

Seqprot.2668_ST25
SEQUENCE LISTING

<110> Forschungszentrum Jülich GmbH

<120> Lyase sowie Verfahren zur asymmetrischen Synthese von
Phenylacetylcarbinol

<130> PT1.2668

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<170> PatentIn version 3.5

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cgaacccccg	cgtgcaggaa	ctgggtggaga	cctccgacgc	actgctgtgc	atcgcccccg	6060
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tggctgagcc	cgaccgcgta	acggctgatg	gccgcgccta	tgacggcttt	accctgcgcg	6180
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aggaccgcca gcatgtggtg atggtaggcg atggctcctt ccagcttacc gcgcaggaag	6540
tggctcagat ggtgcgctac gaactgcccg tcattatctt tctgatcaac aaccgtggct	6600
atgtcgggtgg catcgccatt catgacggcc cgtacaacta tatcaagaac tgggattacg	6660
ccggcctgat ggaagtcttc aacgccggag aaggccatgg acttggcctg aaagccacca	6720
ccccgaagga actgacagaa gccatcgcca gggcaaaagc caatacccgc ggcccgcgc	6780
tgatcgaatg ccagatcgac cgcacggact gcacggatat gctggttcaa tggggccgca	6840
aggttgccctc aaccaacgcg cgcaagacca ctctggccct cgagcaccac caccaccacc	6900
actgagatcc ggctgctaac aaagcccga aggaagctga gttggctgct gccaccgctg	6960
agcaataact agcataaccc cttggggcct ctaaacgggt cttgaggggt tttttgctga	7020
aaggaggaac tatatccgga t	7041

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gacatgaaac agatctattg ctgcaatgag ttgaactgtg gcttcagcgc ggaaggctac	180
gcccgttcta acggggctgc ggcagcggtt gtcaccttca gcgttgccgc catttccgcc	240
atgaacgccc tcggcgccgc ctatgccgaa aacctgccgg ttatcctgat ttccggcgcg	300
cccaacagca atgatcaggg cacaggctcat atcctgcac acacaatcgg caagacggat	360
tacagctacc agcttgaaat ggcccgctcag gtcacctgtg ccgccgaaag cattaccgac	420
gctcactccg ccccgcccaa gattgaccac gtcattcgca cggcgctgcg cgagcgtaag	480
ccggcctatc tggacatcgc gtgcaacatt gcctccgagc cctgcgtgcg gcctggccct	540
gtcagcagcc tgctgtccga gcctgaaatc gaccacacga gcctgaaggc cgagtggtac	600
gccacgggtg ccttgctgga aaaatcggcc agccccgtca tgctgctggg cagcaagctg	660
cgggccgcca acgactggc cgcaaccgaa acgctggcag acaagctgca atgcgcggtg	720
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aagaactggg attacgccgg cctgatgaa gtcttcaacg ccggagaagg ccatggactt	1500
ggcctgaaag ccaccacccc gaaggaactg acagaagcca tcgccagggc aaaagccaat	1560
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<211> 560

<212> PRT

<213> artificial

<220>

<223> künstlich hergestellt

Seqprot.2668_ST25

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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu

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260

265

270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln His Gly
Seite 15

Seqprot.2668_ST25
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535

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
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<212> PRT
<213> artificial

<220>
<223> künstlich hergestellt

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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Seqprot.2668_ST25

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
 210 215 220
 Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
 225 230 235 240
 Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
 245 250 255
 Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
 260 265 270
 Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
 275 280 285
 Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300
 Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
 305 310 315 320
 Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
 325 330 335
 Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
 340 345 350
 Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365
 His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
 370 375 380
 Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400
 Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
 405 410 415
 Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430
 Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445
 Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460
 Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480

Seqprot.2668_ST25

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Phe Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

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<212> PRT
<213> artificial

<220>
<223> künstlich hergestellt
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Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
Seite 18

