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<400> 98

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 35 40 45

Glu Thr Ile Arg Ser Ile Thr Glu Ile Leu Ile Trp Gly Asp Gln Asn
 50 55 60

Asp Ser Ser Val Phe Asp Phe Phe Leu Glu Lys Asn Met Phe Val Phe
 65 70 75 80

Phe Leu Asn Ile Leu Arg Gln Lys Ser Gly Arg Tyr Val Cys Val Gln
 85 90 95

Leu Leu Gln Thr Leu Asn Ile Leu Phe Glu Asn Ile Ser His Glu Thr
 100 105 110

Ser Leu Tyr Tyr Leu Leu Ser Asn Asn Tyr Val Asn Ser Ile Ile Val
 115 120 125

His Lys Phe Asp Phe Ser Asp Glu Glu Ile Met Ala Tyr Tyr Ile Ser
 130 135 140

Phe Leu Lys Thr Leu Ser Leu Lys Leu Asn Asn His Thr Val His Phe
 145 150 155 160

Phe Tyr Asn Glu His Thr Asn Asp Phe Ala Leu Tyr Thr Glu Ala Ile
 165 170 175

Lys Phe Phe Asn His Pro Glu Ser Met Val Arg Ile Ala Val Arg Thr
 180 185 190

Ile Thr Leu Asn Val Tyr Lys Val Ser Leu Asp Asn Gln Ala Met Leu
195 200 205

His Tyr Ile Arg Asp Lys Thr Ala Val Pro Tyr Phe Ser Asn Leu Val
210 215 220

Trp Phe Ile Gly Ser His Val Ile Glu Leu Asp Asp Cys Val Gln Thr
225 230 235 240

Asp Glu Glu His Arg Asn Arg Gly Lys Leu Ser Asp Leu Val Ala Glu
245 250 255

His Leu Asp His Leu His Tyr Leu Asn Asp Ile Leu Ile Ile Asn Cys
260 265 270

Glu Phe Leu Asn Asp Val Leu Thr Asp His Leu Leu Asn Arg Leu Phe
275 280 285

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

Arg Pro Lys Ile Ser Leu Pro Val Ser Leu Tyr Leu Leu Ser Gln His
305 310 315 320

Ile Pro Leu Trp Ala Leu Asn Val Thr Pro Arg Leu Asp Ser Pro Cys
325 330 335

Pro Val Lys Met Leu Val Leu Leu Ala Phe Ile Ile Ala Phe His Ile
340 345 350

Thr Ser Ala Ala Leu Leu Phe Ile Ala Thr Val Asp Asn Ala Trp Trp
355 360 365

Val Gly Asp Glu Phe Phe Ala Asp Val Trp Arg Ile Cys Thr Asn Asn
370 375 380

Thr Asn Cys Thr Val Ile Asn Asp Ser Phe Gln Glu Tyr Ser Thr Leu
385 390 395 400

Gln Ala Val Gln Ala Thr Met Ile Leu Ser Thr Ile Leu Cys Cys Ile
405 410 415

Ala Phe Phe Ile Phe Val Leu Gln Leu Phe Arg Leu Lys Gln Gly Glu
420 425 430

Arg Phe Val Leu Thr Ser Ile Ile Gln Leu Met Ser Cys Leu Cys Val
435 440 445

Met Ile Ala Ala Ser Ile Tyr Thr Asp Arg Arg Glu Asp Ile His Asp
450 455 460

Lys Asn Ala Lys Phe Tyr Pro Val Thr Arg Glu Gly Ser Tyr Gly Tyr
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Met Met Tyr Leu Ile Leu Arg Lys Arg Lys
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Asp	Ser	Ser	Val	Phe	Asp	Phe	Phe	Leu	Glu	Lys	Asn	Met	Phe	Val	Phe
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Leu Leu Gln Thr Leu Asn Ile Leu Phe Glu Asn Ile Ser His Glu Thr
100 105 110

Ser Leu Tyr Tyr Leu Leu Ser Asn Asn Tyr Val Asn Ser Ile Ile Val
115 120 125

His Lys Phe Asp Phe Ser Asp Glu Glu Ile Met Ala Tyr Tyr Ile Ser
130 135 140

Phe Leu Lys Thr Leu Ser Leu Lys Leu Asn Asn His Thr Val His Phe
145 150 155 160

Phe Tyr Asn Glu His Ile Pro Leu Trp Ala Leu Asn Val Thr Pro Arg
165 170 175

Leu Asp Ser Pro Cys Pro Val Lys Met Leu Val Leu Leu Ala Phe Ile
180 185 190

Ile Ala Phe His Ile Thr Ser Ala Ala Leu Leu Phe Ile Ala Thr Val
195 200 205

Asp Asn Ala Trp Trp Val Gly Asp Glu Phe Phe Ala Asp Val Trp Arg
210 215 220

Ile Cys Thr Asn Asn Thr Asn Cys Thr Val Ile Asn Asp Ser Phe Gln
225 230 235 240

Glu Tyr Ser Thr Leu Gln Ala Val Gln Ala Thr Met Ile Leu Ser Thr
245 250 255

Ile Leu Cys Cys Ile Ala Phe Phe Ile Phe Val Leu Gln Leu Phe Arg
260 265 270

Leu Lys Gln Gly Glu Arg Phe Val Leu Thr Ser Ile Ile Gln Leu Met
275 280 285

Ser Cys Leu Cys Val Met Ile Ala Ala Ser Ile Tyr Thr Asp Arg Arg
290 295 300

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

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340 345 350

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<212> DNA
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<212> PRT
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<400> 102

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Glu Thr Ile Arg Ser Ile Thr Glu Ile Leu Ile Trp Gly Asp Gln Asn
50 55 60

Asp Ser Ser Val Phe Asp Phe Phe Leu Glu Lys Asn Met Phe Val Phe
65 70 75 80

Phe Leu Asn Ile Leu Arg Gln Lys Ser Gly Arg Tyr Val Cys Val Gln
85 90 95

Leu Leu Gln Thr Leu Asn Ile Leu Phe Glu Asn Ile Ser His Glu Thr
100 105 110

Ser Leu Tyr Tyr Leu Leu Ser Asn Asn Tyr Val Asn Ser Ile Ile Val
115 120 125

His Lys Phe Asp Phe Ser Asp Glu Glu Ile Met Ala Tyr Tyr Ile Ser
130 135 140

Phe Leu Lys Thr Leu Ser Leu Lys Leu Asn Asn His Thr Val His Phe
145 150 155 160

Phe Tyr Asn Glu His Thr Asn Asp Phe Ala Leu Tyr Thr Glu Ala Ile
165 170 175

Lys Phe Phe Asn His Pro Glu Ser Met Val Arg Ile Ala Val Arg Thr
180 185 190

Ile Thr Leu Asn Val Tyr Lys Val Ser Leu Asp Asn Gln Ala Met Leu
195 200 205

His Tyr Ile Arg Asp Lys Thr Ala Val Pro Tyr Phe Ser Asn Leu Val
210 215 220

Trp Phe Ile Gly Ser His Val Ile Glu Leu Asp Asp Cys Val Gln Thr
225 230 235 240

Asp Glu Glu His Arg Asn Arg Gly Lys Leu Ser Asp Leu Val Ala Glu
245 250 255

His Leu Asp His Leu His Tyr Leu Asn Asp Ile Leu Ile Ile Asn Cys
260 265 270

Glu Phe Leu Asn Asp Val Leu Thr Asp His Leu Leu Asn Arg Leu Phe
275 280 285

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

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Arg Pro Lys Ile Ser Leu Pro Val Ser Leu Tyr Leu Leu Ser Gln Val
305 310 315 320

Phe Leu Ile Ile His His Ala Pro Leu Val Asn Ser Leu Ala Glu Val
325 330 335

Ile Leu Asn Gly Asp Leu Ser Glu Met Tyr Ala Lys Thr Glu Gln Asp
340 345 350

Ile Gln Arg Ser Ser His Ile Pro Leu Trp Ala Leu Asn Val Thr Pro
355 360 365

Arg Leu Asp Ser Pro Cys Pro Val Lys Met Leu Val Leu Leu Ala Phe
370 375 380

Ile Ile Ala Phe His Ile Thr Ser Ala Ala Leu Leu Phe Ile Ala Thr
385 390 395 400

Val Asp Asn Ala Trp Trp Val Gly Asp Glu Phe Phe Ala Asp Val Trp
405 410 415

Arg Ile Cys Thr Asn Asn Thr Asn Cys Thr Val Ile Asn Asp Ser Phe
420 425 430

Gln Glu Tyr Ser Thr Leu Gln Ala Val Gln Ala Thr Met Ile Leu Ser
435 440 445

Thr Ile Leu Cys Cys Ile Ala Phe Phe Ile Phe Val Leu Gln Leu Phe
450 455 460

Arg Leu Lys Gln Gly Glu Arg Phe Val Leu Thr Ser Ile Ile Gln Leu
465 470 475 480

Met Ser Cys Leu Cys Val Met Ile Ala Ala Ser Ile Tyr Thr Asp Arg
485 490 495

Arg Glu Asp Ile His Asp Lys Asn Ala Lys Phe Tyr Pro Val Thr Arg
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Glu Gly Ser Tyr Gly Tyr Ser Tyr Ile Leu Ala Trp Val Ala Phe Ala
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 <211> 261
 <212> PRT
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<400> 104

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 35 40 45

Leu Trp Arg Ser Cys Val Arg Glu Ser Ser Gly Phe Thr Glu Cys Arg
 50 55 60

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Gly Tyr Phe Thr Leu Leu Gly Leu Pro Ala Met Leu Gln Ala Val Arg
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Ala Leu Met Ile Val Gly Ile Val Leu Gly Ala Ile Gly Leu Leu Val
85 90 95

Ser Ile Phe Ala Leu Lys Cys Ile Arg Ile Gly Ser Met Glu Asp Ser
100 105 110

Ala Lys Ala Asn Met Thr Leu Thr Ser Gly Ile Met Phe Ile Val Ser
115 120 125

Gly Leu Cys Ala Ile Ala Gly Val Ser Val Phe Ala Asn Met Leu Val
130 135 140

Thr Asn Phe Trp Met Ser Thr Ala Asn Met Tyr Thr Gly Met Gly Gly
145 150 155 160

Met Val Gln Thr Val Gln Thr Arg Tyr Thr Phe Gly Ala Ala Leu Phe
165 170 175

Val Gly Trp Val Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met
180 185 190

