cys Ala	Gly Cys Ala Thr Cys Cys Ala Gly	1460	1465	1470
Ala Thr Thr Gly Ala Cys Cys	Thr Gly Gly Ala Gly Ala Ala Gly	1475	1480	1485
Thr Ala Cys Ala Gly Cys Gly	Ala Gly Cys Ala Ala Ala Cys Cys	1490	1495	1500
Gly Ala Gly Thr Thr Thr Gly	Gly Gly Ala Thr Cys Ala Cys Ala	1505	1510	1515
Thr Cys Ala Gly Ala Thr Ala	Ala Ala Cys Thr Gly Cys Thr Gly	1520	1525	1530
Cys Thr Gly Gly Cys Cys Thr	Gly Gly Ala Gly Gly Gly Ala Ala	1535	1540	1545
Ala Thr Gly Gly Ala Gly Cys	Ala Gly Gly Cys Thr Gly Thr Gly	1550	1555	1560
Gly Ala Gly Cys Thr Cys Thr	Gly Thr Gly Gly Gly Cys Gly Gly	1565	1570	1575
Gly Ala Gly Ala Ala Cys Gly	Ala Ala Gly Thr Gly Ala Ala Ala			

Sequence Listing.txt

1580	1585	1590
Cys Thr 1595	Cys Cys Thr Gly Gly 1600	Thr Ala Gly Ala Ala Cys Gly Gly 1605
Ala Thr 1610	Gly Ala Thr Gly Gly 1615	Cys Thr Cys Thr Gly Cys Ala Gly 1620
Ala Cys 1625	Cys Gly Ala Cys Ala 1630	Thr Thr Gly Thr Gly Gly Ala Cys 1635
Thr Thr 1640	Ala Cys Ala Gly Ala 1645	Gly Gly Ala Gly Cys Cys Cys Cys 1650
Ala Thr 1655	Gly Gly Gly Cys Cys 1660	Gly Gly Ala Ala Gly Cys Ala Gly 1665
Gly Gly 1670	Gly Gly Gly Ala Ala 1675	Cys Gly Cys Thr Gly Gly Ala Cys 1680
Gly Ala 1685	Cys Cys Thr Ala Gly 1690	Ala Gly Gly Ala Gly Cys Ala Ala 1695
Gly Cys 1700	Ala Ala Gly Gly Gly 1705	Ala Gly Cys Thr Gly Thr Ala Cys 1710
Ala Gly 1715	Gly Ala Gly Ala Cys 1720	Thr Ala Ala Gly Gly Gly Ala Ala 1725
Ala Ala 1730	Ala Cys Cys Thr Cys 1735	Gly Ala Gly Ala Cys Cys Ala Gly 1740
Cys Gly 1745	Ala Ala Cys Thr Gly 1750	Ala Gly Gly Gly Thr Gly Ala Cys 1755
Ala Gly 1760	Thr Cys Ala Gly Gly 1765	Ala Ala Ala Thr Gly Gly Thr Ala 1770
Cys Gly 1775	Gly Cys Thr Gly Cys 1780	Thr Gly Cys Thr Thr Cys Ala Gly 1785
Gly Cys 1790	Ala Ala Thr Thr Cys 1795	Ala Gly Ala Gly Cys Thr Thr Cys 1800
Gly Ala 1805	Gly Ala Ala Gly Ala 1810	Ala Ala Gly Thr Gly Cys Gly Ala 1815
Gly Thr 1820	Gly Ala Thr Cys Thr 1825	Ala Thr Ala Cys Gly Cys Ala Gly 1830
Cys Thr	Cys Ala Gly Thr Ala	Ala Ala Ala Cys Thr Gly Thr Gly