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145		150		155		160
Pro	Ala	Tyr	Leu	Asp 165	Ile	Ala
					Cys	Asn
					Ile	Ala
					Ser	Glu
					Pro	Cys
						Val
Arg	Pro	Gly	Pro 180	Val	Ser	Ser
					Leu	Leu
					Ser	Glu
					Pro	Glu
					Ile	Asp
						His
Thr	Ser	Leu 195	Lys	Ala	Ala	Val
					Asp	Ala
					Thr	Val
					Ala	Leu
					Leu	Glu
						Lys
Ser	Ala 210	Ser	Pro	Val	Met	Leu
						Leu
					Gly	Ser
					Lys	Leu
					Arg	Ala
					Ala	Ala
					Asn	
Ala	Leu	Ala	Ala	Thr	Glu 230	Thr
					Leu	Ala
					Asp	Lys
						Leu
					Gln	Cys
					Ala	Val
						240
Thr	Ile	Met	Ala	Ala 245	Ala	Lys
					Gly	Phe
					Phe	Pro
					Glu	Asp
					His	Ala
						Gly
						255
Phe	Arg	Gly	Leu 260	Tyr	Trp	Gly
					Glu	Val
						Ser
					Asn	Pro
					Gly	Val
						Gln
						Glu
Leu	Val	Glu 275	Thr	Ser	Asp	Ala
						Leu
						Leu
					Cys	Ile
					Ala	Pro
						Val
					Phe	Asn
Asp	Tyr 290	Ser	Thr	Val	Gly	Trp
						Ser
					Ala	Trp
					Pro	Lys
						Gly
					Pro	Asn
						Val
Ile	Leu	Ala	Glu	Pro	Asp 310	Arg
					Val	Thr
					Val	Asp
					Gly	Arg
					Ala	Tyr
						Asp
						320
Gly	Phe	Thr	Leu	Arg 325	Ala	Phe
					Leu	Gln
					Ala	Leu
					Ala	Glu
					Lys	Ala
						Pro
						335
Ala	Arg	Pro	Ala 340	Ser	Ala	Gln
					Lys	Ser
						Val
					Pro	Thr
					Cys	Ser
						Leu
Thr	Ala	Thr 355	Ser	Asp	Glu	Ala
						Gly
						Leu
					Thr	Asn
					Asp	Glu
						Ile
						Val
						Arg
His	Ile 370	Asn	Ala	Leu	Leu	Thr
						Ser
						Asn
						Thr
						Thr
						Leu
						Val
						Ala
						Glu
						Thr
Gly	Asp	Ser	Trp	Phe	Asn 390	Ala
						Met
					Arg	Met
					Thr	Leu
						Pro
					Arg	Gly
						Ala
						400
Arg	Val	Glu	Leu	Glu 405	Met	Gln
					Trp	Gly
						His
						Ile
					Gly	Trp
					Ser	Val
						Pro
Ser	Ala	Phe	Gly	Asn	Ala	Met
					Gly	Ser
					Gln	Asp
					Arg	Gln
					His	Val
						Val

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420

425

430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Pro Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 12

<211> 560

<212> PRT

<213> artificial

<220>

<223> künstlich hergestellt

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Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Seqprot.2668_ST25

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
 100 105 110
 His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
 115 120 125
 Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
 130 135 140
 Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
 145 150 155 160
 Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
 165 170 175
 Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
 180 185 190
 Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
 195 200 205
 Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
 210 215 220
 Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
 225 230 235 240
 Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
 245 250 255
 Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
 260 265 270
 Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
 275 280 285
 Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300
 Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
 305 310 315 320
 Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
 325 330 335
 Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
 340 345 350
 Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365

Seqprot.2668_ST25

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Ile Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

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<211> 560
<212> PRT
<213> artificial

<220>
<223> künstlich hergestellt

<400> 13

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys

Seqprot.2668_ST25

35

40

45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
 50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
 65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
 85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
 100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
 115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
 130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
 145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
 165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
 180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
 195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
 210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
 225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
 245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
 260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
 275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
 Seite 23

Seqprot.2668_ST25

305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Leu Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

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Seqprot.2668_ST25

<220>

<223> künstlich hergestellt

<400> 14

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

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Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Seqprot.2668_ST25

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Met Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 15
<211> 560
<212> PRT
<213> artificial

<220>
<223> künstlich hergestellt

<400> 15

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
Seite 27

Seite 28

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Seqprot.2668_ST25

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Seqprot.2668_ST25

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Ala Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 17
<211> 560
<212> PRT
<213> artificial

<220>
<223> künstlich hergestellt

<400> 17

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
seite 31

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85

90

95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
seite 32

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355

360

365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
 370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
 405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460

Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Tyr Gly
 530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
 545 550 555 560

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<211> 560

<212> PRT

<213> artificial

<220>

<223> künstlich hergestellt

<400> 18

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
 1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
 20 25 30

Seqprot.2668_ST25

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
 35 40 45
 Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
 50 55 60
 Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
 65 70 75 80
 Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
 85 90 95
 Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
 100 105 110
 His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
 115 120 125
 Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
 130 135 140
 Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
 145 150 155 160
 Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
 165 170 175
 Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
 180 185 190
 Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
 195 200 205
 Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
 210 215 220
 Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
 225 230 235 240
 Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
 245 250 255
 Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
 260 265 270
 Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
 275 280 285
 Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300

Seqprot.2668_ST25

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Thr Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

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Seqprot.2668_ST25

<213> artificial

<220>

<223> künstlich hergestellt

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Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
Seite 36