Cys Ile Ala Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr Lys Ala
195 200 205

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210 215 220

Phe Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile
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Lys His Asp Tyr Val
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<400> 106

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Ala Leu Lys Asn Leu Ser Ser Ala Lys Arg Lys Phe Ala Asp Ser Leu
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Met Cys Ile Ala Arg Ser Leu Gln Glu Phe Ala Thr Val Leu Arg Asn
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Ile Thr Pro Leu Glu Lys Phe Arg Lys Glu Gln Ile Gly Ala Ala Lys
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Val Ser Leu Glu Tyr Val Phe Lys Val Gln Glu Val Gln Glu Arg Lys
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Gln Lys Ser Gly Gly Lys Gly Gly Glu Asp Glu Ser Val Ile Leu Lys
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Glu Thr Arg Gly Ile Asn Glu Gln Gly Leu Tyr Arg Ile Val Gly Val
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Asn Ser Arg Val Gln Lys Leu Leu Ser Val Leu Met Asp Pro Lys Thr
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Pro Glu Lys Asn Arg Gln Met Leu Gln Leu Leu Met Asn His Leu Ala
500 505 510

Asn Val Ala Asn Asn His Lys Gln Asn Leu Met Thr Val Ala Asn Leu
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Gly Val Val Phe Gly Pro Thr Leu Leu Arg Pro Gln Glu Glu Thr Val
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Ala Ala Ile Met Asp Ile Lys Phe Gln Asn Ile Val Ile Glu Ile Leu
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Ile Glu Asn His Glu Lys Ile Phe Asn Thr Val Pro Asp Met Pro Leu
565 570 575

Thr Asn Ala Gln Leu His Leu Ser Arg Lys Lys Ser Ser Asp Ser Lys
580 585 590

Pro Pro Ser Cys Ser Glu Arg Pro Leu Thr Leu Phe His Thr Val Gln
595 600 605

Ser Thr Glu Lys Gln Glu Gln Arg Asn Ser Ile Ile Asn Ser Ser Leu
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Glu Ser Val Ser Ser Asn Pro Asn Ser Ile Leu Asn Ser Ser Ser Ser
625 630 635 640

Leu Gln Pro Asn Met Asn Ser Ser Asp Pro Asp Leu Ala Val Val Lys
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Leu Ser Pro Ser Trp Pro Met Phe Ser Ala Pro Ser Ser Pro Met Pro
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Ser Leu His Ala Val Phe Ser Leu Leu Val Asn Phe Val Pro Cys His
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Pro Asn Leu His Leu Leu Phe Asp Arg Pro Glu Glu Ala Val His Glu
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Asp Ser Ser Thr Pro Phe Arg Lys Ala Lys Ala Leu Tyr Ala Cys Lys
755 760 765

Ala Glu His Asp Ser Glu Leu Ser Phe Thr Ala Gly Thr Val Phe Asp
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Phe Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile
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Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Tyr Asn Ser Asn Lys
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Leu Gln Leu Leu Met Asn His Leu Ala Asn Val Ala Asn Asn His Lys
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Gln Asn Leu Met Thr Val Ala Asn Leu Gly Val Val Phe Gly Pro Thr
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Leu Leu Arg Pro Gln Glu Glu Thr Val Ala Ala Ile Met Asp Ile Lys
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Lys Ala Lys Ala Leu Tyr Ala Cys Lys Ala Glu His Asp Ser Glu Leu
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<400> 110

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 35 40 45

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

Val Leu Asp Asp Asp Arg Glu Asp Leu Phe Ala Glu Ala Thr Glu Glu
 65 70 75 80

Val Ser Leu Asp Ser Pro Glu Arg Glu Pro Ile Leu Ser Ser Glu Pro
 85 90 95

Ser Pro Ala Val Thr Pro Val Thr Pro Thr Thr Leu Ile Ala Pro Arg
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Ile Glu Ser Lys Ser Met Ser Ala Pro Val Ile Phe Asp Arg Ser Arg
 115 120 125

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 130 135 140

Gly Val Ser Asp Pro Glu Lys Val Gly Asp Gly Met Asn Ala Tyr Met
 145 150 155 160

Ala Tyr Arg Val Thr Thr Lys Thr Ser Leu Ser Met Phe Ser Lys Ser
165 170 175

Glu Phe Ser Val Lys Arg Arg Phe Ser Asp Phe Leu Gly Leu His Ser
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Lys Leu Ala Ser Lys Tyr Leu His Val Gly Tyr Ile Val Pro Pro Ala
195 200 205

Pro Glu Lys Ser Ile Val Gly Met Thr Lys Val Lys Val Gly Lys Glu
210 215 220

Asp Ser Ser Ser Thr Glu Phe Val Glu Lys Arg Arg Ala Ala Leu Glu
225 230 235 240

Arg Tyr Leu Gln Arg Thr Val Lys His Pro Thr Leu Leu Gln Asp Pro
245 250 255

Asp Leu Arg Gln Phe Leu Glu Ser Ser Glu Leu Pro Arg Ala Val Asn
260 265 270

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

Ala Asp Ala Val Asn Lys Met Thr Ile Lys Met Asn Glu Ser Asp Ala
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Trp Phe Glu Glu Lys Gln Gln Gln Phe Glu Asn Leu Asp Gln Gln Leu
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Arg Lys Leu His Val Ser Val Glu Ala Leu Val Cys His Arg Lys Glu
325 330 335

Leu Ser Ala Asn Thr Ala Ala Phe Ala Lys Ser Ala Ala Met Leu Gly
340 345 350

Asn Ser Glu Asp His Thr Ala Leu Ser Arg Ala Leu Ser Gln Leu Ala
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Glu Val Glu Glu Lys Ile Asp Gln Leu His Gln Glu Gln Ala Phe Ala
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Asp Phe Tyr Met Phe Ser Glu Leu Leu Ser Asp Tyr Ile Arg Leu Ile
385 390 395 400

Ala Ala Val Lys Gly Val Phe Asp His Arg Met Lys Cys Trp Gln Lys
405 410 415

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Lys Met Met Val Ala Asn Lys Pro Asp Lys Ile Gln Gln Ala Lys Asn
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Glu Ile Arg Glu Trp Glu Ala Lys Val Gln Gln Gly Glu Arg Asp Phe
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Glu Gln Ile Ser Lys Thr Ile Arg Lys Glu Val Gly Arg Phe Glu Lys
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Glu Arg Val Lys Asp Phe Lys Thr Val Ile Ile Lys Tyr Leu Glu Ser
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Pro Leu Gln Pro Pro Pro Pro Pro Pro Pro Glu Arg Ala Glu Pro
 50 55 60

Pro Pro Asp Ser Leu Arg Pro Arg Pro Ala Ser Leu Ser Ser Ala Ser
 65 70 75 80

Ser Thr Pro Ala Ser Ser Ser Thr Ser Ala Ser Ser Ala Ser Ser Cys
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Ala Ala Ala Ala Ala Ala Ala Ala Leu Ala Gly Leu Ser Ala Leu Pro
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Val Ser Gln Leu Pro Val Phe Ala Pro Leu Ala Ala Ala Ala Val Ala
 115 120 125

Ala Glu Pro Leu Pro Pro Lys Glu Leu Cys Leu Gly Ala Thr Ser Gly
 130 135 140

Pro Gly Pro Val Lys Cys Gly Gly Gly Gly Gly Gly Gly Glu Gly
 145 150 155 160

Arg Gly Ala Pro Arg Phe Arg Cys Ser Ala Glu Glu Leu Asp Tyr Tyr
 165 170 175

Leu Tyr Gly Gln Gln Arg Met Glu Ile Ile Pro Leu Asn Gln His Thr
 180 185 190

Ser Asp Pro Asn Asn Arg Cys Asp Met Cys Ala Asp Asn Arg Asn Gly
 195 200 205

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Glu Cys Pro Met His Gly Pro Leu His Ser Leu Arg Arg Leu Val Gly
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 Thr Ser Ser Ala Ala Ala Ala Ala Pro Pro Pro Glu Leu Pro Glu Trp
 225 230 235 240
 Leu Arg Asp Leu Pro Arg Glu Val Cys Leu Cys Thr Ser Thr Val Pro
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 Gly Leu Ala Tyr Gly Ile Cys Ala Ala Gln Arg Ile Gln Gln Gly Thr
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 Trp Ile Gly Pro Phe Gln Gly Val Leu Leu Pro Pro Glu Lys Val Gln
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 Ala Gly Ala Val Arg Asn Thr Gln His Leu Trp Glu Ile Tyr Asp Gln
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 Asp Gly Thr Leu Gln His Phe Ile Asp Gly Gly Glu Pro Ser Lys Ser
 305 310 315 320
 Ser Trp Met Arg Tyr Ile Arg Cys Ala Arg His Cys Gly Glu Gln Asn
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 385 390 395 400
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 405 410 415

Arg Ser Val Val Phe Pro Gln Thr Pro Cys Ser Arg Asn Phe Ser Leu
420 425 430

Leu Asp Lys Ser Gly Pro Ile Glu Ser Gly Phe Asn Gln Ile Asn Val
435 440 445

Lys Asn Gln Arg Val Leu Ala Ser Pro Thr Ser Thr Ser Gln Leu His
450 455 460

Ser Glu Phe Ser Asp Trp His Leu Trp Lys Cys Gly Gln Cys Phe Lys
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Thr Phe Thr Gln Arg Ile Leu Leu Gln Met His Val Cys Thr Gln Asn
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Pro Asp Arg Pro Tyr Gln Cys Gly His Cys Ser Gln Ser Phe Ser Gln
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Pro Ser Glu Leu Arg Asn His Val Val Thr His Ser Ser Asp Arg Pro
515 520 525

