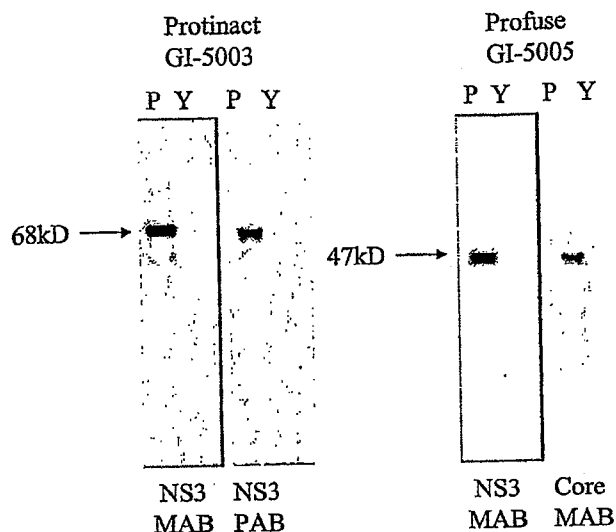


FIG. 1A



P = Profuse or Protinact
Y = YEX (vector only)

FIG. 1B

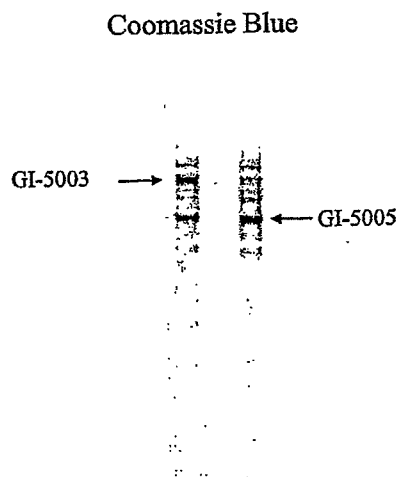


FIG. 1C

E1-E2 Tarmogen

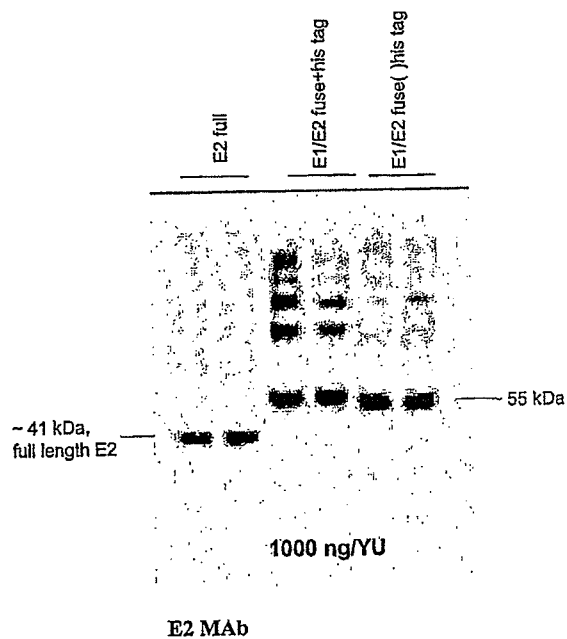


FIG. 1D

NS4B Tarmogen

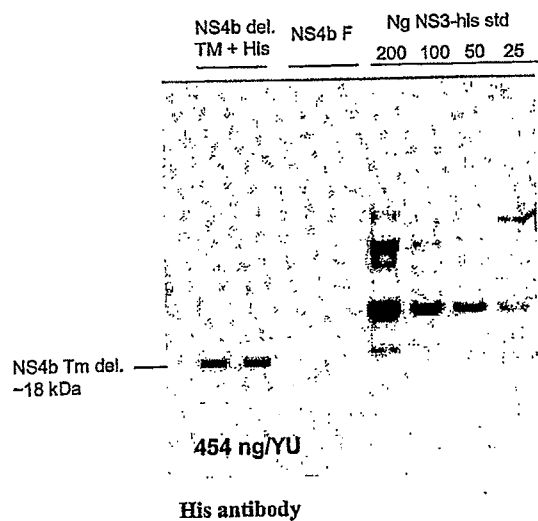


FIG. 2

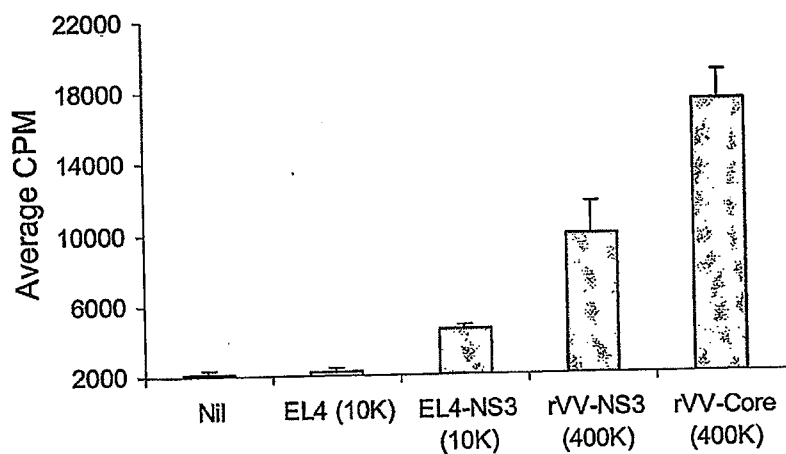


FIG. 3A

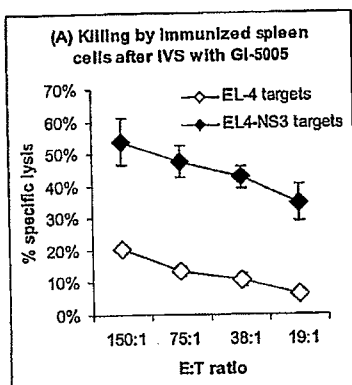


FIG. 3B

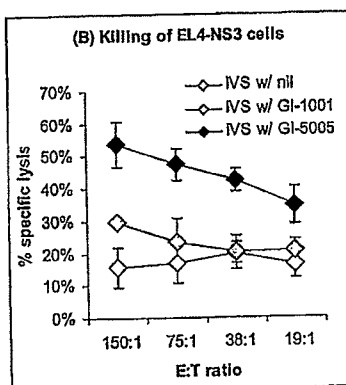


FIG. 3C

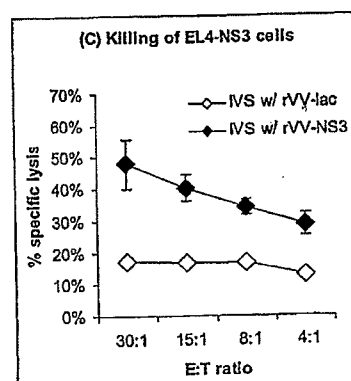


FIG. 4A