Seqprot.2668_ST25

	245	250	255	
Phe Arg Gly	Leu Tyr Trp Gly Glu	Val Ser Asn Pro Gly	Val Gln Glu	
	260	265	270	
Leu Val Glu	Thr Ser Asp Ala Leu	Leu Cys Ile Ala Pro	Val Phe Asn	
	275	280	285	
Asp Tyr Ser	Thr Val Gly Trp Ser	Ala Trp Pro Lys	Gly Pro Asn Val	
	290	295	300	
Ile Leu Ala	Glu Pro Asp Arg Val	Thr Val Asp Gly	Arg Ala Tyr Asp	
	305	310	315	320
Gly Phe Thr	Leu Arg Ala Phe Leu	Gln Ala Leu Ala	Glu Lys Ala Pro	
	325	330	335	
Ala Arg Pro	Ala Ser Ala Gln Lys	Ser Ser Val Pro	Thr Cys Ser Leu	
	340	345	350	
Thr Ala Thr	Ser Asp Glu Ala Gly	Leu Thr Asn Asp	Glu Ile Val Arg	
	355	360	365	
His Ile Asn	Ala Leu Leu Thr Ser	Asn Thr Thr Leu	Val Ala Glu Thr	
	370	375	380	
Gly Asp Ser	Trp Phe Asn Ala Met	Arg Met Thr Leu	Pro Arg Gly Ala	
	385	390	395	400
Arg Val Glu	Leu Glu Met Gln Trp	Gly His Ile Gly	Trp Ser Val Pro	
	405	410	415	
Ser Ala Phe	Gly Asn Ala Met Gly	Ser Gln Asp Arg	Gln His Val Val	
	420	425	430	
Met Val Gly	Asp Gly Ser Phe Gln	Leu Thr Ala Gln	Glu Val Ala Gln	
	435	440	445	
Met Val Arg	Tyr Glu Leu Pro Val	Ile Ile Phe Leu	Ile Asn Asn Arg	
	450	455	460	
Gly Tyr Val	Gly Gly Ile Ala Ile	His Asp Gly Pro	Tyr Asn Tyr Ile	
	465	470	475	480
Lys Asn Trp	Asp Tyr Ala Gly Leu	Met Glu Val Phe	Asn Ala Gly Glu	
	485	490	495	
Gly His Gly	Leu Gly Leu Lys Ala	Thr Thr Pro Lys	Glu Leu Thr Glu	
	500	505	510	
Ala Ile Ala	Arg Ala Lys Ala Asn	Thr Arg Gly Pro	Thr Leu Ile Glu	

Seite 38

Seqprot.2668_ST25

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

Seqprot.2668_ST25

Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Ser Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 21
<211> 560
<212> PRT
<213> artificial

<220>
<223> künstlich hergestellt

<400> 21

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
Seite 40

Seite 41

Seqprot.2668_ST25

405

410

415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460

Gly Tyr Val Gly Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Cys Gly
 530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
 545 550 555 560

<210> 22
 <211> 560
 <212> PRT
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<220>
 <223> künstlich hergestellt

<400> 22

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
 1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
 20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
 35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
 50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
 65 70 75 80

Seqprot.2668_ST25

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Seqprot.2668_ST25

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
 370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
 405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460

Gly Tyr Val Ala Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln His Gly
 530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
 545 550 555 560

<210> 23
 <211> 560
 <212> PRT
 <213> artificial

<220>
 <223> künstlich hergestellt

<400> 23

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
 1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
 Seite 44

Seqprot.2668_ST25

20		25		30
Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys	35	40	45	
Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn	50	55	60	
Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala	65	70	75	80
Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu	85	90	95	
Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu	100	105	110	
His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala	115	120	125	
Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala	130	135	140	
Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys	145	150	155	160
Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val	165	170	175	
Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His	180	185	190	
Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys	195	200	205	
Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn	210	215	220	
Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val	225	230	235	240
Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly	245	250	255	
Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu	260	265	270	
Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn	275	280	285	
Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val				

Seqprot.2668_ST25
300

290

295

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Ala Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Phe Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

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Seqprot.2668_ST25

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 <213> artificial

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 <223> künstlich hergestellt

<400> 24

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
 20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
 35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
 50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
 65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
 85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
 100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
 115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
 130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
 145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
 165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
 180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
 195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
 210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
 225 230 235 240

Seqprot.2668_ST25

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Ala Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Seqprot.2668_ST25

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Pro Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 25
<211> 560
<212> PRT
<213> artificial

<220>
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<400> 25

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
Seite 49

Seqprot.2668_ST25

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

Seqprot.2668_ST25

450

455

460

Gly Tyr Val Ala Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Ile Gly
 530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
 545 550 555 560