Phe Lys Cys Gly Tyr Cys Gly Arg Ala Phe Ala Gly Ala Thr Thr Leu
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Asn Asn His Ile Arg Thr His Thr Gly Glu Lys Pro Phe Lys Cys Glu
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<212> DNA

<213> Homo sapiens

<400> 113

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<400> 114

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35 40 45

Ala Glu Asp Ile Ser Ala Asn Ser Asn Gly Pro Lys Pro Thr Glu Val
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Val Leu Asp Asp Asp Arg Glu Asp Leu Phe Ala Glu Ala Thr Glu Glu
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Val Ser Leu Asp Ser Pro Glu Arg Glu Pro Ile Leu Ser Ser Glu Pro
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Ser Pro Ala Val Thr Pro Val Thr Pro Thr Thr Leu Ile Ala Pro Arg
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Ile Glu Ser Lys Ser Met Ser Ala Pro Val Ile Phe Asp Arg Ser Arg
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Glu Glu Ile Glu Glu Glu Ala Asn Gly Asp Ile Phe Asp Ile Glu Ile
130 135 140

Gly Val Ser Asp Pro Glu Lys Val Gly Asp Gly Met Asn Ala Tyr Met
145 150 155 160

Ala Tyr Arg Val Thr Thr Lys Thr Ser Leu Ser Met Phe Ser Lys Ser
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Glu Phe Ser Val Lys Arg Arg Phe Ser Asp Phe Leu Gly Leu His Ser
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Lys Leu Ala Ser Lys Tyr Leu His Val Gly Tyr Ile Val Pro Pro Ala
195 200 205

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Ala Asp Ala Val Asn Lys Met Thr Ile Lys Met Asn Glu Ser Asp Ala
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Arg Lys Leu His Val Ser Val Glu Ala Leu Val Cys His Arg Lys Glu
325 330 335

Leu Ser Ala Asn Thr Ala Ala Phe Ala Lys Ser Ala Ala Met Leu Gly
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Asn Ser Glu Asp His Thr Ala Leu Ser Arg Ala Leu Ser Gln Leu Ala
355 360 365

Glu Val Glu Glu Lys Ile Asp Gln Leu His Gln Glu Gln Ala Phe Ala
370 375 380

Asp Phe Tyr Met Phe Ser Glu Leu Leu Ser Asp Tyr Ile Arg Leu Ile
385 390 395 400

Ala Ala Val Lys Gly Val Phe Asp His Arg Met Lys Cys Trp Gln Lys
405 410 415

Trp Glu Asp Ala Gln Ile Thr Leu Leu Lys Lys Arg Glu Ala Glu Ala
420 425 430

Lys Met Met Val Ala Asn Lys Pro Asp Lys Ile Gln Gln Ala Lys Asn
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Glu Ile Arg Glu Ile Tyr Asp Gln Asp Gly Thr Leu Gln His Phe Ile
450 455 460

Asp Gly Gly Glu Pro Ser Lys Ser Ser Trp Met Arg Tyr Ile Arg Cys
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Asn Ile Phe Tyr Arg Ala Cys Ile Asp Ile Pro Arg Gly Thr Glu Leu
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Leu Val Trp Tyr Asn Asp Ser Tyr Thr Ser Phe Phe Gly Ile Pro Leu
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Gln Cys Ile Ala Gln Asp Glu Asn Leu Asn Val Pro Ser Thr Val Met
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Glu Ala Met Cys Arg Gln Asp Ala Leu Gln Pro Phe Asn Lys Ser Ser
545 550 555 560

Lys Leu Ala Pro Thr Thr Gln Gln Arg Ser Val Val Phe Pro Gln Thr
565 570 575

Pro Cys Ser Arg Asn Phe Ser Leu Leu Asp Lys Ser Gly Pro Ile Glu
580 585 590

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

Pro Thr Ser Thr Ser Gln Leu His Ser Glu Phe Ser Asp Trp His Leu
610 615 620

Trp Lys Cys Gly Gln Cys Phe Lys Thr Phe Thr Gln Arg Ile Leu Leu
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Gln Met His Val Cys Thr Gln Asn Pro Asp Arg Pro Tyr Gln Cys Gly
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His Cys Ser Gln Ser Phe Ser Gln Pro Ser Glu Leu Arg Asn His Val
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Val Thr His Ser Ser Asp Arg Pro Phe Lys Cys Gly Tyr Cys Gly Arg
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<213> Homo sapiens

<400> 116

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Ser Thr Leu Glu Ser Ser Pro Ser Ser Pro Glu Pro Ala Ser Leu Pro
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<400> 118

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Gln Arg Ala Arg Lys Lys Pro Arg Ser Arg Gly Lys Thr Ala Val Glu
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Asp Glu Asp Ser Met Asp Gly Leu Glu Thr Thr Glu Thr Glu Thr Ile
65 70 75 80

Val Glu Thr Glu Ile Lys Glu Gln Ser Ala Glu Glu Asp Ala Glu Ala
85 90 95

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

Ser Glu Glu Ser Ala Asn Ser Leu Val Ser Val Gly Val Glu Ala Lys
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Ile Ser Glu Gln Leu Cys Ala Phe Cys Tyr Cys Gly Glu Lys Ser Ser
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Trp Asp Glu Leu Ser Leu Val Gly Leu Pro Asp Ala Ile Asp Ile Gln
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Ala Leu Phe Asp Ser Thr Gly Thr Cys Trp Ala His His Arg Cys Val
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Cys Leu Gln Pro Val Met Lys Ser Val Pro Thr Asn Gly Trp Lys Cys
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Lys Asn Cys Arg Ile Cys Ile Glu Cys Gly Thr Arg Ser Ser Ser Gln
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Asp Lys Pro Thr Asp His Glu Leu Asp Thr Gln Leu Lys Glu Glu Tyr
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Thr His Asn Thr Val Ser Pro Pro Ser Trp Ser Pro Asp Ile Ser Glu
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Arg Gly Ala Gly Leu Ser Gly Arg Gly Gly Arg Gly Arg Ser Lys Leu
900 905 910

Lys Ser Gly Ile Gly Ala Val Val Leu Pro Gly Val Ser Thr Ala Asp
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Ile Ser Ser Asn Lys Asp Asp Glu Glu Asn Ser Met His Asn Thr Val
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Cys Ser Gln Cys Gly Gln Cys Tyr His Pro Tyr Cys Val Ser Ile Lys
980 985 990

Ile Thr Lys Val Val Leu Ser Lys Gly Trp Arg Cys Leu Glu Cys Thr
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2165						2170					2175			
Gln	Thr	Pro	Arg	Pro	Ser	Thr	Gln	Thr	Asp	Leu	Phe	Val	Thr	Pro
2180						2185					2190			
Val	Thr	Asn	Gln	Arg	His	Ser	Asp	Pro	Tyr	Ala	His	Pro	Pro	Gly
2195						2200					2205			
Thr	Pro	Arg	Pro	Gly	Ile	Ser	Val	Pro	Tyr	Ser	Gln	Pro	Pro	Ala
2210						2215					2220			
Thr	Pro	Arg	Pro	Arg	Ile	Ser	Glu	Gly	Phe	Thr	Arg	Ser	Ser	Met
2225						2230					2235			

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Thr	Arg	Pro	Val	Leu	Met	Pro	Asn	Gln	Asp	Pro	Phe	Leu	Gln	Ala
2240						2245					2250			
Ala	Gln	Asn	Arg	Gly	Pro	Ala	Leu	Pro	Gly	Pro	Leu	Val	Arg	Pro
2255						2260					2265			
Pro	Asp	Thr	Cys	Ser	Gln	Thr	Pro	Arg	Pro	Pro	Gly	Pro	Gly	Leu
2270						2275					2280			
Ser	Asp	Thr	Phe	Ser	Arg	Val	Ser	Pro	Ser	Ala	Ala	Arg	Asp	Pro
2285						2290					2295			
Tyr	Asp	Gln	Ser	Pro	Met	Thr	Pro	Arg	Ser	Gln	Ser	Asp	Ser	Phe
2300						2305					2310			
Gly	Thr	Ser	Gln	Thr	Ala	His	Asp	Val	Ala	Asp	Gln	Pro	Arg	Pro
2315						2320					2325			
Gly	Ser	Glu	Gly	Ser	Phe	Cys	Ala	Ser	Ser	Asn	Ser	Pro	Met	His
2330						2335					2340			
Ser	Gln	Gly	Gln	Gln	Phe	Ser	Gly	Val	Ser	Gln	Leu	Pro	Gly	Pro
2345						2350					2355			
Val	Pro	Thr	Ser	Gly	Val	Thr	Asp	Thr	Gln	Asn	Thr	Val	Asn	Met
2360						2365					2370			
Ala	Gln	Ala	Asp	Thr	Glu	Lys	Leu	Arg	Gln	Arg	Gln	Lys	Leu	Arg
2375						2380					2385			
Glu	Ile	Ile	Leu	Gln	Gln	Gln	Gln	Gln	Lys	Lys	Ile	Ala	Gly	Arg
2390						2395					2400			
Gln	Glu	Lys	Gly	Ser	Gln	Asp	Ser	Pro	Ala	Val	Pro	His	Pro	Gly
2405						2410					2415			
Pro	Leu	Gln	His	Trp	Gln	Pro	Glu	Asn	Val	Asn	Gln	Ala	Phe	Thr
2420						2425					2430			