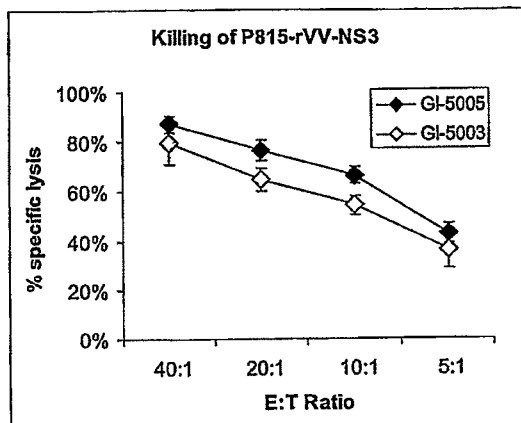


FIG. 4B

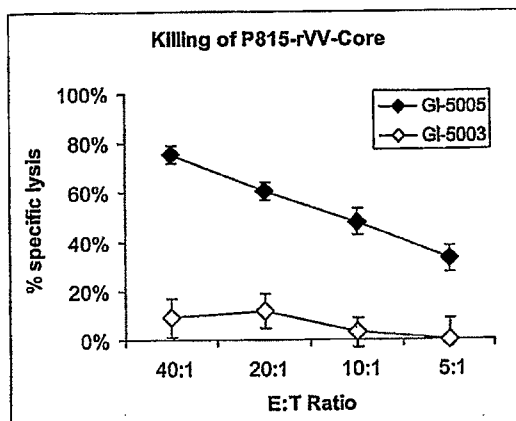


FIG. 5

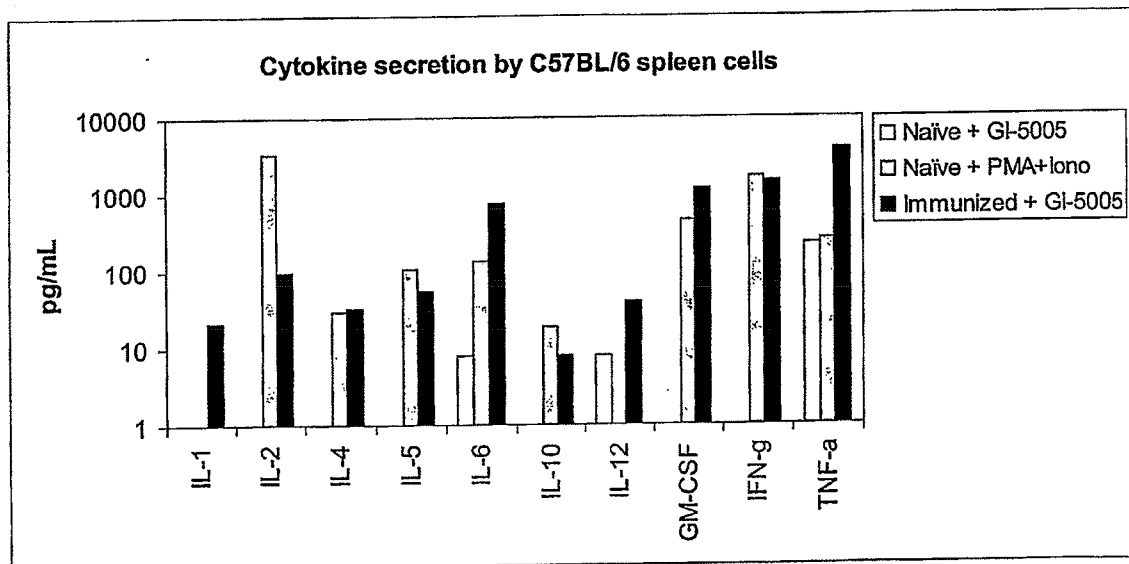


FIG. 6

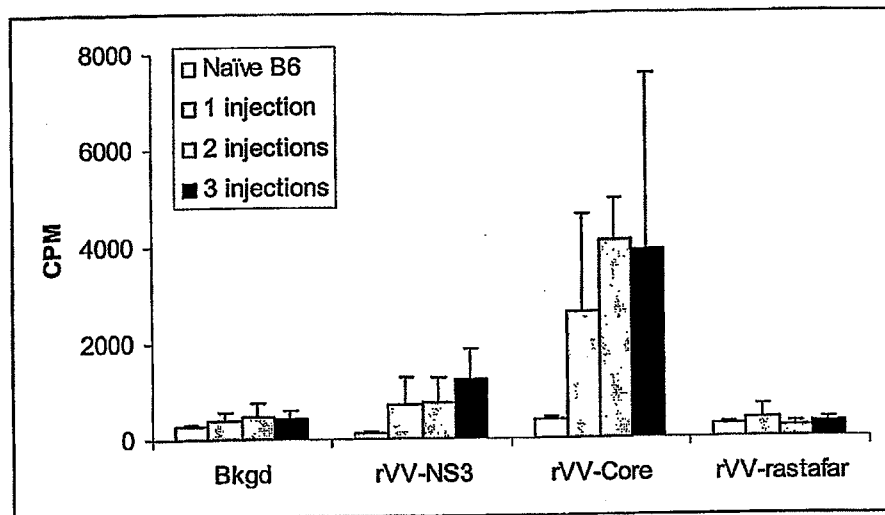


FIG. 7A

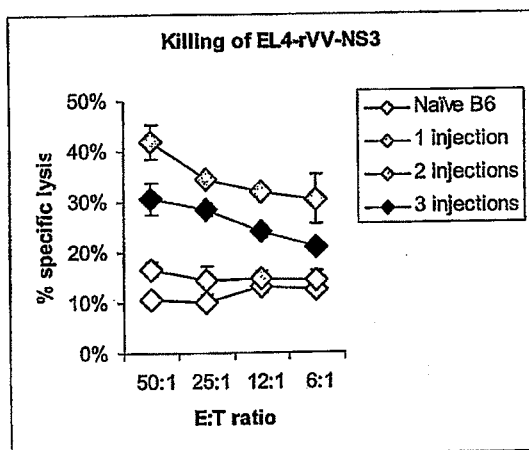


FIG. 7B

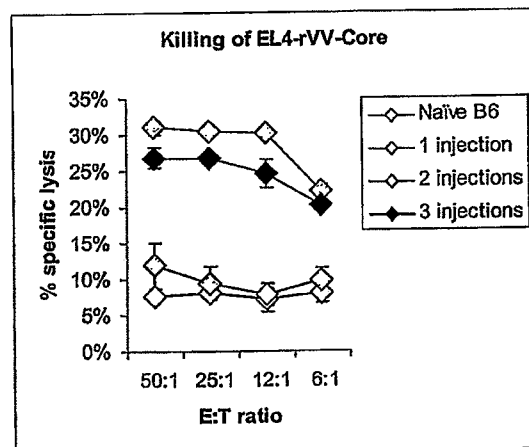


FIG. 7C

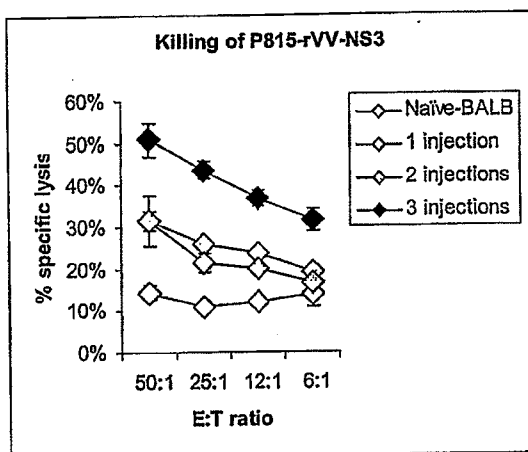


FIG. 7D

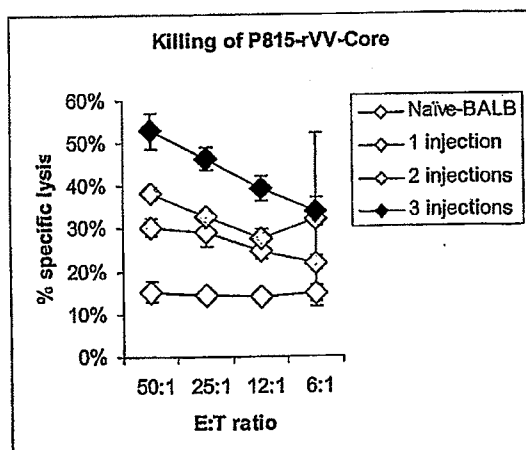


FIG. 8A

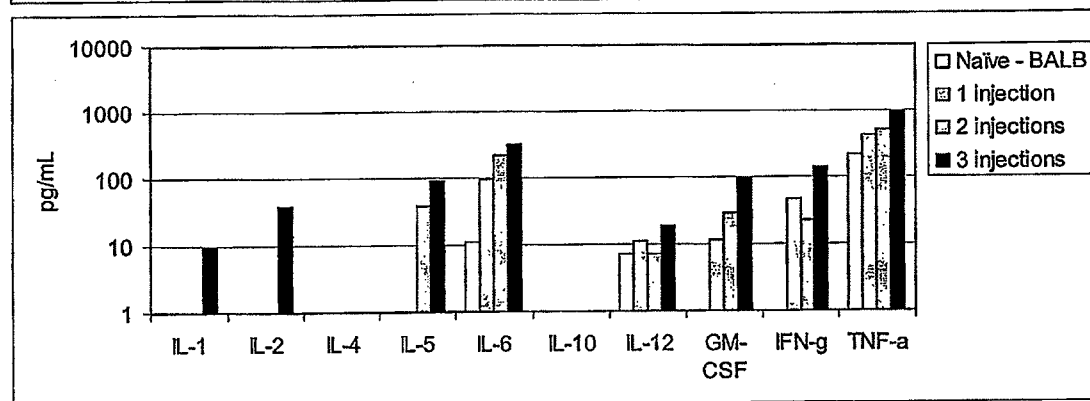
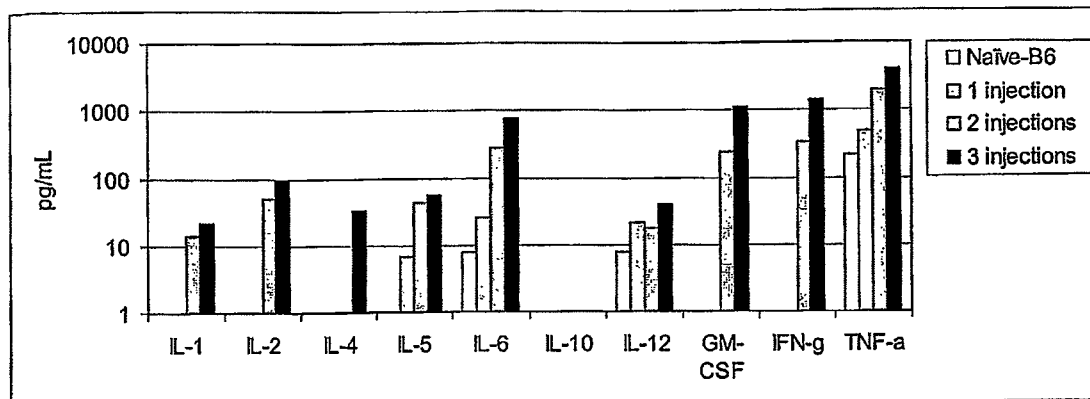