<210> 26
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 <213> artificial

<220>
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<400> 26

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
 20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
 35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
 50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
 65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
 85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
 100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
 115 120 125

Seqprot.2668_ST25

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
 130 135 140
 Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
 145 150 155 160
 Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
 165 170 175
 Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
 180 185 190
 Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
 195 200 205
 Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
 210 215 220
 Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
 225 230 235 240
 Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
 245 250 255
 Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
 260 265 270
 Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
 275 280 285
 Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300
 Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
 305 310 315 320
 Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
 325 330 335
 Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
 340 345 350
 Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365
 His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
 370 375 380
 Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400

Seqprot.2668_ST25

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Ala Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Leu Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

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Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
Seite 53

Seqprot.2668_ST25

65707580

Met Asn Ala Leu Gly 85 Gly Ala Tyr Ala Glu 90 Asn Leu Pro Val Ile 95 Leu

Ile Ser Gly Ala 100 Pro Asn Ser Asn Asp 105 Gln Gly Thr Gly His 110 Ile Leu

His His Thr 115 Ile Gly Lys Thr Asp 120 Tyr Ser Tyr Gln Leu 125 Glu Met Ala

Arg Gln Val Thr Cys Ala 135 Ala Glu Ser Ile Thr Asp 140 Ala His Ser Ala

Pro Ala Lys Ile Asp 150 His Val Ile Arg Thr Ala 155 Leu Arg Glu Arg Lys 160

Pro Ala Tyr Leu Asp 165 Ile Ala Cys Asn Ile 170 Ala Ser Glu Pro Cys 175 Val

Arg Pro Gly Pro 180 Val Ser Ser Leu Leu 185 Ser Glu Pro Glu Ile 190 Asp His

Thr Ser Leu 195 Lys Ala Ala Val Asp 200 Ala Thr Val Ala Leu 205 Leu Glu Lys

Ser Ala Ser Pro Val Met Leu 215 Leu Gly Ser Lys Leu 220 Arg Ala Ala Asn

Ala Leu Ala Ala Thr 230 Glu Thr Leu Ala Asp Lys 235 Leu Gln Cys Ala Val 240

Thr Ile Met Ala 245 Ala Ala Lys Gly Phe Phe 250 Pro Glu Asp His Ala 255 Gly

Phe Arg Gly Leu 260 Tyr Trp Gly Glu Val 265 Ser Asn Pro Gly Val 270 Gln Glu

Leu Val Glu 275 Thr Ser Asp Ala Leu 280 Leu Cys Ile Ala Pro Val Phe Asn

Asp Tyr Ser Thr Val Gly 295 Trp Ser Ala Trp Pro Lys 300 Gly Pro Asn Val

Ile Leu Ala Glu Pro 310 Asp Arg Val Thr Val Asp 315 Gly Arg Ala Tyr Asp 320

Gly Phe Thr Leu Arg 325 Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala 335 Pro

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu

Seite 55

Seqprot.2668_ST25

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Seqprot.2668_ST25

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300
 Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
 305 310 315 320
 Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
 325 330 335
 Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
 340 345 350
 Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365
 His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
 370 375 380
 Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400
 Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
 405 410 415
 Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430
 Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445
 Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460
 Gly Tyr Val Ala Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480
 Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495
 Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510
 Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525
 Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Val Gly
 530 535 540
 Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
 545 550 555 560