Arg	Pro	Pro	Pro	Pro	Tyr	Pro	Gly	Asn	Ile	Arg	Ser	Pro	Val	Ala
2435						2440					2445			
Pro	Pro	Leu	Gly	Pro	Arg	Tyr	Ala	Val	Phe	Pro	Lys	Asp	Gln	Arg
2450						2455					2460			
Gly	Pro	Tyr	Pro	Pro	Asp	Val	Ala	Ser	Met	Gly	Met	Arg	Pro	His
2465						2470					2475			
Gly	Phe	Arg	Phe	Gly	Phe	Pro	Gly	Gly	Ser	His	Gly	Thr	Met	Pro
2480						2485					2490			
Ser	Gln	Glu	Arg	Phe	Leu	Val	Pro	Pro	Gln	Gln	Ile	Gln	Gly	Ser
2495						2500					2505			
Gly	Val	Ser	Pro	Gln	Leu	Arg	Arg	Ser	Val	Ser	Val	Asp	Met	Pro
2510						2515					2520			
Arg	Pro	Leu	Asn	Asn	Ser	Gln	Met	Asn	Asn	Pro	Val	Gly	Leu	Pro
2525						2530					2535			
Gln	His	Phe	Ser	Pro	Gln	Ser	Leu	Pro	Val	Gln	Gln	His	Asn	Ile
2540						2545					2550			
Leu	Gly	Gln	Ala	Tyr	Ile	Glu	Leu	Arg	His	Arg	Ala	Pro	Asp	Gly
2555						2560					2565			
Arg	Gln	Arg	Leu	Pro	Phe	Ser	Ala	Pro	Pro	Gly	Ser	Val	Val	Glu
2570						2575					2580			
Ala	Ser	Ser	Asn	Leu	Arg	His	Gly	Asn	Phe	Ile	Pro	Arg	Pro	Asp
2585						2590					2595			
Phe	Pro	Gly	Pro	Arg	His	Thr	Asp	Pro	Met	Arg	Arg	Pro	Pro	Gln
2600						2605					2610			
Gly	Leu	Pro	Asn	Gln	Leu	Pro	Val	His	Pro	Asp	Leu	Glu	Gln	Val
2615						2620					2625			

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Pro	Pro	Ser	Gln	Gln	Glu	Gln	Gly	His	Ser	Val	His	Ser	Ser	Ser
2630						2635					2640			
Met	Val	Met	Arg	Thr	Leu	Asn	His	Pro	Leu	Gly	Gly	Glu	Phe	Ser
2645						2650					2655			
Glu	Ala	Pro	Leu	Ser	Thr	Ser	Val	Pro	Ser	Glu	Thr	Thr	Ser	Asp
2660						2665					2670			
Asn	Leu	Gln	Ile	Thr	Thr	Gln	Pro	Ser	Asp	Gly	Leu	Glu	Glu	Lys
2675						2680					2685			
Leu	Asp	Ser	Asp	Asp	Pro	Ser	Val	Lys	Glu	Leu	Asp	Val	Lys	Asp
2690						2695					2700			
Leu	Glu	Gly	Val	Glu	Val	Lys	Asp	Leu	Asp	Asp	Glu	Asp	Leu	Glu
2705						2710					2715			
Asn	Leu	Asn	Leu	Asp	Thr	Glu	Asp	Gly	Lys	Val	Val	Glu	Leu	Asp
2720						2725					2730			
Thr	Leu	Asp	Asn	Leu	Glu	Thr	Asn	Asp	Pro	Asn	Leu	Asp	Asp	Leu
2735						2740					2745			
Leu	Arg	Ser	Gly	Glu	Phe	Asp	Ile	Ile	Ala	Tyr	Thr	Asp	Pro	Glu
2750						2755					2760			
Leu	Asp	Met	Gly	Asp	Lys	Lys	Ser	Met	Phe	Asn	Glu	Glu	Leu	Asp
2765						2770					2775			
Leu	Pro	Ile	Asp	Asp	Lys	Leu	Asp	Asn	Gln	Cys	Val	Ser	Val	Glu
2780						2785					2790			
Pro	Lys	Lys	Lys	Glu	Gln	Glu	Asn	Lys	Thr	Leu	Val	Leu	Ser	Asp
2795						2800					2805			
Lys	His	Ser	Pro	Gln	Lys	Lys	Ser	Thr	Val	Thr	Asn	Glu	Val	Lys
2810						2815					2820			

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Thr	Glu	Val	Leu	Ser	Pro	Asn	Ser	Lys	Val	Glu	Ser	Lys	Cys	Glu
	2825					2830					2835			
Thr	Glu	Lys	Asn	Asp	Glu	Asn	Lys	Asp	Asn	Val	Asp	Thr	Pro	Cys
	2840					2845					2850			
Ser	Gln	Ala	Ser	Ala	His	Ser	Asp	Leu	Asn	Asp	Gly	Glu	Lys	Thr
	2855					2860					2865			
Ser	Leu	His	Pro	Cys	Asp	Pro	Asp	Leu	Phe	Glu	Lys	Arg	Thr	Asn
	2870					2875					2880			
Arg	Glu	Thr	Ala	Gly	Pro	Ser	Ala	Asn	Val	Ile	Gln	Ala	Ser	Thr
	2885					2890					2895			
Gln	Leu	Pro	Ala	Gln	Asp	Val	Ile	Asn	Ser	Cys	Gly	Ile	Thr	Gly
	2900					2905					2910			
Ser	Thr	Pro	Val	Leu	Ser	Ser	Leu	Leu	Ala	Asn	Glu	Lys	Ser	Asp
	2915					2920					2925			
Asn	Ser	Asp	Ile	Arg	Pro	Ser	Gly	Ser	Pro	Pro	Pro	Pro	Thr	Leu
	2930					2935					2940			
Pro	Ala	Ser	Pro	Ser	Asn	His	Val	Ser	Ser	Leu	Pro	Pro	Phe	Ile
	2945					2950					2955			
Ala	Pro	Pro	Gly	Arg	Val	Leu	Asp	Asn	Ala	Met	Asn	Ser	Asn	Val
	2960					2965					2970			
Thr	Val	Val	Ser	Arg	Val	Asn	His	Val	Phe	Ser	Gln	Gly	Val	Gln
	2975					2980					2985			
Val	Asn	Pro	Gly	Leu	Ile	Pro	Gly	Gln	Ser	Thr	Val	Asn	His	Ser
	2990					2995					3000			
Leu	Gly	Thr	Gly	Lys	Pro	Ala	Thr	Gln	Thr	Gly	Pro	Gln	Thr	Ser
	3005					3010					3015			

Gln	Ser	Gly	Thr	Ser	Ser	Met	Ser	Gly	Pro	Gln	Gln	Leu	Met	Ile
3020						3025					3030			
Pro	Gln	Thr	Leu	Ala	Gln	Gln	Asn	Arg	Glu	Arg	Pro	Leu	Leu	Leu
3035						3040					3045			
Glu	Glu	Gln	Pro	Leu	Leu	Leu	Gln	Asp	Leu	Leu	Asp	Gln	Glu	Arg
3050						3055					3060			
Gln	Glu	Gln	Gln	Gln	Gln	Arg	Gln	Met	Gln	Ala	Met	Ile	Arg	Gln
3065						3070					3075			
Arg	Ser	Glu	Pro	Phe	Phe	Pro	Asn	Ile	Asp	Phe	Asp	Ala	Ile	Thr
3080						3085					3090			
Asp	Pro	Ile	Met	Lys	Ala	Lys	Met	Val	Ala	Leu	Lys	Gly	Ile	Asn
3095						3100					3105			
Lys	Val	Met	Ala	Gln	Asn	Asn	Leu	Gly	Met	Pro	Pro	Met	Val	Met
3110						3115					3120			
Ser	Arg	Phe	Pro	Phe	Met	Gly	Gln	Val	Val	Thr	Gly	Thr	Gln	Asn
3125						3130					3135			
Ser	Glu	Gly	Gln	Asn	Leu	Gly	Pro	Gln	Ala	Ile	Pro	Gln	Asp	Gly
3140						3145					3150			
Ser	Ile	Thr	His	Gln	Ile	Ser	Arg	Pro	Asn	Pro	Pro	Asn	Phe	Gly
3155						3160					3165			
Pro	Gly	Phe	Val	Asn	Asp	Ser	Gln	Arg	Lys	Gln	Tyr	Glu	Glu	Trp
3170						3175					3180			
Leu	Gln	Glu	Thr	Gln	Gln	Leu	Leu	Gln	Met	Gln	Gln	Lys	Tyr	Leu
3185						3190					3195			
Glu	Glu	Gln	Ile	Gly	Ala	His	Arg	Lys	Ser	Lys	Lys	Ala	Leu	Ser
3200						3205					3210			

Ala	Lys	Gln	Arg	Thr	Ala	Lys	Lys	Ala	Gly	Arg	Glu	Phe	Pro	Glu
3215						3220					3225			
Glu	Asp	Ala	Glu	Gln	Leu	Lys	His	Val	Thr	Glu	Gln	Gln	Ser	Met
3230						3235					3240			
Val	Gln	Lys	Gln	Leu	Glu	Gln	Ile	Arg	Lys	Gln	Gln	Lys	Glu	His
3245						3250					3255			
Ala	Glu	Leu	Ile	Glu	Asp	Tyr	Arg	Ile	Lys	Gln	Gln	Gln	Gln	Cys
3260						3265					3270			
Ala	Met	Ala	Pro	Pro	Thr	Met	Met	Pro	Ser	Val	Gln	Pro	Gln	Pro
3275						3280					3285			
Pro	Leu	Ile	Pro	Gly	Ala	Thr	Pro	Pro	Thr	Met	Ser	Gln	Pro	Thr
3290						3295					3300			
Phe	Pro	Met	Val	Pro	Gln	Gln	Leu	Gln	His	Gln	Gln	His	Thr	Thr
3305						3310					3315			
Val	Ile	Ser	Gly	His	Thr	Ser	Pro	Val	Arg	Met	Pro	Ser	Leu	Pro
3320						3325					3330			
Gly	Trp	Gln	Pro	Asn	Ser	Ala	Pro	Ala	His	Leu	Pro	Leu	Asn	Pro
3335						3340					3345			
Pro	Arg	Ile	Gln	Pro	Pro	Ile	Ala	Gln	Leu	Pro	Ile	Lys	Thr	Cys
3350						3355					3360			
Thr	Pro	Ala	Pro	Gly	Thr	Val	Ser	Asn	Ala	Asn	Pro	Gln	Ser	Gly
3365						3370					3375			
Pro	Pro	Pro	Arg	Val	Glu	Phe	Asp	Asp	Asn	Asn	Pro	Phe	Ser	Glu
3380						3385					3390			
Ser	Phe	Gln	Glu	Arg	Glu	Arg	Lys	Glu	Arg	Leu	Arg	Glu	Gln	Gln
3395						3400					3405			