FIG. 8B

FIG. 9

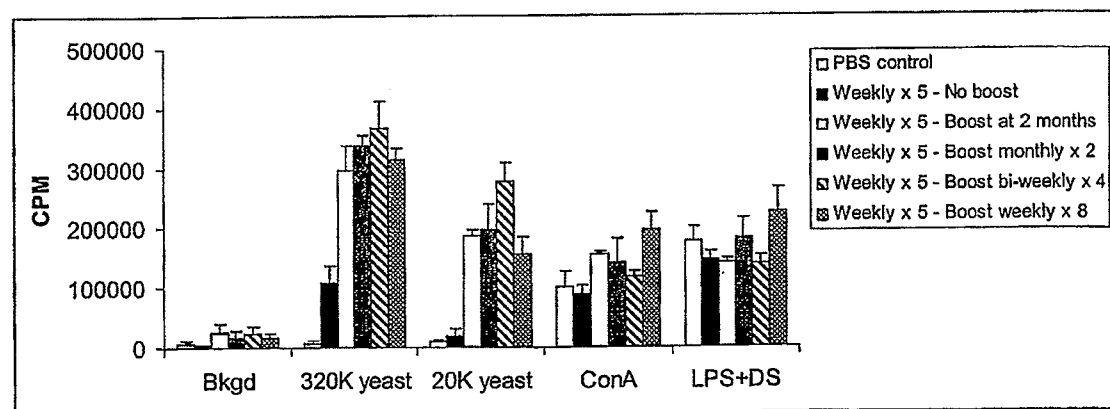


FIG. 10

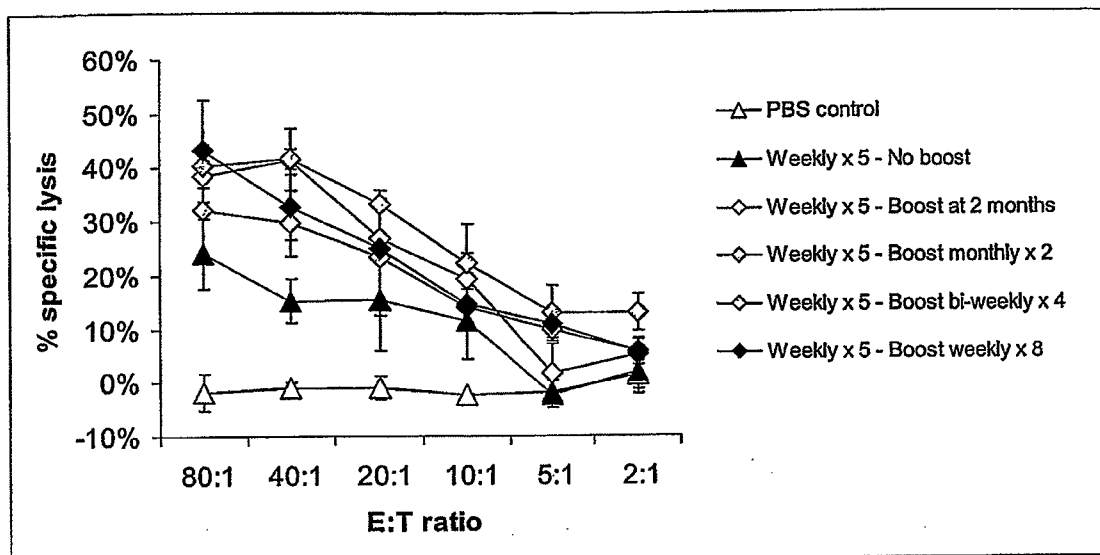


FIG. 11A

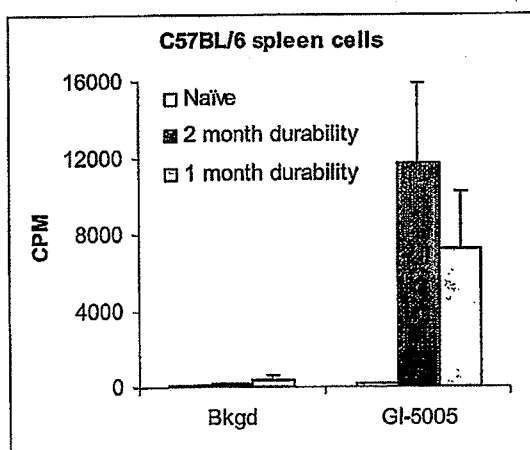


FIG. 11B

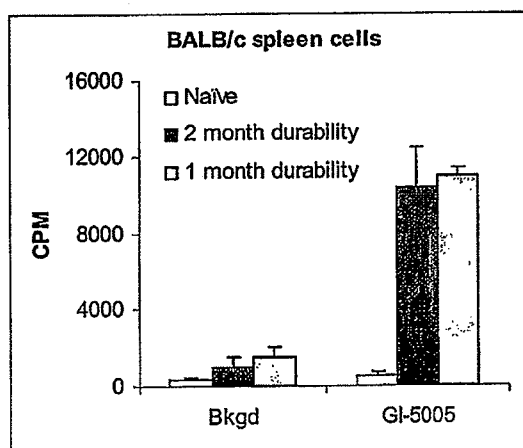


FIG. 12A

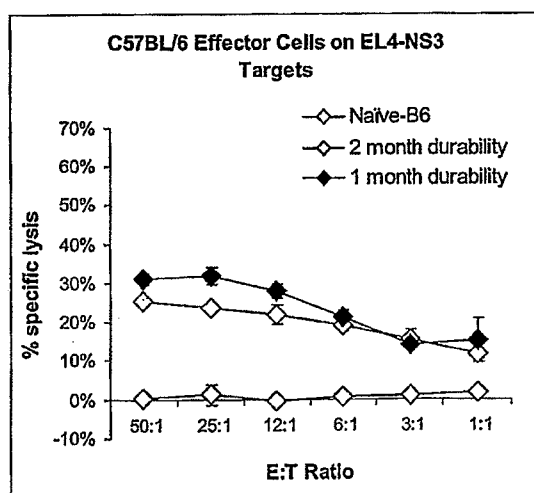


FIG. 12B

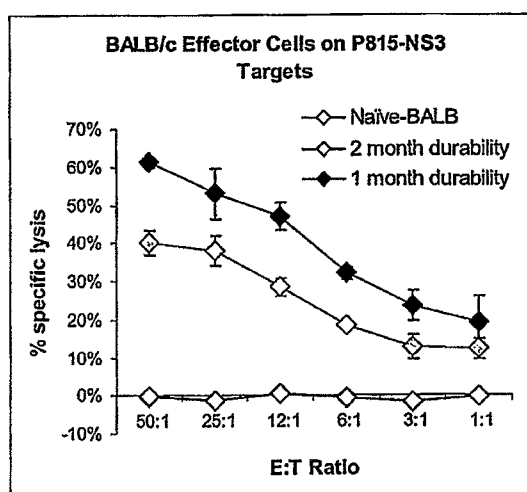


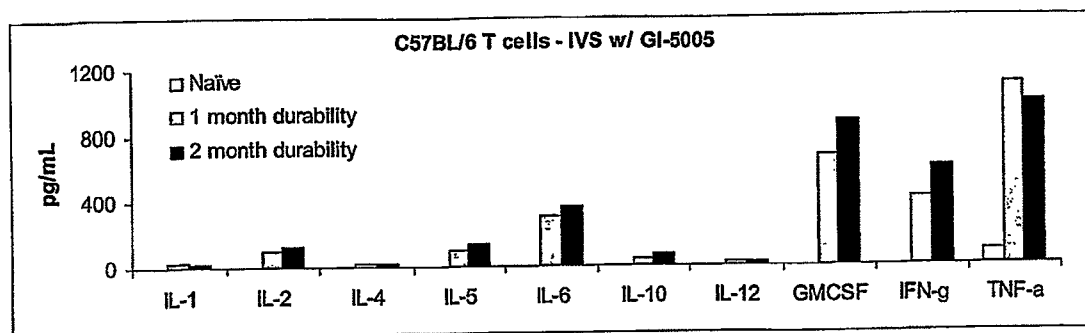
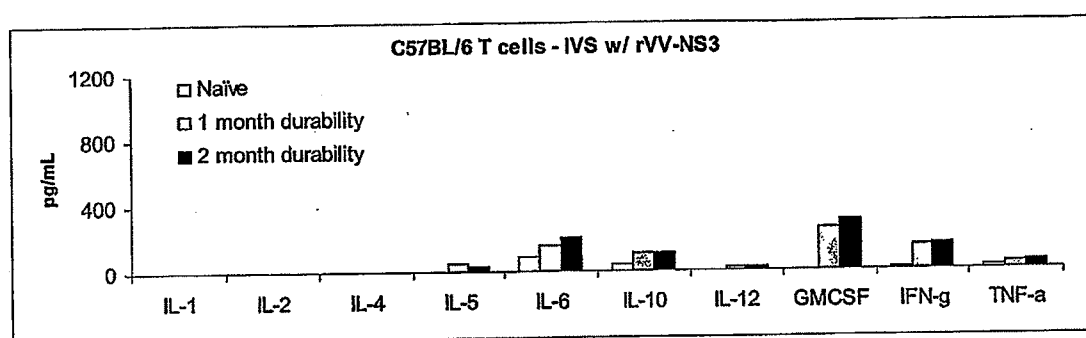
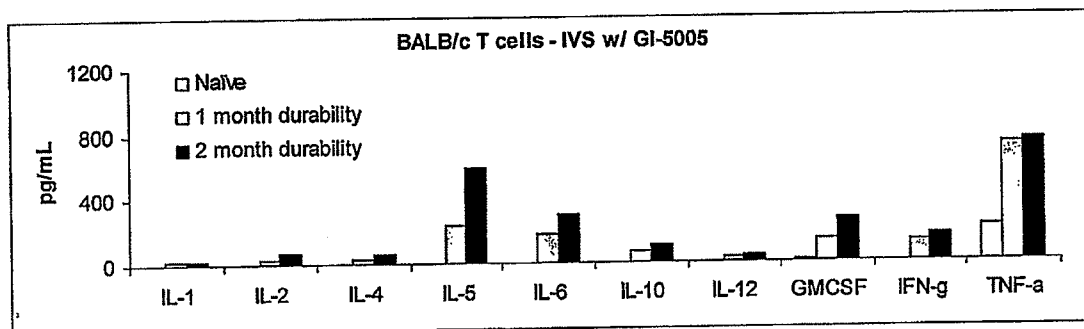
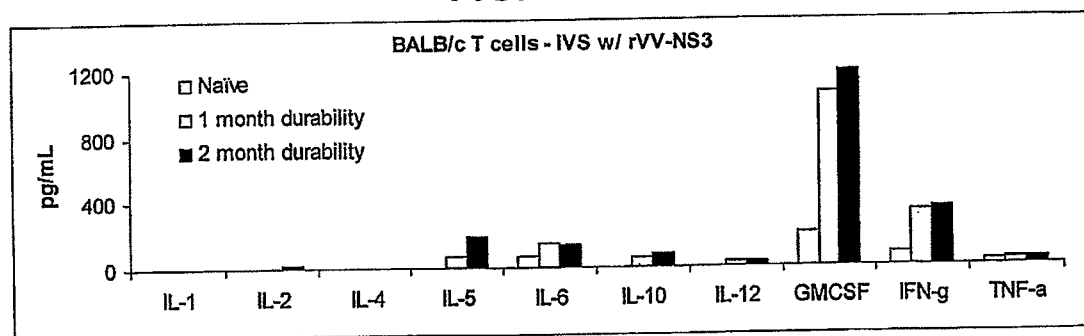
FIG. 13A**FIG. 13B****FIG. 13C****FIG. 13D**