Seqprot.2668_ST25

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<213> artificial

<220>
<223> künstlich hergestellt

<400> 29

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
Seite 58

Seqprot.2668_ST25

225		230		235		240
Thr	Ile	Met	Ala	Ala ₂₄₅	Ala	Lys
				Gly	Phe	Phe ₂₅₀
				Pro	Glu	Asp
				His	Ala ₂₅₅	Gly
Phe	Arg	Gly	Leu ₂₆₀	Tyr	Trp	Gly
				Glu	Val ₂₆₅	Ser
				Asn	Pro	Gly
				Val ₂₇₀	Gln	Glu
Leu	Val	Glu ₂₇₅	Thr	Ser	Asp	Ala
				Leu ₂₈₀	Leu	Cys
				Ile	Ala	Pro
				Val ₂₈₅	Phe	Asn
Asp	Tyr ₂₉₀	Ser	Thr	Val	Gly	Trp ₂₉₅
				Ser	Ala	Trp
				Pro	Lys ₃₀₀	Gly
				Pro	Asn	Val
Ile ₃₀₅	Leu	Ala	Glu	Pro	Asp ₃₁₀	Arg
				Val	Thr	Val
				Asp ₃₁₅	Gly	Arg
				Ala	Tyr	Asp ₃₂₀
Gly	Phe	Thr	Leu	Arg ₃₂₅	Ala	Phe
				Leu	Gln	Ala ₃₃₀
				Leu	Ala	Glu
				Lys	Ala ₃₃₅	Pro
Ala	Arg	Pro	Ala ₃₄₀	Ser	Ala	Gln
				Lys	Ser ₃₄₅	Ser
				Val	Pro	Thr
				Cys ₃₅₀	Ser	Leu
Thr	Ala	Thr ₃₅₅	Ser	Asp	Glu	Ala
				Gly ₃₆₀	Leu	Thr
				Asn	Asp	Glu ₃₆₅
				Ile	Val	Arg
His	Ile ₃₇₀	Asn	Ala	Leu	Leu	Thr ₃₇₅
				Ser	Asn	Thr
				Thr	Thr	Leu
				Val ₃₈₀	Ala	Glu
				Thr		
Gly ₃₈₅	Asp	Ser	Trp	Phe	Asn ₃₉₀	Ala
				Met	Arg	Met
				Thr ₃₉₅	Leu	Pro
				Arg	Gly	Ala ₄₀₀
Arg	Val	Glu	Leu	Glu ₄₀₅	Met	Gln
				Trp	Gly	His
				Ile ₄₁₀	Gly	Trp
				Ser	Val ₄₁₅	Pro
Ser	Ala	Phe	Gly ₄₂₀	Asn	Ala	Met
				Gly	Ser ₄₂₅	Gln
				Asp	Arg	Gln
				His ₄₃₀	Val	Val
Met	Val	Gly ₄₃₅	Asp	Gly	Ser	Phe
				Gln ₄₄₀	Leu	Thr
				Ala	Gln	Glu
				Val ₄₄₅	Ala	Gln
Met	Val ₄₅₀	Arg	Tyr	Glu	Leu	Pro
				Val ₄₅₅	Ile	Ile
				Phe	Leu	Ile
				Asn ₄₆₀	Asn	Arg
Gly ₄₆₅	Tyr	Val	Ala	Gly	Ile ₄₇₀	Ala
				Ile	His	Asp
				Gly ₄₇₅	Pro	Tyr
				Asn	Tyr	Ile ₄₈₀
Lys	Asn	Trp	Asp	Tyr ₄₈₅	Ala	Gly
				Leu	Met	Glu
				Val ₄₉₀	Phe	Asn
				Ala	Gly	Glu ₄₉₅
Gly	His	Gly	Leu	Gly	Leu	Lys
				Ala	Thr	Thr
				Pro	Lys	Glu
				Leu	Thr	Glu

Seqprot.2668_ST25

500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Ala Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

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<220>
<223> künstlich hergestellt

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Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Seqprot.2668_ST25

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

Seqprot.2668_ST25

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Ala Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Tyr Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 31
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<212> PRT
<213> artificial

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<223> künstlich hergestellt

<400> 31

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
Seite 62

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115

120

125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
Seite 63

seqplot:2008_S123

<400> 32

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Seqprot.2668_ST25

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Seqprot.2668_ST25

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Ala Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Gly Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 33
<211> 560
<212> PRT
<213> artificial

<220>
<223> künstlich hergestellt

<400> 33

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
Seite 66

Seqprot.2668_ST25

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

Seite 68

Seite 69

Seqprot.2668_ST25

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
 225 230 235 240
 Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
 245 250 255
 Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
 260 265 270
 Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
 275 280 285
 Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300
 Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
 305 310 315 320
 Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
 325 330 335
 Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
 340 345 350
 Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365
 His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
 370 375 380
 Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400
 Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
 405 410 415
 Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430
 Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445
 Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460
 Gly Tyr Val Ala Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480
 Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495

Seqprot.2668_ST25

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Cys Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 35

<211> 560

<212> PRT

<213> artificial

<220>

<223> künstlich hergestellt

<400> 35

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
Seite 71

Seqprot.2668_ST25

165170175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His

180185190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys

195200205

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

210215220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val

225230235240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly

245250255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu

260265270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn

275280285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val

290295300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp

305310315320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro

325330335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu

340345350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg

355360365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr

370375380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala

385390395400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro

405410415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val

420425430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln

Seqprot.2668_ST25

435

440

445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460

Gly Tyr Val Val Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln His Gly
 530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
 545 550 555 560

<210> 36

<211> 560

<212> PRT

<213> artificial

<220>

<223> künstlich hergestellt

<400> 36

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
 20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
 35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
 50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
 65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
 85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
 100 105 110

Seqprot.2668_ST25

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125
Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140
Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160
Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175
Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190
Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205
Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220
Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240
Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255
Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270
Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285
Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300
Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320
Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335
Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350
Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365
His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Seqprot.2668_ST25

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Val Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Phe Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 37
<211> 560
<212> PRT
<213> artificial