Glu Arg Gln Arg Ile Gln Leu Met Gln Glu Val Asp Arg Gln Arg
 3410 3415 3420

Ala Leu Gln Gln Arg Met Glu Met Glu Gln His Gly Met Val Gly
 3425 3430 3435

Ser Glu Ile Ser Ser Ser Arg Thr Ser Val Ser Gln Ile Pro Phe
 3440 3445 3450

Tyr Ser Ser Asp Leu Pro Cys Asp Phe Met Gln Pro Leu Gly Pro
 3455 3460 3465

Leu Gln Gln Ser Pro Gln His Gln Gln Gln Met Gly Gln Val Leu
 3470 3475 3480

Gln Gln Gln Asn Ile Gln Gln Gly Ser Ile Asn Ser Pro Ser Thr
 3485 3490 3495

Gln Thr Phe Met Gln Thr Asn Glu Arg Arg Gln Val Gly Pro Pro
 3500 3505 3510

Ser Phe Val Pro Asp Ser Pro Ser Ile Pro Val Gly Ser Pro Asn
 3515 3520 3525

Phe Ser Ser Val Lys Gln Gly His Gly Asn Leu Ser Gly Thr Ser
 3530 3535 3540

Phe Gln Gln Ser Pro Val Arg Pro Ser Phe Thr Pro Ala Leu Pro
 3545 3550 3555

Ala Ala Pro Pro Val Ala Asn Ser Ser Leu Pro Cys Gly Gln Asp
 3560 3565 3570

Ser Thr Ile Thr His Gly His Ser Tyr Pro Gly Ser Thr Gln Ser
 3575 3580 3585

Leu Ile Gln Leu Tyr Ser Asp Ile Ile Pro Glu Glu Lys Gly Lys
 3590 3595 3600

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Lys	Lys	Arg	Thr	Arg	Lys	Lys	Lys	Arg	Asp	Asp	Asp	Ala	Glu	Ser
3605						3610					3615			
Thr	Lys	Ala	Pro	Ser	Thr	Pro	His	Ser	Asp	Ile	Thr	Ala	Pro	Pro
3620						3625					3630			
Thr	Pro	Gly	Ile	Ser	Glu	Thr	Thr	Ser	Thr	Pro	Ala	Val	Ser	Thr
3635						3640					3645			
Pro	Ser	Glu	Leu	Pro	Gln	Gln	Ala	Asp	Gln	Glu	Ser	Val	Glu	Pro
3650						3655					3660			
Val	Gly	Pro	Ser	Thr	Pro	Asn	Met	Ala	Ala	Gly	Gln	Leu	Cys	Thr
3665						3670					3675			
Glu	Leu	Glu	Asn	Lys	Leu	Pro	Asn	Ser	Asp	Phe	Ser	Gln	Ala	Thr
3680						3685					3690			
Pro	Asn	Gln	Gln	Thr	Tyr	Ala	Asn	Ser	Glu	Val	Asp	Lys	Leu	Ser
3695						3700					3705			
Met	Glu	Thr	Pro	Ala	Lys	Thr	Glu	Glu	Ile	Lys	Leu	Glu	Lys	Ala
3710						3715					3720			
Glu	Thr	Glu	Ser	Cys	Pro	Gly	Gln	Glu	Glu	Pro	Lys	Leu	Glu	Glu
3725						3730					3735			
Gln	Asn	Gly	Ser	Lys	Val	Glu	Gly	Asn	Ala	Val	Ala	Cys	Pro	Val
3740						3745					3750			
Ser	Ser	Ala	Gln	Ser	Pro	Pro	His	Ser	Ala	Gly	Ala	Pro	Ala	Ala
3755						3760					3765			
Lys	Gly	Asp	Ser	Gly	Asn	Glu	Leu	Leu	Lys	His	Leu	Leu	Lys	Asn
3770						3775					3780			
Lys	Lys	Ser	Ser	Ser	Leu	Leu	Asn	Gln	Lys	Pro	Glu	Gly	Ser	Ile
3785						3790					3795			

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Cys	Ser	Glu	Asp	Asp	Cys	Thr	Lys	Asp	Asn	Lys	Leu	Val	Glu	Lys
3800						3805					3810			
Gln	Asn	Pro	Ala	Glu	Gly	Leu	Gln	Thr	Leu	Gly	Ala	Gln	Met	Gln
3815						3820					3825			
Gly	Gly	Phe	Gly	Cys	Gly	Asn	Gln	Leu	Pro	Lys	Thr	Asp	Gly	Gly
3830						3835					3840			
Ser	Glu	Thr	Lys	Lys	Gln	Arg	Ser	Lys	Arg	Thr	Gln	Arg	Thr	Gly
3845						3850					3855			
Glu	Lys	Ala	Ala	Pro	Arg	Ser	Lys	Lys	Arg	Lys	Lys	Asp	Glu	Glu
3860						3865					3870			
Glu	Lys	Gln	Ala	Met	Tyr	Ser	Ser	Thr	Asp	Thr	Phe	Thr	His	Leu
3875						3880					3885			
Lys	Gln	Gln	Asn	Asn	Leu	Ser	Asn	Pro	Pro	Thr	Pro	Pro	Ala	Ser
3890						3895					3900			
Leu	Pro	Pro	Thr	Pro	Pro	Pro	Met	Ala	Cys	Gln	Lys	Met	Ala	Asn
3905						3910					3915			
Gly	Phe	Ala	Thr	Thr	Glu	Glu	Leu	Ala	Gly	Lys	Ala	Gly	Val	Leu
3920						3925					3930			
Val	Ser	His	Glu	Val	Thr	Lys	Thr	Leu	Gly	Pro	Lys	Pro	Phe	Gln
3935						3940					3945			
Leu	Pro	Phe	Arg	Pro	Gln	Asp	Asp	Leu	Leu	Ala	Arg	Ala	Leu	Ala
3950						3955					3960			
Gln	Gly	Pro	Lys	Thr	Val	Asp	Val	Pro	Ala	Ser	Leu	Pro	Thr	Pro
3965						3970					3975			
Pro	His	Asn	Asn	Gln	Glu	Glu	Leu	Arg	Ile	Gln	Asp	His	Cys	Gly
3980						3985					3990			

Asp	Arg	Asp	Thr	Pro	Asp	Ser	Phe	Val	Pro	Ser	Ser	Ser	Pro	Glu
	3995					4000					4005			
Ser	Val	Val	Gly	Val	Glu	Val	Ser	Arg	Tyr	Pro	Asp	Leu	Ser	Leu
	4010					4015					4020			
Val	Lys	Glu	Glu	Pro	Pro	Glu	Pro	Val	Pro	Ser	Pro	Ile	Ile	Pro
	4025					4030					4035			
Ile	Leu	Pro	Ser	Thr	Ala	Gly	Lys	Ser	Ser	Glu	Ser	Arg	Arg	Asn
	4040					4045					4050			
Asp	Ile	Lys	Thr	Glu	Pro	Gly	Thr	Leu	Tyr	Phe	Ala	Ser	Pro	Phe
	4055					4060					4065			
Gly	Pro	Ser	Pro	Asn	Gly	Pro	Arg	Ser	Gly	Leu	Ile	Ser	Val	Ala
	4070					4075					4080			
Ile	Thr	Leu	His	Pro	Thr	Ala	Ala	Glu	Asn	Ile	Ser	Ser	Val	Val
	4085					4090					4095			
Ala	Ala	Phe	Ser	Asp	Leu	Leu	His	Val	Arg	Ile	Pro	Asn	Ser	Tyr
	4100					4105					4110			
Glu	Val	Ser	Ser	Ala	Pro	Asp	Val	Pro	Ser	Met	Gly	Leu	Val	Ser
	4115					4120					4125			
Ser	His	Arg	Ile	Asn	Pro	Gly	Leu	Glu	Tyr	Arg	Gln	His	Leu	Leu
	4130					4135					4140			
Leu	Arg	Gly	Pro	Pro	Pro	Gly	Ser	Ala	Asn	Pro	Pro	Arg	Leu	Val
	4145					4150					4155			
Ser	Ser	Tyr	Arg	Leu	Lys	Gln	Pro	Asn	Val	Pro	Phe	Pro	Pro	Thr
	4160					4165					4170			
Ser	Asn	Gly	Leu	Ser	Gly	Tyr	Lys	Asp	Ser	Ser	His	Gly	Ile	Ala
	4175					4180					4185			

Glu 4190	Ser	Ala	Ala	Leu	Arg	Pro 4195	Gln	Trp	Cys	Cys	His 4200	Cys	Lys	Val
Val 4205	Ile	Leu	Gly	Ser	Gly	Val 4210	Arg	Lys	Ser	Phe	Lys 4215	Asp	Leu	Thr
Leu 4220	Leu	Asn	Lys	Asp	Ser	Arg 4225	Glu	Ser	Thr	Lys	Arg 4230	Val	Glu	Lys
Asp 4235	Ile	Val	Phe	Cys	Ser	Asn 4240	Asn	Cys	Phe	Ile	Leu 4245	Tyr	Ser	Ser
Thr 4250	Ala	Gln	Ala	Lys	Asn	Ser 4255	Glu	Asn	Lys	Glu	Ser 4260	Ile	Pro	Ser
Leu 4265	Pro	Gln	Ser	Pro	Met	Arg 4270	Glu	Thr	Pro	Ser	Lys 4275	Ala	Phe	His
Gln 4280	Tyr	Ser	Asn	Asn	Ile	Ser 4285	Thr	Leu	Asp	Val	His 4290	Cys	Leu	Pro
Gln 4295	Leu	Pro	Glu	Lys	Ala	Ser 4300	Pro	Pro	Ala	Ser	Pro 4305	Pro	Ile	Ala
Phe 4310	Pro	Pro	Ala	Phe	Glu	Ala 4315	Ala	Gln	Val	Glu	Ala 4320	Lys	Pro	Asp
Glu 4325	Leu	Lys	Val	Thr	Val	Lys 4330	Leu	Lys	Pro	Arg	Leu 4335	Arg	Ala	Val
His 4340	Gly	Gly	Phe	Glu	Asp	Cys 4345	Arg	Pro	Leu	Asn	Lys 4350	Lys	Trp	Arg
Gly 4355	Met	Lys	Trp	Lys	Lys	Trp 4360	Ser	Ile	His	Ile	Val 4365	Ile	Pro	Lys
Gly 4370	Thr	Phe	Lys	Pro	Pro	Cys 4375	Glu	Asp	Glu	Ile	Asp 4380	Glu	Phe	Leu