FIG. 14A

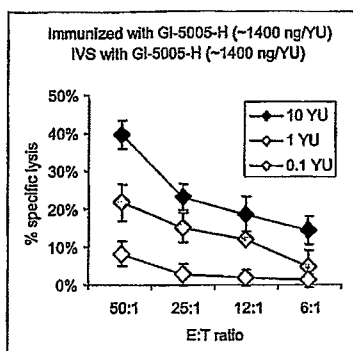


FIG. 14B

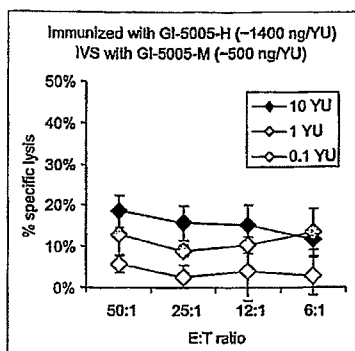


FIG. 14C

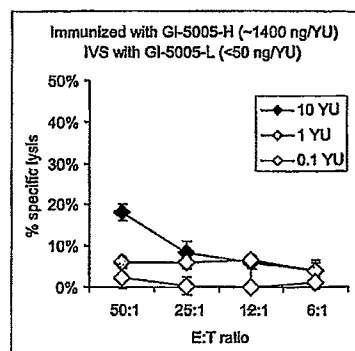


FIG. 14D

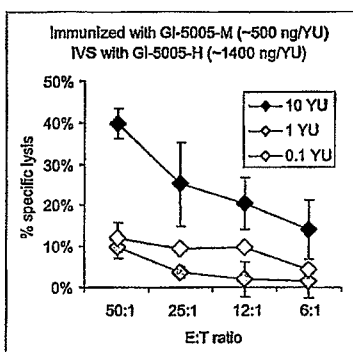


FIG. 14E

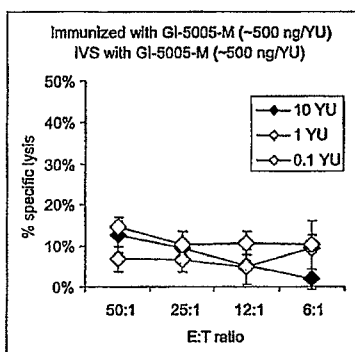


FIG. 14F

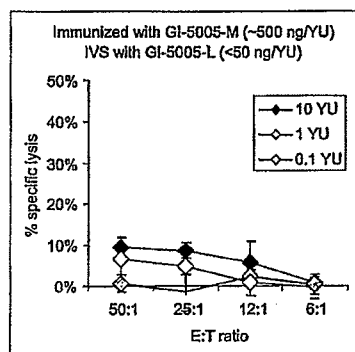


FIG. 14G

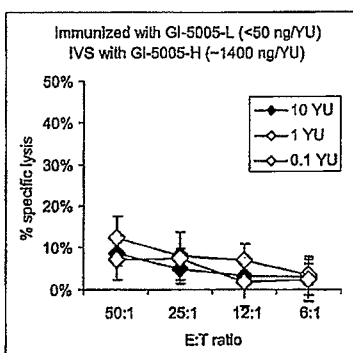


FIG. 14H

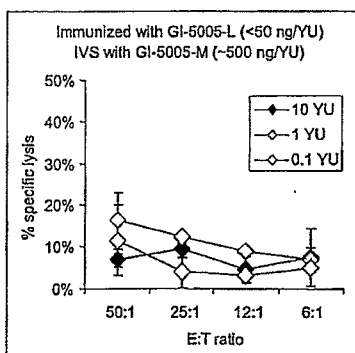


FIG. 14I

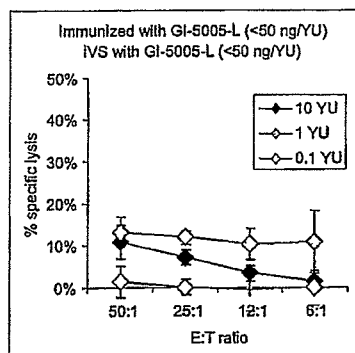


FIG. 15A

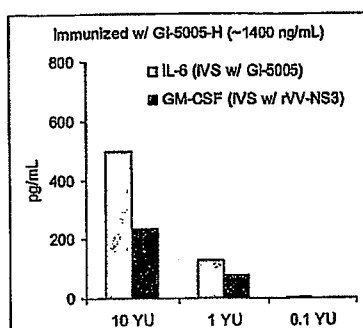


FIG. 15B

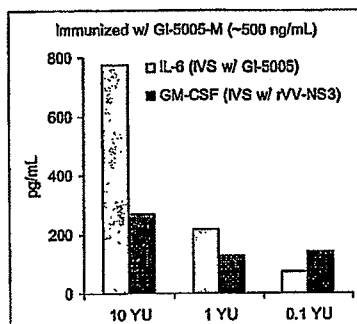


FIG. 15C

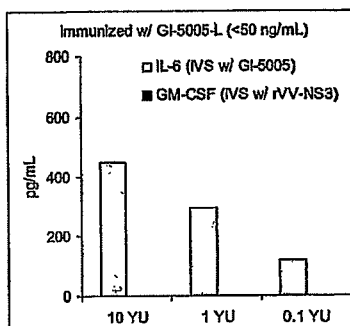


FIG. 16

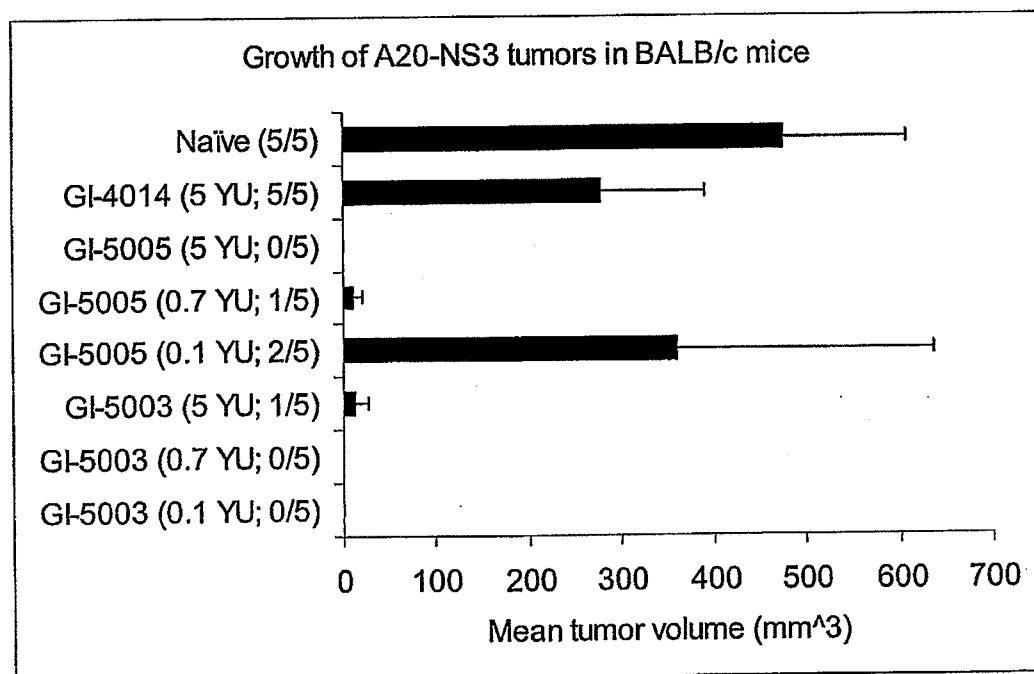


FIG. 17

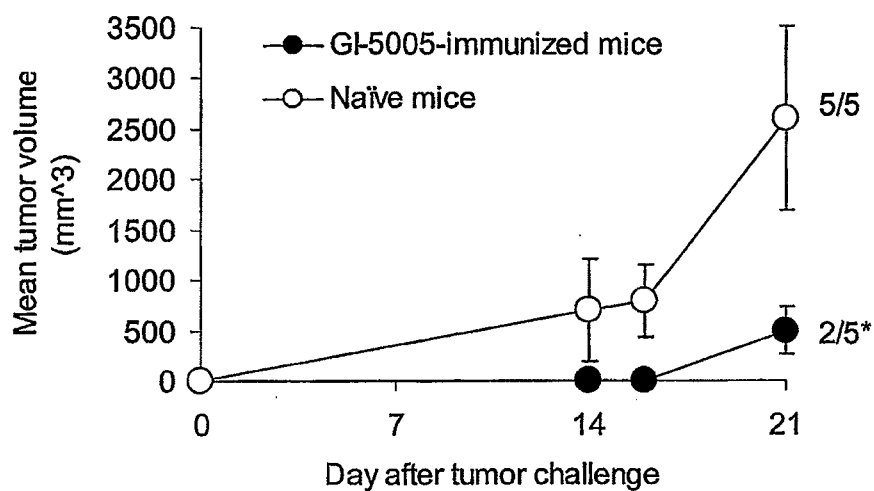


FIG. 18

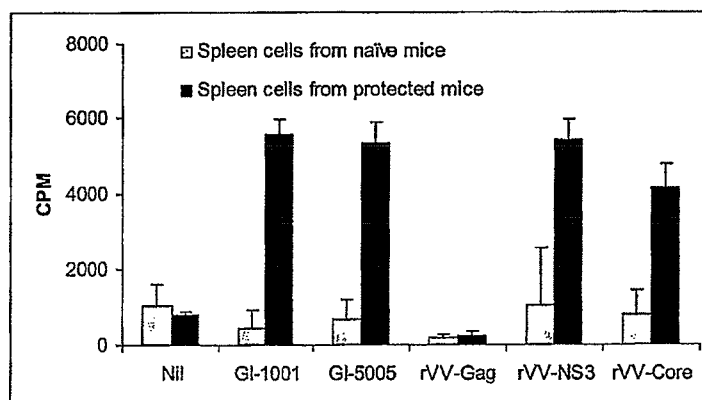


FIG. 19

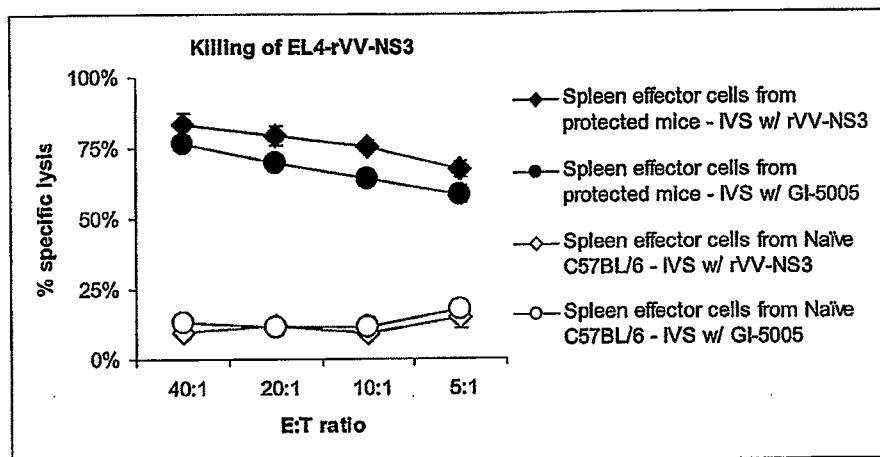


FIG. 20

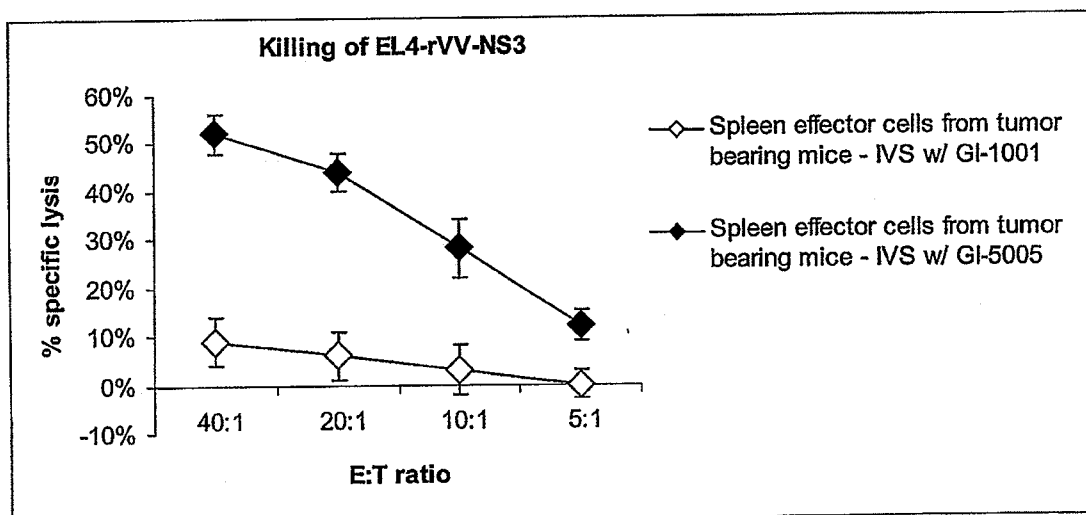


FIG. 21

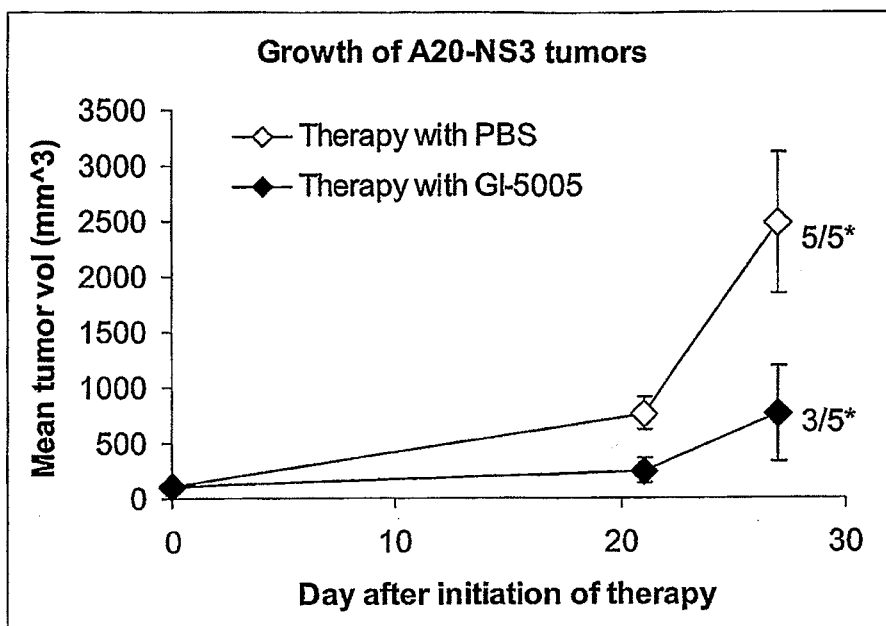


FIG. 22A

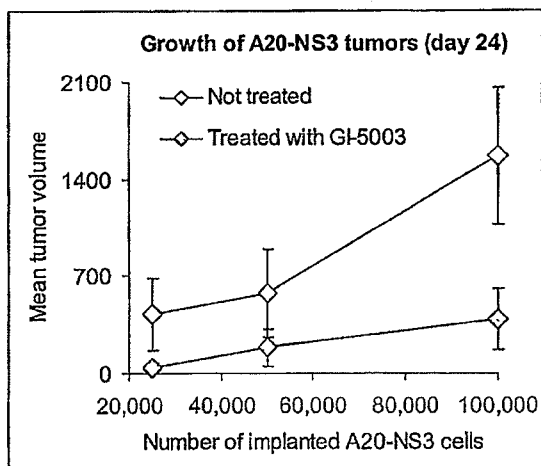


FIG. 22B

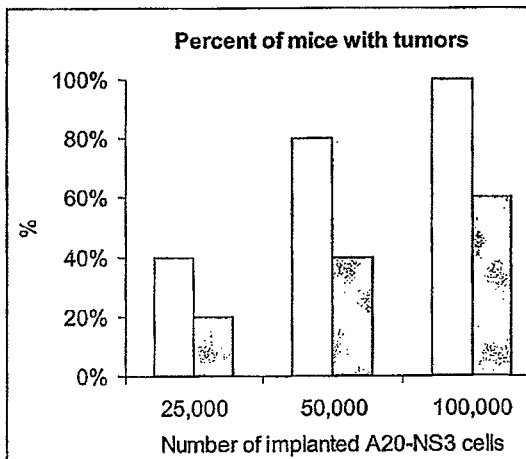


FIG. 23A

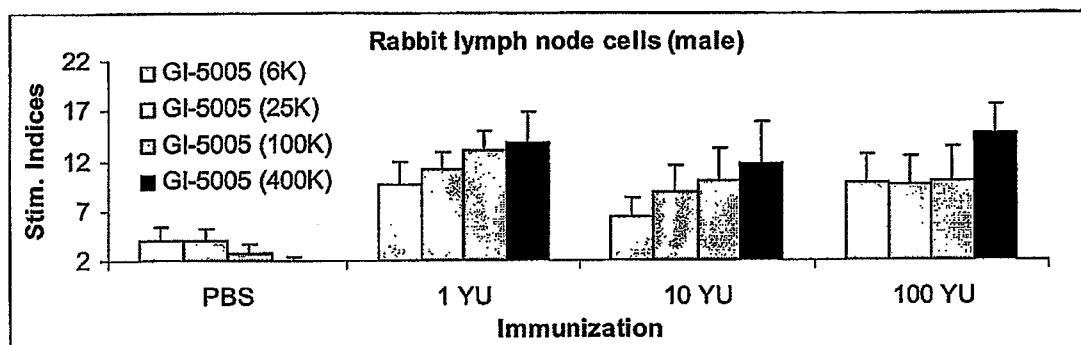
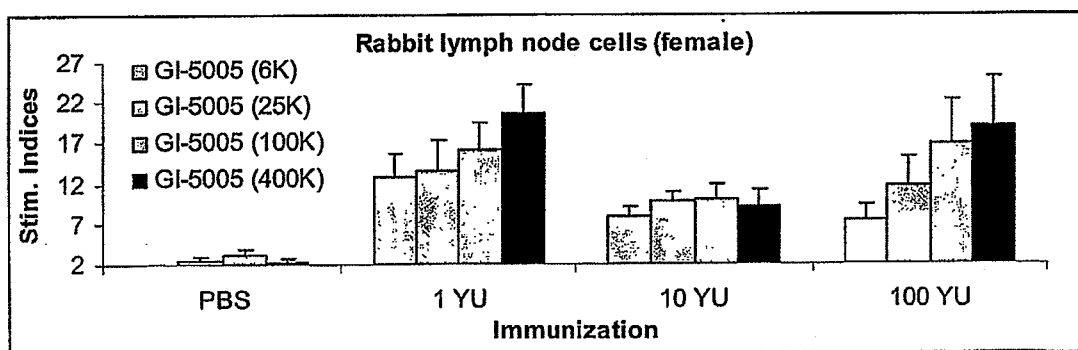


FIG. 23B



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Haller, Aurelia
King, Thomas H.

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

Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro
 500 505 510

Ala Glu Thr Thr Val Arg Leu Arg Ala Tyr Met Asn Thr Pro Gly Leu
 515 520 525

Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly Val Phe Thr Gly
 530 535 540

Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ser Gly
 545 550 555 560

Glu Asn Phe Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg
 565 570 575

Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp Lys Cys Leu Ile
 580 585 590

Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu
 595 600 605

Gly Ala Val Gln Asn Glu Val Thr Leu Thr His Pro Ile Thr Lys Tyr
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Ile Met Thr Cys Met Ser Ala Asp Leu Glu Val Val Thr
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Asp Ala Ile Leu His Thr Pro Gly Cys Val Pro Cys Val Arg Glu Gly
35 40 45

Asn Ala Ser Arg Cys Trp Val Ala Val Thr Pro Thr Val Ala Thr Arg
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3923-12-pct.ST25.txt

Asp Gly Lys Leu Pro Thr Thr Gln Leu Arg Arg His Ile Asp Leu Leu
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Val Gly Ser Ala Thr Leu Cys Ser Ala Leu Tyr Val Gly Asp Leu Cys
85 90 95

Gly Ser Val Phe Leu Val Gly Gln Leu Phe Thr Phe Ser Pro Arg Arg
100 105 110

His Trp Thr Thr Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile
115 120 125