<220>
<223> künstlich hergestellt

<400> 37

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
Seite 75

Seqprot.2668_ST25

50

55

60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
Seite 76

Seqprot.2668_ST25
330

325

335

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

<210> 38

<211> 560

<212> PRT

<213> artificial

<220>

<223> künstlich hergestellt

<400> 38

Seqprot.2668_ST25

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

Seqprot.2668_ST25

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
 275 280 285
 Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300
 Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
 305 310 315 320
 Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
 325 330 335
 Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
 340 345 350
 Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365
 His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
 370 375 380
 Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400
 Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
 405 410 415
 Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430
 Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445
 Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460
 Gly Tyr Val Val Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480
 Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495
 Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510
 Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525
 Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Ile Gly
 530 535 540

Seqprot.2668_ST25

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 39
<211> 560
<212> PRT
<213> artificial

<220>
<223> künstlich hergestellt

<400> 39

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
Seite 80

Seqprot.2668_ST25
220

210

215

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260 265 270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275 280 285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290 295 300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305 310 315 320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Val Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
seite 81

Seqprot.2668_ST25

485

490

495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Leu Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 40

<211> 560

<212> PRT

<213> artificial

<220>

<223> künstlich hergestellt

<400> 40

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
1 5 10 15

Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

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Pro Ala Tyr Leu Asp₁₆₅ Ile Ala Cys Asn₁₇₀ Ile Ala Ser Glu Pro Cys₁₇₅ Val
Arg Pro Gly Pro₁₈₀ Val Ser Ser Leu₁₈₅ Leu Ser Glu Pro Glu Ile Asp His₁₉₀
Thr Ser Leu₁₉₅ Lys Ala Ala Val Asp₂₀₀ Ala Thr Val Ala Leu₂₀₅ Leu Glu Lys
Ser Ala₂₁₀ Ser Pro Val Met Leu₂₁₅ Leu Gly Ser Lys Leu₂₂₀ Arg Ala Ala Asn
Ala₂₂₅ Leu Ala Ala Thr Glu₂₃₀ Thr Leu Ala Asp Lys₂₃₅ Leu Gln Cys Ala Val₂₄₀
Thr Ile Met Ala₂₄₅ Ala Lys Gly Phe Phe₂₅₀ Pro Glu Asp His Ala₂₅₅ Gly
Phe Arg Gly Leu₂₆₀ Tyr Trp Gly Glu Val₂₆₅ Ser Asn Pro Gly Val₂₇₀ Gln Glu
Leu Val Glu₂₇₅ Thr Ser Asp Ala Leu₂₈₀ Leu Cys Ile Ala Pro₂₈₅ Val Phe Asn
Asp Tyr₂₉₀ Ser Thr Val Gly Trp₂₉₅ Ser Ala Trp Pro Lys₃₀₀ Gly Pro Asn Val
Ile₃₀₅ Leu Ala Glu Pro Asp₃₁₀ Arg Val Thr Val Asp₃₁₅ Gly Arg Ala Tyr Asp₃₂₀
Gly Phe Thr Leu Arg₃₂₅ Ala Phe Leu Gln Ala₃₃₀ Leu Ala Glu Lys Ala₃₃₅ Pro
Ala Arg Pro Ala₃₄₀ Ser Ala Gln Lys Ser₃₄₅ Ser Val Pro Thr Cys₃₅₀ Ser Leu
Thr Ala Thr₃₅₅ Ser Asp Glu Ala Gly₃₆₀ Leu Thr Asn Asp Glu₃₆₅ Ile Val Arg
His Ile₃₇₀ Asn Ala Leu Leu Thr₃₇₅ Ser Asn Thr Thr Leu₃₈₀ Val Ala Glu Thr
Gly Asp Ser Trp Phe Asn₃₉₀ Ala Met Arg Met Thr₃₉₅ Leu Pro Arg Gly Ala₄₀₀
Arg Val Glu Leu Glu₄₀₅ Met Gln Trp Gly His₄₁₀ Ile Gly Trp Ser Val₄₁₅ Pro
Ser Ala Phe Gly₄₂₀ Asn Ala Met Gly Ser₄₂₅ Gln Asp Arg Gln His₄₃₀ Val Val

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Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Val Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Met Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

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<223> künstlich hergestellt

<400> 41

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
Seite 84

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100110

105

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115120125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130135140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145150155160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165170175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180185190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195200205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210215220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225230235240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245250255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
260265270

Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
275280285

Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
290295300

Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
305310315320

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
325330335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
340345350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
355360365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr

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370

375

380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
 405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460

Gly Tyr Val Val Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Val Gly
 530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
 545 550 555 560

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<400> 42

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
 20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
 35 40 45