## Sequence Listing.txt

1835                      1840                      1845  
 Gly Thr Thr Thr Gly Cys Ala Ala Gly Cys Ala Gly Ala Ala Gly  
     1850                      1855                      1860  
 Gly Cys Gly Cys Thr Gly Gly Ala Ala Cys Thr Gly Thr Thr Gly  
     1865                      1870                      1875  
 Cys Cys Cys Ala Ala Gly Gly Thr Gly Gly Ala Ala Gly Ala Gly  
     1880                      1885                      1890  
 Gly Thr Gly Gly Thr Gly Ala Gly Cys Thr Thr Ala Ala Thr Gly  
     1895                      1900                      1905  
 Ala Ala Thr Gly Ala Gly Gly Ala Thr Gly Ala Gly Ala Ala Gly  
     1910                      1915                      1920  
 Ala Cys Thr Gly Thr Thr Gly Thr Cys Cys Gly Gly Cys Thr Gly  
     1925                      1930                      1935  
 Cys Ala Gly Gly Ala Gly Ala Ala Gly Cys Gly Gly Cys Ala Gly  
     1940                      1945                      1950  
 Ala Ala Gly Gly Ala Gly Cys Thr Cys Thr Gly Gly Ala Ala Thr  
     1955                      1960                      1965  
 Cys Thr Cys Cys Thr Gly Ala Ala Gly Ala Thr Thr Gly Cys Thr  
     1970                      1975                      1980  
 Thr Gly Thr Ala Gly Cys Ala Ala Gly Gly Thr Cys Gly Thr  
     1985                      1990                      1995  
 Gly Gly Thr Cys Cys Thr Gly Thr Cys Gly Cys Thr Gly Gly Ala  
     2000                      2005                      2010  
 Gly Cys Cys Cys Cys Gly Gly Ala Thr Gly Cys Cys Ala Thr Gly  
     2015                      2020                      2025  
 Ala Ala Thr Gly Cys Cys Gly Cys Thr Cys Gly Ala Cys Thr Thr  
     2030                      2035                      2040  
 Gly Cys Cys Cys Ala Gly Cys Cys Thr Gly Gly Gly Cys Ala Gly  
     2045                      2050                      2055  
 Cys Thr Gly Ala Thr Gly Gly Cys Thr Cys Ala Gly Cys Cys Cys  
     2060                      2065                      2070  
 Gly Cys Cys Ala Cys Gly Gly Cys Cys Gly Cys Cys Ala Ala Cys  
     2075                      2080                      2085  
 Gly Cys Cys Thr Thr Ala Cys Cys Thr Gly Ala Gly Cys Cys Ala

Sequence Listing.txt

2090

2095

2100

Gly Cys Cys Ala Ala Gly Ala Ala Gly Gly Cys Thr Gly Ala Ala  
2105 2110 2115

Gly Ala Ala Cys Thr Gly Gly Thr Gly Gly Cys Thr Gly Ala Ala  
2120 2125 2130

Gly Cys Ala Cys Ala Thr Ala Ala Cys Cys Thr Cys Thr Gly Cys  
2135 2140 2145

Ala Cys Cys Cys Thr Gly Cys Thr Ala Gly Ala Ala Ala Ala Thr  
2150 2155 2160

Gly Cys Cys Ala Thr Ala Cys Ala Gly Gly Ala Cys Ala Cys Thr  
2165 2170 2175

Gly Thr Gly Ala Gly Gly Gly Ala Ala Cys Ala Ala Gly Ala Cys  
2180 2185 2190

Cys Ala Gly Ala Gly Thr Thr Thr Cys Ala Cys Gly Gly Cys Cys  
2195 2200 2205

Cys Thr Ala Gly Ala Cys Thr Gly Gly Ala Gly Cys Thr Gly Gly  
2210 2215 2220

Thr Thr Ala Cys Ala Gly Ala Cys Gly Gly Ala Ala Gly Ala Ala  
2225 2230 2235

Gly Ala Ala Gly Ala Gly Cys Ala Cys Ala Gly Cys Thr Gly Cys  
2240 2245 2250

Cys Thr Gly Gly Ala Gly Cys Ala Gly Gly Cys Cys Thr Cys Ala  
2255 2260 2265

Thr Gly Ala  
2270