Lys Lys Leu Gly Thr Ser Leu Lys Pro Asp Pro Val Pro Lys Asp
 4385 4390 4395

 Tyr Arg Lys Cys Cys Phe Cys His Glu Glu Gly Asp Gly Leu Thr
 4400 4405 4410

 Asp Gly Pro Ala Arg Leu Leu Asn Leu Asp Leu Asp Leu Trp Val
 4415 4420 4425

 His Leu Asn Cys Ala Leu Trp Ser Thr Glu Val Tyr Glu Thr Gln
 4430 4435 4440

 Ala Gly Ala Leu Ile Asn Val Glu Leu Ala Leu Arg Arg Gly Leu
 4445 4450 4455

 Gln Met Lys Cys Val Phe Cys His Lys Thr Gly Ala Thr Ser Gly
 4460 4465 4470

 Cys His Arg Phe Arg Cys Thr Asn Ile Tyr His Phe Thr Cys Ala
 4475 4480 4485

 Ile Lys Ala Gln Cys Met Phe Phe Lys Asp Lys Thr Met Leu Cys
 4490 4495 4500

 Pro Met His Lys Pro Lys Gly Ile His Glu Gln Glu Leu Ser Tyr
 4505 4510 4515

 Phe Ala Val Phe Arg Arg Val Tyr Val Gln Arg Asp Glu Val Arg
 4520 4525 4530

 Gln Ile Ala Ser Ile Val Gln Arg Gly Glu Arg Asp His Thr Phe
 4535 4540 4545

 Arg Val Gly Ser Leu Ile Phe His Thr Ile Gly Gln Leu Leu Pro
 4550 4555 4560

 Gln Gln Met Gln Ala Phe His Ser Pro Lys Ala Leu Phe Pro Val
 4565 4570 4575

Gly	Tyr	Glu	Ala	Ser	Arg	Leu	Tyr	Trp	Ser	Thr	Arg	Tyr	Ala	Asn
4580						4585					4590			
Arg	Arg	Cys	Arg	Tyr	Leu	Cys	Ser	Ile	Glu	Glu	Lys	Asp	Gly	Arg
4595						4600					4605			
Pro	Val	Phe	Val	Ile	Arg	Ile	Val	Glu	Gln	Gly	His	Glu	Asp	Leu
4610						4615					4620			
Val	Leu	Ser	Asp	Ile	Ser	Pro	Lys	Gly	Val	Trp	Asp	Lys	Ile	Leu
4625						4630					4635			
Glu	Pro	Val	Ala	Cys	Val	Arg	Lys	Lys	Ser	Glu	Met	Leu	Gln	Leu
4640						4645					4650			
Phe	Pro	Ala	Tyr	Leu	Lys	Gly	Glu	Asp	Leu	Phe	Gly	Leu	Thr	Val
4655						4660					4665			
Ser	Ala	Val	Ala	Arg	Ile	Ala	Glu	Ser	Leu	Pro	Gly	Val	Glu	Ala
4670						4675					4680			
Cys	Glu	Asn	Tyr	Thr	Phe	Arg	Tyr	Gly	Arg	Asn	Pro	Leu	Met	Glu
4685						4690					4695			
Leu	Pro	Leu	Ala	Val	Asn	Pro	Thr	Gly	Cys	Ala	Arg	Ser	Glu	Pro
4700						4705					4710			
Lys	Met	Ser	Ala	His	Val	Lys	Arg	Phe	Val	Leu	Arg	Pro	His	Thr
4715						4720					4725			
Leu	Asn	Ser	Thr	Ser	Thr	Ser	Lys	Ser	Phe	Gln	Ser	Thr	Val	Thr
4730						4735					4740			
Gly	Glu	Leu	Asn	Ala	Pro	Tyr	Ser	Lys	Gln	Phe	Val	His	Ser	Lys
4745						4750					4755			
Ser	Ser	Gln	Tyr	Arg	Lys	Met	Lys	Thr	Glu	Trp	Lys	Ser	Asn	Val
4760						4765					4770			

Tyr Leu Ala Arg Ser Arg Ile Gln Gly Leu Gly Leu Tyr Ala Ala
4775 4780 4785

Arg Asp Ile Glu Lys His Thr Met Val Ile Glu Tyr Ile Gly Thr
4790 4795 4800

Ile Ile Arg Asn Glu Val Ala Asn Arg Lys Glu Lys Leu Tyr Glu
4805 4810 4815

Ser Gln Asn Arg Gly Val Tyr Met Phe Arg Met Asp Asn Asp His
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Val Ile Asp Ala Thr Leu Thr Gly Gly Pro Ala Arg Tyr Ile Asn
4835 4840 4845

His Ser Cys Ala Pro Asn Cys Val Ala Glu Val Val Thr Phe Glu
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Arg Gly His Lys Ile Ile Ile Ser Ser Ser Arg Arg Ile Gln Lys
4865 4870 4875

Gly Glu Glu Leu Cys Tyr Asp Tyr Lys Phe Asp Phe Glu Asp Asp
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Gln His Lys Ile Pro Cys His Cys Gly Ala Val Asn Cys Arg Lys
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3282

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 <212> PRT
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Asp Gly Asp Leu Glu Gly Ser Gly Lys His Ser Ser Arg Lys Val Asp
 50 55 60

Ser Pro Phe Gly Pro Gly Ser Pro Ser Lys Gly Phe Phe Ser Arg Gly
 65 70 75 80

Pro Gln Pro Arg Pro Ser Ser Pro Met Ser Ala Pro Val Arg Pro Lys
 85 90 95

Thr Ser Pro Gly Ser Pro Lys Thr Val Phe Pro Phe Ser Tyr Gln Glu
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Ser Pro Pro Arg Ser Pro Arg Arg Met Ser Phe Ser Gly Ile Phe Arg
 115 120 125

Ser Ser Ser Lys Glu Ser Ser Pro Asn Ser Asn Pro Ala Thr Ser Pro
 130 135 140

Gly Gly Ile Arg Phe Phe Ser Arg Ser Arg Lys Thr Ser Gly Leu Ser
 145 150 155 160

Ser Ser Pro Ser Thr Pro Thr Gln Val Thr Lys Gln His Thr Phe Pro
 165 170 175

Leu Glu Ser Tyr Lys His Glu Pro Glu Arg Leu Glu Asn Arg Ile Tyr
180 185 190

Ala Ser Ser Ser Pro Pro Asp Thr Gly Gln Arg Phe Cys Pro Ser Ser
195 200 205

Phe Gln Ser Pro Thr Arg Pro Pro Leu Ala Ser Pro Thr His Tyr Ala
210 215 220

Pro Ser Lys Ala Ala Ala Leu Ala Ala Ala Leu Gly Pro Ala Glu Ala
225 230 235 240

Gly Met Leu Glu Lys Leu Glu Phe Glu Asp Glu Ala Val Glu Asp Ser
245 250 255

Glu Ser Gly Val Tyr Met Arg Phe Met Arg Ser His Lys Cys Tyr Asp
260 265 270

Ile Val Pro Thr Ser Ser Lys Leu Val Val Phe Asp Thr Thr Leu Gln
275 280 285

Val Lys Lys Ala Phe Phe Ala Leu Val Ala Asn Gly Val Arg Ala Ala
290 295 300

Pro Leu Trp Glu Ser Lys Lys Gln Ser Phe Val Gly Met Leu Thr Ile
305 310 315 320

Thr Asp Phe Ile Asn Ile Leu His Arg Tyr Tyr Lys Ser Pro Met Val
325 330 335

Gln Ile Tyr Glu Leu Glu Glu His Lys Ile Glu Thr Trp Arg Glu Leu
340 345 350

Tyr Leu Gln Glu Thr Phe Lys Pro Leu Val Asn Ile Ser Pro Asp Ala
355 360 365

Ser Leu Phe Asp Ala Val Tyr Ser Leu Ile Lys Asn Lys Ile His Arg
370 375 380

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

Lys Pro Ala Phe Met Lys Gln Asn Leu Asp Glu Leu Gly Ile Gly Thr
420 425 430

Tyr His Asn Ile Ala Phe Ile His Pro Asp Thr Pro Ile Ile Lys Ala
435 440 445

Leu Asn Ile Phe Val Glu Arg Arg Ile Ser Ala Leu Pro Val Val Asp
450 455 460

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

Leu Ala Ala Glu Lys Thr Tyr Asn Asn Leu Asp Ile Thr Val Thr Gln
485 490 495

Ala Leu Gln His Arg Ser Gln Tyr Phe Glu Gly Val Val Lys Cys Asn
500 505 510

Lys Leu Glu Ile Leu Glu Thr Ile Val Asp Arg Ile Val Arg Ala Glu
515 520 525

Val His Arg Leu Val Val Val Asn Glu Ala Asp Ser Ile Val Gly Ile
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<212> DNA

<213> Homo sapiens

<400> 121

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 <213> Homo sapiens

<400> 122

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Asp Lys Arg Pro Arg Gly Arg Pro Arg Lys Asp Gly Ala Ser Pro Phe
 35 40 45