Thr Gly His Arg Met Ala Trp Asp Met Met Met Asn Trp Ser Pro Thr
130 135 140

Ala Ala Leu Val Val Ala Gln Leu Leu Arg Ile Pro Gln Ala Ile Met
145 150 155 160

Asp Met Glu Thr His Val Thr Gly Gly Ser Ala Gly Arg Thr Thr Ala
165 170 175

Gly Leu Val Gly Leu Leu Thr Pro Gly Ala Lys Gln Asn Ile Gln Leu
180 185 190

Ile Asn Thr Asn Gly Ser Trp His Ile Asn Ser Thr Ala Leu Asn Cys
195 200 205

Asn Glu Ser Leu Asn Thr Gly Trp Leu Ala Gly Leu Phe Tyr Gln His
210 215 220

Lys Phe Asn Ser Ser Gly Cys Pro Glu Arg Leu Ala Ser Cys Arg Arg
225 230 235 240

Leu Thr Asp Phe Ala Gln Gly Trp Gly Pro Ile Ser Tyr Ala Asn Gly
245 250 255

Ser Gly Leu Asp Glu Arg Pro Tyr Cys Trp His Tyr Pro Pro Arg Pro
260 265 270

Cys Gly Ile Val Pro Ala Lys Ser Val Cys Gly Pro Val Tyr Cys Phe
275 280 285

Thr Pro Ser Pro Val Val Val Gly Thr Thr Asp Arg Ser Gly Ala Pro
290 295 300

Thr Tyr Ser Trp Gly Ala Asn Asp Thr Asp Val Phe Val Leu Asn Asn
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3923-12-pct.ST25.txt

Thr Arg Pro Pro Leu Gly Asn Trp Phe Gly Cys Thr Trp Met Asn Ser
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Thr Gly Phe Thr Lys Val Cys Gly Ala Pro Pro Cys Val Ile Gly Gly
 340 345 350

Val Gly Asn Asn Thr Leu Leu Cys Pro Thr Asp Cys Phe Arg Lys His
 355 360 365

Pro Glu Ala Thr Tyr Ser Arg Cys Gly Ser Gly Pro Trp Ile Thr Pro
 370 375 380

Arg Cys Met Val Asp Tyr Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr
 385 390 395 400

Ile Asn Tyr Thr Ile Phe Lys Val Arg Met Tyr Val Gly Gly Val Glu
 405 410 415

His Arg Leu Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp
 420 425 430

Leu Glu Asp Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr
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Thr Gln Trp Gln Val Leu Pro Cys Ser Phe Thr Thr Leu Pro Ala Leu
 450 455 460

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 <212> PRT
 <213> Artificial

<220>
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Met Met Leu Ala Glu Gln Phe Lys Gln Lys Ala Leu Gly Leu Leu Gln
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Thr Ala Ser Arg His Ala Glu Val Ile Thr Pro Ala Val Gln Thr Asn
 35 40 45

Trp Gln Lys Leu Glu Val Phe Trp Ala Lys His Met Trp Asn Phe Ile
 50 55 60

Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Ser Pro Gly Ala Leu
 65 70 75 80

Val Val Gly Val Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro
 85 90 95

Gly Glu Gly Ala Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser
 100 105 110

Arg Gly Asn His Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala
 115 120 125

Ala Ala Arg Val Thr Ala Ile Leu Ser Ser Leu Thr Val Thr Gln Leu
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Leu Arg Arg Leu His Gln Trp Ile Ser Ser Glu Cys Thr Thr Pro Cys
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 <212> PRT
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3923-12-pct.ST25.txt

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<213> Artificial

<220>

<223> synthetic peptide

<400> 10

Gly Gly Gly His His His His His His
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<210> 11

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<213> Artificial

<220>

<223> recombinant fusion protein construct

<400> 11

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<213> Artificial

<220>
<223> recombinant fusion protein

<400> 12

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20 25 30

3923-12-pct.ST25.txt

Gly Gln Ile Val Gly Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg
 35 40 45

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

Gly Arg Arg Gln Pro Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Thr
 65 70 75 80

Trp Ala Gln Pro Gly Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys
 85 90 95

Gly Trp Ala Gly Trp Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp
 100 105 110

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

Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu
 130 135 140

Val Gly Ala Pro Leu Gly Gly Ala Ala Arg Ala Leu Ala His Gly Val
 145 150 155 160

Arg Val Leu Glu Asp Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly
 165 170 175

Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val
 180 185 190

Pro Ala Ser Ala Tyr Gln Val Arg Asn Ser Ser Gly Leu Tyr His Val
 195 200 205

Thr Asn Asp Cys Pro Asn Ser Ser Ile Val Tyr Glu Ala Ala Asp Ala
 210 215 220

Ile Leu His Thr Pro Gly Cys Val Pro Cys Val Arg Glu Gly Asn Ala
 225 230 235 240

Ser Arg Cys Trp Val Ala Val Thr Pro Thr Val Ala Thr Arg Asp Gly
 245 250 255

Lys Leu Pro Thr Thr Gln Leu Arg Arg His Ile Asp Leu Leu Val Gly
 260 265 270

Ser Ala Thr Leu Cys Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Ser
 275 280 285

3923-12-pct.ST25.txt

Val Phe Leu Val Gly Gln Leu Phe Thr Phe Ser Pro Arg Arg His Trp
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Thr Thr Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly
 305 310 315 320

His Arg Met Ala Trp Asp Met Met Met Asn Trp Ser Pro Thr Ala Ala
 325 330 335

Leu Val Val Ala Gln Leu Leu Arg Ile Pro Gln Ala Ile Met Asp Met
 340 345 350

Ile Ala Gly Ala His Trp Gly Val Leu Ala Gly Ile Ala Tyr Phe Ser
 355 360 365

Met Val Gly Asn Trp Ala Lys Val Leu Val Val Leu Leu Phe Ala
 370 375 380

Gly Val Asp Ala Glu Thr His Val Thr Gly Gly Ser Ala Gly Arg Thr
 385 390 395 400

Thr Ala Gly Leu Val Gly Leu Leu Thr Pro Gly Ala Lys Gln Asn Ile
 405 410 415

Gln Leu Ile Asn Thr Asn Gly Ser Trp His Ile Asn Ser Thr Ala Leu
 420 425 430

Asn Cys Asn Glu Ser Leu Asn Thr Gly Trp Leu Ala Gly Leu Phe Tyr
 435 440 445

Gln His Lys Phe Asn Ser Ser Gly Cys Pro Glu Arg Leu Ala Ser Cys
 450 455 460

Arg Arg Leu Thr Asp Phe Ala Gln Gly Trp Gly Pro Ile Ser Tyr Ala
 465 470 475 480

Asn Gly Ser Gly Leu Asp Glu Arg Pro Tyr Cys Trp His Tyr Pro Pro
 485 490 495

Arg Pro Cys Gly Ile Val Pro Ala Lys Ser Val Cys Gly Pro Val Tyr
 500 505 510

Cys Phe Thr Pro Ser Pro Val Val Val Gly Thr Thr Asp Arg Ser Gly
 515 520 525

Ala Pro Thr Tyr Ser Trp Gly Ala Asn Asp Thr Asp Val Phe Val Leu
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3923-12-pct.ST25.txt

Asn Asn Thr Arg Pro Pro Leu Gly Asn Trp Phe Gly Cys Thr Trp Met
 545 550 555 560

Asn Ser Thr Gly Phe Thr Lys Val Cys Gly Ala Pro Pro Cys Val Ile
 565 570 575

Gly Gly Val Gly Asn Asn Thr Leu Leu Cys Pro Thr Asp Cys Phe Arg
 580 585 590

Lys His Pro Glu Ala Thr Tyr Ser Arg Cys Gly Ser Gly Pro Trp Ile
 595 600 605

Thr Pro Arg Cys Met Val Asp Tyr Pro Tyr Arg Leu Trp His Tyr Pro
 610 615 620

Cys Thr Ile Asn Tyr Thr Ile Phe Lys Val Arg Met Tyr Val Gly Gly
 625 630 635 640

Val Glu His Arg Leu Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu Arg
 645 650 655

Cys Asp Leu Glu Asp Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu
 660 665 670

Ser Thr Thr Gln Trp Gln Val Leu Pro Cys Ser Phe Thr Thr Leu Pro
 675 680 685

Ala Leu Ser Thr Gly Leu Ile His Leu His Gln Asn Ile Val Asp Val
 690 695 700

Gln Tyr Leu Tyr Gly Val Gly Ser Ser Ile Ala Ser Trp Ala Ile Lys
 705 710 715 720

Trp Glu Tyr Val Val Leu Leu Phe Leu Leu Leu Ala Asp Ala Arg Val
 725 730 735

Cys Ser Cys Leu Trp Met Met Leu Leu Ile Ser Gln Ala Glu Ala
 740 745 750

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 <212> DNA
 <213> Artificial

<220>
 <223> recombinant fusion protein construct

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aaccgtcgcc cacaggacgt caagttcccg ggtggcggtc agatcgttgg tggagtttac 120
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3923-12-pct.ST25.txt

<212> PRT

<213> Artificial

<220>

<223> recombinant fusion protein

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 35 40 45

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

Gly Arg Arg Gln Pro Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Thr
 65 70 75 80

Trp Ala Gln Pro Gly Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys
 85 90 95

Gly Trp Ala Gly Trp Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp
 100 105 110

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

Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu
 130 135 140

Val Tyr Gln Val Arg Asn Ser Ser Gly Leu Tyr His Val Thr Asn Asp
 145 150 155 160

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

Thr Pro Gly Cys Val Pro Cys Val Arg Glu Gly Asn Ala Ser Arg Cys
 180 185 190

Trp Val Ala Val Thr Pro Thr Val Ala Thr Arg Asp Gly Lys Leu Pro
 195 200 205

Thr Thr Gln Leu Arg Arg His Ile Asp Leu Leu Val Gly Ser Ala Thr
 210 215 220

3923-12-pct.ST25.txt

Leu Cys Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Ser Val Phe Leu
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Val Gly Gln Leu Phe Thr Phe Ser Pro Arg Arg His Trp Thr Thr Gln
 245 250 255

Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met
 260 265 270

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

Ala Gln Leu Leu Arg Ile Pro Gln Ala Ile Met Asp Met Glu Thr His
 290 295 300

Val Thr Gly Gly Ser Ala Gly Arg Thr Thr Ala Gly Leu Val Gly Leu
 305 310 315 320

Leu Thr Pro Gly Ala Lys Gln Asn Ile Gln Leu Ile Asn Thr Asn Gly
 325 330 335

Ser Trp His Ile Asn Ser Thr Ala Leu Asn Cys Asn Glu Ser Leu Asn
 340 345 350

Thr Gly Trp Leu Ala Gly Leu Phe Tyr Gln His Lys Phe Asn Ser Ser
 355 360 365

Gly Cys Pro Glu Arg Leu Ala Ser Cys Arg Arg Leu Thr Asp Phe Ala
 370 375 380

Gln Gly Trp Gly Pro Ile Ser Tyr Ala Asn Gly Ser Gly Leu Asp Glu
 385 390 395 400

Arg Pro Tyr Cys Trp His Tyr Pro Pro Arg Pro Cys Gly Ile Val Pro
 405 410 415

Ala Lys Ser Val Cys Gly Pro Val Tyr Cys Phe Thr Pro Ser Pro Val
 420 425 430

Val Val Gly Thr Thr Asp Arg Ser Gly Ala Pro Thr Tyr Ser Trp Gly
 435 440 445

Ala Asn Asp Thr Asp Val Phe Val Leu Asn Asn Thr Arg Pro Pro Leu
 450 455 460

Gly Asn Trp Phe Gly Cys Thr Trp Met Asn Ser Thr Gly Phe Thr Lys
 465 470 475 480

3923-12-pct.ST25.txt

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

Ser Arg Cys Gly Ser Gly Pro Trp Ile Thr Pro Arg Cys Met Val Asp
515 520 525

Tyr Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Ile Asn Tyr Thr Ile
530 535 540

Phe Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg Leu Glu Ala
545 550 555 560

Ala Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp Arg Asp
565 570 575

Arg Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Gln Trp Gln Val
580 585 590

Leu Pro Cys Ser Phe Thr Thr Leu Pro Ala Leu Ser Thr Gly Leu Ile
595 600 605

His Leu His Gln Asn Ile Val Asp Val Gln Tyr Leu Tyr Gly Val Gly
610 615 620

Ser Ser Ile Ala Ser Trp Ala Ile Lys Trp Glu
630 635

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<211> 2538
<212> DNA
<213> Artificial

<220>
<223> recombinant fusion protein construct

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tataccaatg tggaccaaga ccttgtgggc tggcccgctc ctcaaggttc ccgctcattg 300
acaccctgta cctgcggctc ctcggacatt tacctggtca cgaggcacgc cgatgtcatt 360
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<400> 16

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Asn Gln Val Glu Gly Glu Val Gln Ile Val Ser Thr Ala Thr Gln Thr
 35 40 45

Phe Leu Ala Thr Cys Ile Asn Gly Val Cys Trp Thr Val Tyr His Gly
 50 55 60

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

Tyr Thr Asn Val Asp Gln Asp Leu Val Gly Trp Pro Ala Pro Gln Gly
 85 90 95

Ser Arg Ser Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu
 100 105 110

Val Thr Arg His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser
 115 120 125

Arg Gly Ser Leu Leu Ser Pro Arg Pro Ile Ser Tyr Leu Lys Gly Ser
 130 135 140

Ala Gly Gly Pro Leu Leu Cys Pro Ala Gly His Ala Val Gly Leu Phe
 145 150 155 160

Arg Ala Ala Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Ile
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Pro Val Glu Asn Leu Gly Thr Thr Met Arg Ser Pro Val Phe Thr Asp
 180 185 190

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Asn Ser Ser Pro Pro Ala Val Pro Gln Ser Phe Gln Val Ala His Leu
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His Ala Pro Thr Gly Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr
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Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala
 225 230 235 240

Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His Gly Val Asp Pro
 245 250 255

Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly Ser Pro Ile Thr
 260 265 270

Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly
 275 280 285

Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ala Thr
 290 295 300

Ser Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly
 305 310 315 320

Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr
 325 330 335

Val Ser His Pro Asn Ile Glu Glu Val Ala Leu Ser Thr Thr Gly Glu
 340 345 350

Ile Pro Phe Tyr Gly Lys Ala Ile Pro Leu Glu Val Ile Lys Gly Gly
 355 360 365

Arg His Leu Ile Phe Cys His Ser Lys Lys Lys Cys Asp Glu Leu Ala
 370 375 380

Ala Lys Leu Val Ala Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly
 385 390 395 400

Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val Val Val Val Ser
 405 410 415

Thr Asp Ala Leu Met Thr Gly Phe Thr Gly Asp Phe Asp Ser Val Ile
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Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro
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 485 490 495

Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro
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Ala Glu Thr Thr Val Arg Leu Arg Ala Tyr Met Asn Thr Pro Gly Leu
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Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly Val Phe Thr Gly
 530 535 540

Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ser Gly
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Glu Asn Phe Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg
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Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp Lys Cys Leu Ile
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Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu
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Gly Ala Val Gln Asn Glu Val Thr Leu Thr His Pro Ile Thr Lys Tyr
 610 615 620

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

Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Gln Glu Phe Asp Glu Met
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Glu Glu Cys Ser Gln His Leu Pro Tyr Ile Glu Gln Gly Met Met Leu
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740 745 750

Gln Tyr Leu Ala Gly Leu Ser Thr Ser Pro Gly Ala Leu Val Val Gly
755 760 765

Val Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly
770 775 780

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

His Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg
805 810 815

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<400> 18

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 35 40 45
 Tyr Arg Gly Val Trp Arg Gly Asp Gly Ile Met His Thr Arg Cys His
 50 55 60
 Cys Gly Ala Glu Ile Thr Gly His Val Lys Asn Gly Thr Met Arg Ile
 65 70 75 80
 Val Gly Pro Arg Thr Cys Arg Asn Met Trp Ser Gly Thr Phe Pro Ile
 85 90 95
 Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro Leu Pro Ala Pro Asn Tyr
 100 105 110
 Lys Phe Ala Leu Trp Arg Val Ser Ala Glu Glu Tyr Val Glu Ile Arg
 115 120 125
 Arg Val Gly Asp Phe His Tyr Val Ser Gly Met Thr Thr Asp Asn Leu
 130 135 140

3923-12-pct.ST25.txt

Lys Cys Pro Cys Gln Ile Pro Ser Pro Glu Phe Phe Thr Glu Leu Asp
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Gly Val Arg Leu His Arg Phe Ala Pro Pro Cys Lys Pro Leu Leu Arg
 165 170 175

Glu Glu Val Ser Phe Arg Val Gly Leu His Glu Tyr Pro Val Gly Ser
 180 185 190

Gln Leu Pro Cys Glu Pro Glu Pro Asp Val Ala Val Leu Thr Ser Met
 195 200 205

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

Ala Arg Gly Ser Pro Pro Ser Met Ala Ser Ser Ser Ala Ser Gln Leu
 225 230 235 240

Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr Ala Asn His Asp Ser Pro
 245 250 255

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

Gly Asn Ile Thr Arg Val Glu Ser Glu Asn Lys Val Val Ile Leu Asp
 275 280 285

Ser Phe Asp Pro Leu Val Ala Glu Glu Asp Glu Arg Glu Val Ser Val
 290 295 300

Pro Ala Glu Ile Leu Arg Lys Ser Arg Arg Phe Ala Arg Ala Leu Pro
 305 310 315 320

Val Trp Ala Arg Pro Asp Tyr Asn Pro Pro Leu Val Glu Thr Trp Lys
 325 330 335

Lys Pro Asp Tyr Glu Pro Pro Val Val His Gly Cys Pro Leu Pro Pro
 340 345 350

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

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 435 440 445

Glu Asp Val Val Cys Cys Ser Met Ser Tyr Ser Trp Thr Gly Ala Leu
 450 455 460

Val Thr Pro Cys Ala Ala Glu Glu Gln Lys Leu Pro Ile Asn Ala Leu
 465 470 475 480

Ser Asn Ser Leu Leu Arg His His Asn Leu Val Tyr Ser Thr Thr Ser
 485 490 495

Arg Ser Ala Cys Gln Arg Gln Lys Lys Val Thr Phe Asp Arg Leu Gln
 500 505 510

Val Leu Asp Ser His Tyr Gln Asp Val Leu Lys Glu Val Lys Ala Ala
 515 520 525

Ala Ser Lys Val Lys Ala Asn Leu Leu Ser Val Glu Glu Ala Cys Ser
 530 535 540

Leu Thr Pro Pro His Ser Ala Lys Ser Lys Phe Gly Tyr Gly Ala Lys
 545 550 555 560

Asp Val Arg Cys His Ala Arg Lys Ala Val Ala His Ile Asn Ser Val
 565 570 575

Trp Lys Asp Leu Leu Glu Asp Ser Val Thr Pro Ile Asp Thr Thr Ile
 580 585 590

Met Ala Lys Asn Glu Val Phe Cys Val Gln Pro Glu Lys Gly Gly Arg
 595 600 605

Lys Pro Ala Arg Leu Ile Val Phe Pro Asp Leu Gly Val Arg Val Cys
 610 615 620

Glu Lys Met Ala Leu Tyr Asp Val Val Ser Lys Leu Pro Leu Ala Val
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 675 680 685

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 690 695 700

Val Ala Ile Lys Ser Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Leu
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Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr Arg Arg Cys Arg Ala Ser
 725 730 735

Gly Val Leu Thr Thr Ser Cys Gly Asn Thr Leu Thr Cys Tyr Ile Lys
 740 745 750

Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu Gln Asp Cys Thr Met Leu
 755 760 765

Val Cys Gly Asp Asp Leu Val Val Ile Cys Glu Ser Ala Gly Val Gln
 770 775 780

Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr Glu Ala Met Thr Arg Tyr
 785 790 795 800

Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro Glu Tyr Asp Leu Glu Leu
 805 810 815

Ile Thr Ser Cys Ser Ser Asn Val Ser Val Ala His Asp Gly Ala Gly
 820 825 830

Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro Thr Thr Pro Leu Ala Arg
 835 840 845

Ala Ala Trp Glu Thr Ala Arg His Thr Pro Val Asn Ser Trp Leu Gly
 850 855 860

Asn Ile Ile Met Phe Ala Pro Thr Leu Trp Ala Arg Met Ile Leu Met
 865 870 875 880

Thr His Phe Phe Ser Val Leu Ile Ala Arg Asp Gln Leu Glu Gln Ala
 885 890 895

Leu Asn Cys Glu Ile Tyr Gly Ala Cys Tyr Ser Ile Glu Pro Leu Asp
 900 905 910

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Leu Pro Pro Ile Ile Gln Arg Leu His Gly Leu Ser Ala Phe Ser Leu
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His Ser Tyr Ser Pro Gly Glu Ile Asn Arg Val Ala Ala Cys Leu Arg
 930 935 940