Seqprot.2668_ST25

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

Seqprot.2668_ST25

Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
 325 330 335

Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
 340 345 350

Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
 370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
 405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460

Gly Tyr Val Val Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Ala Gly
 530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
 545 550 555 560

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Seqprot.2668_ST25

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Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
210 215 220

Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
225 230 235 240

Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
245 250 255

Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
Seite 89

Seqprot.2668_ST25															
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Leu	Val	Glu	Thr	Ser	Asp	Ala	Leu	Leu	Cys	Ile	Ala	Pro	Val	Phe	Asn
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Ile	Leu	Ala	Glu	Pro	Asp	Arg	Val	Thr	Val	Asp	Gly	Arg	Ala	Tyr	Asp
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Gly	Phe	Thr	Leu	Arg	Ala	Phe	Leu	Gln	Ala	Leu	Ala	Glu	Lys	Ala	Pro
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Ala	Arg	Pro	Ala	Ser	Ala	Gln	Lys	Ser	Ser	Val	Pro	Thr	Cys	Ser	Leu
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Thr	Ala	Thr	Ser	Asp	Glu	Ala	Gly	Leu	Thr	Asn	Asp	Glu	Ile	Val	Arg
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His	Ile	Asn	Ala	Leu	Leu	Thr	Ser	Asn	Thr	Thr	Leu	Val	Ala	Glu	Thr
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Arg	Val	Glu	Leu	Glu	Met	Gln	Trp	Gly	His	Ile	Gly	Trp	Ser	Val	Pro
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Ser	Ala	Phe	Gly	Asn	Ala	Met	Gly	Ser	Gln	Asp	Arg	Gln	His	Val	Val
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Met	Val	Gly	Asp	Gly	Ser	Phe	Gln	Leu	Thr	Ala	Gln	Glu	Val	Ala	Gln
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Met	Val	Arg	Tyr	Glu	Leu	Pro	Val	Ile	Ile	Phe	Leu	Ile	Asn	Asn	Arg
	450					455					460				
Gly	Tyr	Val	Val	Gly	Ile	Ala	Ile	His	Asp	Gly	Pro	Tyr	Asn	Tyr	Ile
465					470					475					480
Lys	Asn	Trp	Asp	Tyr	Ala	Gly	Leu	Met	Glu	Val	Phe	Asn	Ala	Gly	Glu
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Gly	His	Gly	Leu	Gly	Leu	Lys	Ala	Thr	Thr	Pro	Lys	Glu	Leu	Thr	Glu
			500					505					510		
Ala	Ile	Ala	Arg	Ala	Lys	Ala	Asn	Thr	Arg	Gly	Pro	Thr	Leu	Ile	Glu
		515					520					525			
Cys	Gln	Ile	Asp	Arg	Thr	Asp	Cys	Thr	Asp	Met	Leu	Val	Gln	Tyr	Gly

Seqprot.2668_ST25

530

535

540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

<210> 44
<211> 560
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<213> artificial

<220>
<223> künstlich hergestellt

<400> 44

Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
85 90 95

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
145 150 155 160

Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
165 170 175

Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
180 185 190

Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
195 200 205

Seqprot.2668_ST25

Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
 210 215 220
 Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
 225 230 235 240
 Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
 245 250 255
 Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
 260 265 270
 Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
 275 280 285
 Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300
 Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
 305 310 315 320
 Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
 325 330 335
 Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
 340 345 350
 Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365
 His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
 370 375 380
 Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400
 Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
 405 410 415
 Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430
 Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445
 Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460
 Gly Tyr Val Val Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480

Seqprot.2668_ST25

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Thr Gly
530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
545 550 555 560

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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
65 70 75 80

Met Asn Ala Leu ⁸⁵Gly Gly Ala Tyr Ala ⁹⁰Glu Asn Leu Pro Val ⁹⁵Ile Leu

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
100 105 110

His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
115 120 125

Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
130 135 140

Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
Seite 93

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

Seqprot.2668_ST25

420

425

430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460

Gly Tyr Val Val Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480

Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495

Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510

Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525

Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Gly Gly
 530 535 540

Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu
 545 550 555 560

<210> 46

<211> 560

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<213> artificial

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<223> künstlich hergestellt

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Met Thr Tyr Thr Val Gly Met Tyr Leu Ala Glu Arg Leu Val Gln Ile
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Gly Leu Lys His His Phe Ala Val Ala Gly Asp Tyr Asn Leu Val Leu
 20 25 30