Gln Arg Ala Arg Lys Lys Pro Arg Ser Arg Gly Lys Thr Ala Val Glu
 50 55 60

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

Val Asp Lys Ala Val Val Ser Gly Ser Thr Glu Arg Cys Ala Phe Cys
 275 280 285

Lys His Leu Gly Ala Thr Ile Lys Cys Cys Glu Glu Lys Cys Thr Gln
 290 295 300

Met Tyr His Tyr Pro Cys Ala Ala Gly Ala Gly Thr Phe Gln Asp Phe
 305 310 315 320

Ser His Ile Phe Leu Leu Cys Pro Glu His Ile Asp Gln Ala Pro Glu
 325 330 335

Arg Ser Lys Glu Asp Ala Asn Cys Ala Val Cys Asp Ser Pro Gly Asp
 340 345 350

Leu Leu Asp Gln Phe Phe Cys Thr Thr Cys Gly Gln His Tyr His Gly
 355 360 365

Met Cys Leu Asp Ile Ala Val Thr Pro Leu Lys Arg Ala Gly Trp Gln
 370 375 380

Cys Pro Glu Cys Lys Val Cys Gln Asn Cys Lys Gln Ser Gly Glu Asp
 385 390 395 400

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

Cys Leu Gln Pro Val Met Lys Ser Val Pro Thr Asn Gly Trp Lys Cys
 420 425 430

Lys Ala Ala Leu Ala Ala Ala Leu Gly Pro Ala Glu Ala Gly Met Leu
 435 440 445

Glu Lys Leu Glu Phe Glu Asp Glu Ala Val Glu Asp Ser Glu Ser Gly
 450 455 460

Val Tyr Met Arg Phe Met Arg Ser His Lys Cys Tyr Asp Ile Val Pro
 465 470 475 480

Thr Ser Ser Lys Leu Val Val Phe Asp Thr Thr Leu Gln Val Lys Lys
 485 490 495

Ala Phe Phe Ala Leu Val Ala Asn Gly Val Arg Ala Ala Pro Leu Trp
 500 505 510

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

Ile Asn Ile Leu His Arg Tyr Tyr Lys Ser Pro Met Val Gln Ile Tyr
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Glu Leu Glu Glu His Lys Ile Glu Thr Trp Arg Glu Leu Tyr Leu Gln
 545 550 555 560

Glu Thr Phe Lys Pro Leu Val Asn Ile Ser Pro Asp Ala Ser Leu Phe
 565 570 575

Asp Ala Val Tyr Ser Leu Ile Lys Asn Lys Ile His Arg Leu Pro Val
 580 585 590

Ile Asp Pro Ile Ser Gly Asn Ala Leu Tyr Ile Leu Thr His Lys Arg
 595 600 605

Ile Leu Lys Phe Leu Gln Leu Phe Met Ser Asp Met Pro Lys Pro Ala
 610 615 620

Phe Met Lys Gln Asn Leu Asp Glu Leu Gly Ile Gly Thr Tyr His Asn
 625 630 635 640

Ile Ala Phe Ile His Pro Asp Thr Pro Ile Ile Lys Ala Leu Asn Ile
 645 650 655

Phe Val Glu Arg Arg Ile Ser Ala Leu Pro Val Val Asp Glu Ser Gly
 660 665 670

Lys Val Val Asp Ile Tyr Ser Lys Phe Asp Val Ile Asn Leu Ala Ala
 675 680 685

Glu Lys Thr Tyr Asn Asn Leu Asp Ile Thr Val Thr Gln Ala Leu Gln
 690 695 700

His Arg Ser Gln Tyr Phe Glu Gly Val Val Lys Cys Asn Lys Leu Glu
 705 710 715 720

Ile Leu Glu Thr Ile Val Asp Arg Ile Val Arg Ala Glu Val His Arg
 725 730 735

Leu Val Val Val Asn Glu Ala Asp Ser Ile Val Gly Ile Ile Ser Leu
 740 745 750

Ser Asp Ile Leu Gln Ala Leu Ile Leu Thr Pro Ala Gly Ala Lys Gln
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Lys Glu Thr Glu Thr Glu
 770

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 <212> DNA
 <213> Homo sapiens

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 <212> PRT
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<400> 124

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Gln Arg Ala Arg Lys Lys Pro Arg Ser Arg Gly Lys Thr Ala Val Glu
50 55 60

Asp Glu Asp Ser Met Glu Thr Asp Gly Leu Glu Thr Thr Glu Thr Glu
65 70 75 80

Thr Ile Val Glu Thr Glu Ile Lys Glu Gln Ser Ala Glu Glu Asp Ala
85 90 95

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

Ser Val Ser Glu Glu Ser Ala Asn Ser Leu Val Ser Val Gly Val Glu
115 120 125

Ala Lys Ile Ser Glu Gln Leu Cys Ala Phe Cys Tyr Cys Gly Glu Lys
130 135 140

Ser Ser Leu Gly Gln Gly Asp Leu Lys Gln Phe Arg Ile Thr Pro Gly
145 150 155 160

Phe Ile Leu Pro Trp Arg Asn Gln Pro Ser Asn Lys Lys Asp Ile Asp
165 170 175

Asp Asn Ser Asn Gly Thr Tyr Glu Lys Met Gln Asn Ser Ala Pro Arg
180 185 190

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

Ser Cys Val Ser Val Ser Thr Gln Thr Ala Ser Asp Asp Gln Ala Gly
210 215 220

Lys Leu Trp Asp Glu Leu Ser Leu Val Gly Leu Pro Asp Ala Ile Asp
225 230 235 240

Ile Gln Ala Leu Phe Asp Ser Thr Gly Thr Cys Trp Ala His His Arg
 245 250 255

Cys Val Glu Trp Ser Leu Gly Val Cys Gln Met Glu Glu Pro Leu Leu
 260 265 270

Val Asn Val Asp Lys Ala Val Val Ser Gly Ser Thr Glu Val Lys Lys
 275 280 285

Ala Phe Phe Ala Leu Val Ala Asn Gly Val Arg Ala Ala Pro Leu Trp
 290 295 300

Glu Ser Lys Lys Gln Ser Phe Val Gly Met Leu Thr Ile Thr Asp Phe
 305 310 315 320

Ile Asn Ile Leu His Arg Tyr Tyr Lys Ser Pro Met Val Gln Ile Tyr
 325 330 335

Glu Leu Glu Glu His Lys Ile Glu Thr Trp Arg Glu Leu Tyr Leu Gln
 340 345 350

Glu Thr Phe Lys Pro Leu Val Asn Ile Ser Pro Asp Ala Ser Leu Phe
 355 360 365

Asp Ala Val Tyr Ser Leu Ile Lys Asn Lys Ile His Arg Leu Pro Val
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Phe Val Glu Arg Arg Ile Ser Ala Leu Pro Val Val Asp Glu Ser Gly
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Lys Val Val Asp Ile Tyr Ser Lys Phe Asp Val Ile Asn Leu Ala Ala
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Glu Lys Thr Tyr Asn Asn Leu Asp Ile Thr Val Thr Gln Ala Leu Gln
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His Arg Ser Gln Tyr Phe Glu Gly Val Val Lys Cys Asn Lys Leu Glu
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Met Cys Leu Asp Ile Ala Val Thr Pro Leu Lys Arg Ala Gly Trp Gln
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Cys Pro Glu Cys Lys Val Cys Gln Asn Cys Lys Gln Ser Gly Glu Asp
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Ser Lys Met Leu Val Cys Asp Thr Cys Asp Lys Gly Tyr His Thr Phe
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Cys Leu Gln Pro Val Met Lys Ser Val Pro Thr Asn Gly Trp Lys Cys
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Lys Asn Cys Arg Ile Cys Ile Glu Cys Gly Thr Arg Ser Ser Ser Gln
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Trp His His Asn Cys Leu Ile Cys Asp Asn Cys Tyr Gln Gln Gln Asp
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Asn Leu Cys Pro Phe Cys Gly Lys Cys Tyr His Pro Glu Leu Gln Lys
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Glu Ser Ser Phe Ser Ser Ser Ala Asp Ile Ser Lys Ala Asp Val Ser
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 <211> 493
 <212> PRT
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<400> 128

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Asp Tyr Gly Ala Asp Ile Val Tyr Cys Glu Glu Leu Ile Asp Leu Lys	
35 40 45	

Met Ile Gln Cys Lys Arg Val Val Asn Glu Val Leu Ser Thr Val Asp	
50 55 60	

Phe Val Ala Pro Asp Asp Arg Val Val Phe Arg Thr Cys Glu Arg Glu	
65 70 75 80	

Gln Asn Arg Val Val Phe Gln Met Gly Thr Ser Asp Ala Glu Arg Ala	
85 90 95	

Leu Ala Val Ala Arg Leu Val Glu Asn Asp Val Ala Gly Ile Asp Val	
100 105 110	

Asn Met Gly Cys Pro Lys Gln Tyr Ser Thr Lys Gly Gly Met Gly Ala	
115 120 125	

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Ala Leu Leu Ser Asp Pro Asp Lys Ile Glu Lys Ile Leu Ser Thr Leu
130 135 140

Val Lys Gly Thr Arg Arg Pro Val Thr Cys Lys Ile Arg Ile Leu Pro
145 150 155 160

Ser Leu Glu Asp Thr Leu Ser Leu Val Lys Arg Ile Glu Arg Thr Gly
165 170 175

Ile Ala Ala Ile Ala Val His Gly Arg Lys Arg Glu Glu Arg Pro Gln
180 185 190

His Pro Val Ser Cys Glu Val Ile Lys Ala Ile Ala Asp Thr Leu Ser
195 200 205

Ile Pro Val Ile Ala Asn Gly Gly Ser His Asp His Ile Gln Gln Tyr
210 215 220

Ser Asp Ile Glu Asp Phe Arg Gln Ala Thr Ala Ala Ser Ser Val Met
225 230 235 240

Val Ala Arg Ala Ala Met Trp Asn Pro Ser Ile Phe Leu Lys Glu Gly
245 250 255

Leu Arg Pro Leu Glu Glu Val Met Gln Lys Tyr Ile Arg Tyr Ala Val
260 265 270

Gln Tyr Asp Asn His Tyr Thr Asn Thr Lys Tyr Cys Leu Cys Gln Met
275 280 285

Leu Arg Glu Gln Leu Glu Ser Pro Gln Gly Arg Leu Leu His Ala Ala
290 295 300

Gln Ser Ser Arg Glu Ile Cys Glu Ala Phe Gly Leu Gly Ala Phe Tyr
305 310 315 320

Glu Glu Thr Thr Gln Glu Leu Asp Ala Gln Gln Ala Arg Leu Ser Ala
325 330 335

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Lys Thr Ser Glu Gln Thr Gly Glu Pro Ala Glu Asp Thr Ser Gly Val
340 345 350

Ile Lys Met Ala Val Lys Phe Asp Arg Arg Ala Tyr Pro Ala Gln Ile
355 360 365

Thr Pro Lys Met Cys Leu Leu Glu Trp Cys Arg Arg Glu Lys Leu Ala
370 375 380

Gln Pro Val Tyr Glu Thr Val Gln Arg Pro Leu Asp Arg Leu Phe Ser
385 390 395 400

Ser Ile Val Thr Val Ala Glu Gln Lys Tyr Gln Ser Thr Leu Trp Asp
405 410 415

Lys Ser Lys Lys Leu Ala Glu Gln Ala Ala Ala Ile Val Cys Leu Arg
420 425 430

Ser Gln Gly Leu Pro Glu Gly Arg Leu Gly Glu Glu Ser Pro Ser Leu
435 440 445

His Lys Arg Lys Arg Glu Ala Pro Asp Gln Asp Pro Gly Gly Pro Arg
450 455 460

Ala Gln Glu Leu Ala Gln Pro Gly Asp Leu Cys Lys Lys Pro Phe Val
465 470 475 480

Ala Leu Gly Ser Gly Glu Glu Ser Pro Leu Glu Gly Trp
485 490

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<210> 130
<211> 424
<212> PRT
<213> Homo sapiens

<400> 130

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

Lys Ala Gly Phe Pro Ala Ala Ser Gln Tyr Ala His Pro Cys Pro Gly
50 55 60

Pro Pro Thr Ala Gly His Thr Glu Pro Pro Ser Glu Pro Pro Arg Arg
65 70 75 80

Ala Arg Val Ala Lys Tyr Arg Ala Lys Phe Asp Pro Arg Val Thr Ala
85 90 95

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

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Val Arg Val Glu His Arg Ala Thr Arg Gln Pro Tyr Ala Ile Lys Met
115 120 125

Ile Glu Thr Lys Tyr Arg Glu Gly Arg Glu Val Cys Glu Ser Glu Leu
130 135 140

Arg Val Leu Arg Arg Val Arg His Ala Asn Ile Ile Gln Leu Val Glu
145 150 155 160

Val Phe Glu Thr Gln Glu Arg Val Tyr Met Val Met Glu Leu Ala Thr
165 170 175

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

Arg Asp Ala Thr Arg Val Leu Gln Met Val Leu Asp Gly Val Arg Tyr
195 200 205

Leu His Ala Leu Gly Ile Thr His Arg Asp Leu Lys Pro Glu Asn Leu
210 215 220

Leu Tyr Tyr His Pro Gly Thr Asp Ser Lys Ile Ile Ile Thr Asp Phe
225 230 235 240

Gly Leu Ala Ser Ala Arg Lys Lys Gly Asp Asp Cys Leu Met Lys Thr
245 250 255

Thr Cys Gly Thr Pro Glu Tyr Ile Ala Pro Glu Val Leu Val Arg Lys
260 265 270

Pro Tyr Thr Asn Ser Val Asp Met Trp Ala Leu Gly Val Ile Ala Tyr
275 280 285

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

Leu Tyr Arg Gln Ile Leu Arg Gly Lys Tyr Ser Tyr Ser Gly Glu Pro
305 310 315 320

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Trp Pro Ser Val Ser Asn Leu Ala Lys Asp Phe Ile Asp Arg Leu Leu
325 330 335

Thr Val Asp Pro Gly Ala Arg Met Thr Ala Leu Gln Ala Leu Arg His
340 345 350

Pro Trp Val Val Ser Met Ala Ala Ser Ser Ser Met Lys Asn Leu His
355 360 365

Arg Ser Ile Ser Gln Asn Leu Leu Lys Arg Ala Ser Ser Arg Cys Gln
370 375 380

Ser Thr Lys Ser Ala Gln Ser Thr Arg Ser Ser Arg Ser Thr Arg Ser
385 390 395 400

Asn Lys Ser Arg Arg Val Arg Glu Arg Glu Leu Arg Glu Leu Asn Leu
405 410 415

Arg Tyr Gln Gln Gln Tyr Asn Gly
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<210> 131
<211> 1899
<212> DNA
<213> Homo sapiens

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 <211> 632
 <212> PRT
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<400> 132

Met Ile Leu Asn Ser Leu Ser Leu Cys Tyr His Asn Lys Leu Ile Leu
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 20 25 30

Asp Tyr Gly Ala Asp Ile Val Tyr Cys Glu Glu Leu Ile Asp Leu Lys
 35 40 45

Met Ile Gln Cys Lys Arg Val Val Asn Glu Val Leu Ser Thr Val Asp
 50 55 60

Phe Val Ala Pro Asp Asp Arg Val Val Phe Arg Thr Cys Glu Arg Glu
 65 70 75 80

Gln Asn Arg Val Val Phe Gln Met Gly Thr Ser Asp Ala Glu Arg Ala
 85 90 95

Leu Ala Val Ala Arg Leu Val Glu Asn Asp Val Ala Gly Ile Asp Val
 100 105 110

Asn Met Gly Cys Pro Lys Gln Tyr Ser Thr Lys Gly Gly Met Gly Ala
 115 120 125

Ala Leu Leu Ser Asp Pro Asp Lys Ile Glu Lys Ile Leu Ser Thr Leu
 130 135 140

Val Lys Gly Thr Arg Arg Pro Val Thr Cys Lys Ile Arg Ile Leu Pro
 145 150 155 160

Ser Leu Glu Asp Thr Leu Ser Leu Val Lys Arg Ile Glu Arg Thr Gly
 165 170 175

Ile Ala Ala Ile Ala Val His Gly Arg Cys Arg Arg Gly Thr Ala Phe
 180 185 190

Arg Ala Gly Pro Ala Ser Leu Ala Gly Glu Asp Ala Leu Val Ser Val
 195 200 205

Met Gly Cys Gly Thr Ser Lys Val Leu Pro Glu Pro Pro Lys Asp Val
 210 215 220

Gln Leu Asp Leu Val Lys Lys Val Glu Pro Phe Ser Gly Thr Lys Ser
 225 230 235 240

Asp Val Tyr Lys His Phe Ile Thr Glu Val Asp Ser Val Gly Pro Val
 245 250 255

Lys Ala Gly Phe Pro Ala Ala Ser Gln Tyr Ala His Pro Cys Pro Gly
 260 265 270

Pro Pro Thr Ala Gly His Thr Glu Pro Pro Ser Glu Pro Pro Arg Arg
 275 280 285

Ala Arg Val Ala Lys Tyr Arg Ala Lys Phe Asp Pro Arg Val Thr Ala
 290 295 300

Lys Tyr Asp Ile Lys Ala Leu Ile Gly Arg Gly Ser Phe Ser Arg Val
 305 310 315 320

Val Arg Val Glu His Arg Ala Thr Arg Gln Pro Tyr Ala Ile Lys Met
 325 330 335

Ile Glu Thr Lys Tyr Arg Glu Gly Arg Glu Val Cys Glu Ser Glu Leu
 340 345 350

Arg Val Leu Arg Arg Val Arg His Ala Asn Ile Ile Gln Leu Val Glu
 355 360 365

Val Phe Glu Thr Gln Glu Arg Val Tyr Met Val Met Glu Leu Ala Thr
 370 375 380

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

Arg Asp Ala Thr Arg Val Leu Gln Met Val Leu Asp Gly Val Arg Tyr
 405 410 415

Leu His Ala Leu Gly Ile Thr His Arg Asp Leu Lys Pro Glu Asn Leu
 420 425 430

Leu Tyr Tyr His Pro Gly Thr Asp Ser Lys Ile Ile Ile Thr Asp Phe
 435 440 445

Gly Leu Ala Ser Ala Arg Lys Lys Gly Asp Asp Cys Leu Met Lys Thr
 450 455 460

Thr Cys Gly Thr Pro Glu Tyr Ile Ala Pro Glu Val Leu Val Arg Lys
 465 470 475 480

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

Ile Leu Leu Ser Gly Thr Met Pro Phe Glu Asp Asp Asn Arg Thr Arg
 500 505 510

Leu Tyr Arg Gln Ile Leu Arg Gly Lys Tyr Ser Tyr Ser Gly Glu Pro
 515 520 525

Trp Pro Ser Val Ser Asn Leu Ala Lys Asp Phe Ile Asp Arg Leu Leu
 530 535 540

Thr Val Asp Pro Gly Ala Arg Met Thr Ala Leu Gln Ala Leu Arg His
 545 550 555 560

Pro Trp Val Val Ser Met Ala Ala Ser Ser Ser Met Lys Asn Leu His
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Arg Ser Ile Ser Gln Asn Leu Leu Lys Arg Ala Ser Ser Arg Cys Gln
 580 585 590

Ser Thr Lys Ser Ala Gln Ser Thr Arg Ser Ser Arg Ser Thr Arg Ser
 595 600 605

Asn Lys Ser Arg Arg Val Arg Glu Arg Glu Leu Arg Glu Leu Asn Leu
 610 615 620

Arg Tyr Gln Gln Gln Tyr Asn Gly
625 630

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<211> 1609
<212> DNA
<213> Homo sapiens

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<211> 89
<212> PRT
<213> Homo sapiens

<400> 134

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Asp Tyr Gly Ala Asp Ile Val Tyr Cys Glu Glu Leu Ile Asp Leu Lys
35 40 45

Met Ile Gln Cys Lys Arg Val Val Asn Glu Val Leu Ser Thr Val Asp
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Phe Val Ala Pro Asp Asp Arg Val Val Phe Arg Thr Cys Glu Arg Glu
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Gln Asn Arg Val Val Phe Gln Met Val
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<211> 2277
<212> DNA
<213> Homo sapiens

<400> 135

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atgtgtatag caagatcttt gcaggagttt gccactgtcc tcaggaatct tgaagatgaa	300
cggatacggg tgattgagaa tgccagcgag gtgctcatca ctcccttgga gaagtttcga	360
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ctggccttcc tgcaaggact cttcactttc tatcaccatg gttacgaact ggccaaggat	660
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