Leu Asp Gln Leu Leu Leu Asn Lys Asp Met Lys Gln Ile Tyr Cys Cys
 35 40 45

Asn Glu Leu Asn Cys Gly Phe Ser Ala Glu Gly Tyr Ala Arg Ser Asn
 50 55 60

Gly Ala Ala Ala Ala Val Val Thr Phe Ser Val Gly Ala Ile Ser Ala
 65 70 75 80

Met Asn Ala Leu Gly Gly Ala Tyr Ala Glu Asn Leu Pro Val Ile Leu
 85 90 95

Seqprot.2668_ST25

Ile Ser Gly Ala Pro Asn Ser Asn Asp Gln Gly Thr Gly His Ile Leu
 100 105 110
 His His Thr Ile Gly Lys Thr Asp Tyr Ser Tyr Gln Leu Glu Met Ala
 115 120 125
 Arg Gln Val Thr Cys Ala Ala Glu Ser Ile Thr Asp Ala His Ser Ala
 130 135 140
 Pro Ala Lys Ile Asp His Val Ile Arg Thr Ala Leu Arg Glu Arg Lys
 145 150 155 160
 Pro Ala Tyr Leu Asp Ile Ala Cys Asn Ile Ala Ser Glu Pro Cys Val
 165 170 175
 Arg Pro Gly Pro Val Ser Ser Leu Leu Ser Glu Pro Glu Ile Asp His
 180 185 190
 Thr Ser Leu Lys Ala Ala Val Asp Ala Thr Val Ala Leu Leu Glu Lys
 195 200 205
 Ser Ala Ser Pro Val Met Leu Leu Gly Ser Lys Leu Arg Ala Ala Asn
 210 215 220
 Ala Leu Ala Ala Thr Glu Thr Leu Ala Asp Lys Leu Gln Cys Ala Val
 225 230 235 240
 Thr Ile Met Ala Ala Ala Lys Gly Phe Phe Pro Glu Asp His Ala Gly
 245 250 255
 Phe Arg Gly Leu Tyr Trp Gly Glu Val Ser Asn Pro Gly Val Gln Glu
 260 265 270
 Leu Val Glu Thr Ser Asp Ala Leu Leu Cys Ile Ala Pro Val Phe Asn
 275 280 285
 Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300
 Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
 305 310 315 320
 Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
 325 330 335
 Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
 340 345 350
 Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365

Seqprot.2668_ST25

His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
370 375 380

Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
385 390 395 400

Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
405 410 415

Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
420 425 430

Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
435 440 445

Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
450 455 460

Gly Tyr Val Val Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
465 470 475 480

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

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Asp Tyr Ser Thr Val Gly Trp Ser Ala Trp Pro Lys Gly Pro Asn Val
 290 295 300
 Ile Leu Ala Glu Pro Asp Arg Val Thr Val Asp Gly Arg Ala Tyr Asp
 305 310 315 320
 Gly Phe Thr Leu Arg Ala Phe Leu Gln Ala Leu Ala Glu Lys Ala Pro
 325 330 335
 Ala Arg Pro Ala Ser Ala Gln Lys Ser Ser Val Pro Thr Cys Ser Leu
 340 345 350
 Thr Ala Thr Ser Asp Glu Ala Gly Leu Thr Asn Asp Glu Ile Val Arg
 355 360 365
 His Ile Asn Ala Leu Leu Thr Ser Asn Thr Thr Leu Val Ala Glu Thr
 370 375 380
 Gly Asp Ser Trp Phe Asn Ala Met Arg Met Thr Leu Pro Arg Gly Ala
 385 390 395 400
 Arg Val Glu Leu Glu Met Gln Trp Gly His Ile Gly Trp Ser Val Pro
 405 410 415
 Ser Ala Phe Gly Asn Ala Met Gly Ser Gln Asp Arg Gln His Val Val
 420 425 430
 Met Val Gly Asp Gly Ser Phe Gln Leu Thr Ala Gln Glu Val Ala Gln
 435 440 445
 Met Val Arg Tyr Glu Leu Pro Val Ile Ile Phe Leu Ile Asn Asn Arg
 450 455 460
 Gly Tyr Val Ile Gly Ile Ala Ile His Asp Gly Pro Tyr Asn Tyr Ile
 465 470 475 480
 Lys Asn Trp Asp Tyr Ala Gly Leu Met Glu Val Phe Asn Ala Gly Glu
 485 490 495
 Gly His Gly Leu Gly Leu Lys Ala Thr Thr Pro Lys Glu Leu Thr Glu
 500 505 510
 Ala Ile Ala Arg Ala Lys Ala Asn Thr Arg Gly Pro Thr Leu Ile Glu
 515 520 525
 Cys Gln Ile Asp Arg Thr Asp Cys Thr Asp Met Leu Val Gln Trp Gly
 530 535 540
 Arg Lys Val Ala Ser Thr Asn Ala Arg Lys Thr Thr Leu Ala Leu Glu

545	550	Seqprot.2668_ST25 555	560
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