Lys Leu Gly Val Pro Pro Leu Arg Ala Trp Arg His Arg Ala Arg Ser
 945 950 955 960

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

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<211> 3011

<212> PRT

<213> Hepatitis C virus

<400> 20

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 35 40 45

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

Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly
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Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
 85 90 95

3923-12-pct.ST25.txt

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Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
 115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu
 130 135 140

Gly Gly Ala Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp
 145 150 155 160

Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
 165 170 175

Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr
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Gln Val Arg Asn Ser Ser Gly Leu Tyr His Val Thr Asn Asp Cys Pro
 195 200 205

Asn Ser Ser Ile Val Tyr Glu Ala Ala Asp Ala Ile Leu His Thr Pro
 210 215 220

Gly Cys Val Pro Cys Val Arg Glu Gly Asn Ala Ser Arg Cys Trp Val
 225 230 235 240

Ala Val Thr Pro Thr Val Ala Thr Arg Asp Gly Lys Leu Pro Thr Thr
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Gln Leu Arg Arg His Ile Asp Leu Leu Val Gly Ser Ala Thr Leu Cys
 260 265 270

Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Ser Val Phe Leu Val Gly
 275 280 285

Gln Leu Phe Thr Phe Ser Pro Arg Arg His Trp Thr Thr Gln Asp Cys
 290 295 300

Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met Ala Trp
 305 310 315 320

Asp Met Met Met Asn Trp Ser Pro Thr Ala Ala Leu Val Val Ala Gln
 325 330 335

Leu Leu Arg Ile Pro Gln Ala Ile Met Asp Met Ile Ala Gly Ala His
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3923-12-pct.ST25.txt

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Ala Lys Val Leu Val Val Leu Leu Leu Phe Ala Gly Val Asp Ala Glu
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Thr His Val Thr Gly Gly Asn Ala Gly Arg Thr Thr Ala Gly Leu Val
385 390 395 400

Gly Leu Leu Thr Pro Gly Ala Lys Gln Asn Ile Gln Leu Ile Asn Thr
405 410 415

Asn Gly Ser Trp His Ile Asn Ser Thr Ala Leu Asn Cys Asn Glu Ser
420 425 430

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

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

Thr Lys Val Cys Gly Ala Pro Pro Cys Val Ile Gly Gly Val Gly Asn
565 570 575

Asn Thr Leu Leu Cys Pro Thr Asp Cys Phe Arg Lys His Pro Glu Ala
580 585 590

Thr Tyr Ser Arg Cys Gly Ser Gly Pro Trp Ile Thr Pro Arg Cys Met
595 600 605

3923-12-pct.ST25.txt

Val Asp Tyr Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Ile Asn Tyr
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Thr Ile Phe Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg Leu
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Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp
645 650 655

Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Gln Trp
660 665 670

Gln Val Leu Pro Cys Ser Phe Thr Thr Leu Pro Ala Leu Ser Thr Gly
675 680 685

Leu Ile His Leu His Gln Asn Ile Val Asp Val Gln Tyr Leu Tyr Gly
690 695 700

Val Gly Ser Ser Ile Ala Ser Trp Ala Ile Lys Trp Glu Tyr Val Val
705 710 715 720

Leu Leu Phe Leu Leu Leu Ala Asp Ala Arg Val Cys Ser Cys Leu Trp
725 730 735

Met Met Leu Leu Ile Ser Gln Ala Glu Ala Ala Leu Glu Asn Leu Val
740 745 750

Ile Leu Asn Ala Ala Ser Leu Ala Gly Thr His Gly Leu Val Ser Phe
755 760 765

Leu Val Phe Phe Cys Phe Ala Trp Tyr Leu Lys Gly Arg Trp Val Pro
770 775 780

Gly Ala Ala Tyr Ala Phe Tyr Gly Met Trp Pro Leu Leu Leu Leu Leu
785 790 795 800

Leu Ala Leu Pro Gln Arg Ala Tyr Ala Leu Asp Thr Glu Val Ala Ala
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Ser Cys Gly Gly Val Val Leu Val Gly Leu Met Ala Leu Thr Leu Ser
820 825 830

Pro Tyr Tyr Lys Arg Tyr Ile Ser Trp Cys Met Trp Trp Leu Gln Tyr
835 840 845

Phe Leu Thr Arg Val Glu Ala Gln Leu His Val Trp Val Pro Pro Leu
850 855 860

3923-12-pct.ST25.txt

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

Gly Pro Leu Trp Ile Leu Gln Ala Ser Leu Leu Lys Val Pro Tyr Phe
900 905 910

Val Arg Val Gln Gly Leu Leu Arg Ile Cys Ala Leu Ala Arg Lys Ile
915 920 925

Ala Gly Gly His Tyr Val Gln Met Ala Ile Ile Lys Leu Gly Ala Leu
930 935 940

Thr Gly Thr Tyr Val Tyr Asn His Leu Thr Pro Leu Arg Asp Trp Ala
945 950 955 960

His Asn Gly Leu Arg Asp Leu Ala Val Ala Val Glu Pro Val Val Phe
965 970 975

Ser Arg Met Glu Thr Lys Leu Ile Thr Trp Gly Ala Asp Thr Ala Ala
980 985 990

Cys Gly Asp Ile Ile Asn Gly Leu Pro Val Ser Ala Arg Arg Gly Gln
995 1000 1005

Glu Ile Leu Leu Gly Pro Ala Asp Gly Met Val Ser Lys Gly Trp
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Arg Leu Gln Ala Pro Ile Thr Ala Tyr Thr Gln Gln Thr Arg Gly
1025 1030 1035

Leu Leu Gly Cys Ile Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn
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Phe Leu Ala Thr Cys Ile Asn Gly Val Cys Trp Thr Val Tyr His
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Gln Met Tyr Thr Asn Val Asp Gln Asp Leu Val Gly Trp Pro Ala
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3923-12-pct.ST25.txt

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Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys Pro Ala
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Gly His Ala Val Gly Leu Phe Arg Ala Ala Val Cys Thr Arg Gly
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Val Ala Lys Ala Val Asp Phe Ile Pro Val Glu Asn Leu Gly Thr
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Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala
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Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly
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Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly
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Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly
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Phe Gly Ala Tyr Met Ser Lys Ala His Gly Val Asp Pro Asn Ile
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Arg Thr Gly Val Arg Thr Ile Thr Thr Gly Ser Pro Ile Thr Tyr
1280 1285 1290

Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly
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Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ala
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Thr Ser Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala Glu Thr
1325 1330 1335

Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro Gly
1340 1345 1350

3923-12-pct.ST25.txt

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3923-12-pct.ST25.txt

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Val Phe Trp Ala Lys His Met Trp Asn Phe Ile Ser Gly Ile Gln
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Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn Pro Ala Ile Ala
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Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro Leu Thr Thr
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Gln Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe Val Gly Ala Gly
 1820 1825 1830

3923-12-pct.ST25.txt

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Val Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu
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Val Ala Phe Lys Ile Met Ser Gly Glu Val Pro Ser Thr Glu Asp
 1865 1870 1875

Leu Val Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val
 1880 1885 1890

Val Gly Val Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro
 1895 1900 1905

Gly Glu Gly Ala Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala
 1910 1915 1920

Ser Arg Gly Asn His Val Ser Pro Thr His Tyr Val Pro Glu Ser
 1925 1930 1935

Asp Ala Ala Ala Arg Val Thr Ala Ile Leu Ser Ser Leu Thr Val
 1940 1945 1950

Thr Gln Leu Leu Arg Arg Leu His Gln Trp Ile Ser Ser Glu Cys
 1955 1960 1965

Thr Thr Pro Cys Ser Gly Ser Trp Leu Arg Asp Ile Trp Asp Trp
 1970 1975 1980

Ile Cys Glu Val Leu Ser Asp Phe Lys Thr Trp Leu Lys Ala Lys
 1985 1990 1995

Leu Met Pro Gln Leu Pro Gly Ile Pro Phe Val Ser Cys Gln Arg
 2000 2005 2010

Gly Tyr Arg Gly Val Trp Arg Gly Asp Gly Ile Met His Thr Arg
 2015 2020 2025

Cys His Cys Gly Ala Glu Ile Thr Gly His Val Lys Asn Gly Thr
 2030 2035 2040

Met Arg Ile Val Gly Pro Arg Thr Cys Arg Asn Met Trp Ser Gly
 2045 2050 2055

Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro Leu
 2060 2065 2070

3923-12-pct.ST25.txt

Pro Ala Pro Asn Tyr Lys Phe Ala Leu Trp Arg Val Ser Ala Glu
 2075 2080 2085

Glu Tyr Val Glu Ile Arg Arg Val Gly Asp Phe His Tyr Val Ser
 2090 2095 2100

Gly Met Thr Thr Asp Asn Leu Lys Cys Pro Cys Gln Ile Pro Ser
 2105 2110 2115

Pro Glu Phe Phe Thr Glu Leu Asp Gly Val Arg Leu His Arg Phe
 2120 2125 2130

Ala Pro Pro Cys Lys Pro Leu Leu Arg Glu Glu Val Ser Phe Arg
 2135 2140 2145

Val Gly Leu His Glu Tyr Pro Val Gly Ser Gln Leu Pro Cys Glu
 2150 2155 2160

Pro Glu Pro Asp Val Ala Val Leu Thr Ser Met Leu Thr Asp Pro
 2165 2170 2175

Ser His Ile Thr Ala Glu Ala Ala Gly Arg Arg Leu Ala Arg Gly
 2180 2185 2190

Ser Pro Pro Ser Met Ala Ser Ser Ser Ala Ser Gln Leu Ser Ala
 2195 2200 2205

Pro Ser Leu Lys Ala Thr Cys Thr Ala Asn His Asp Ser Pro Asp
 2210 2215 2220

Ala Glu Leu Ile Glu Ala Asn Leu Leu Trp Arg Gln Glu Met Gly
 2225 2230 2235

Gly Asn Ile Thr Arg Val Glu Ser Glu Asn Lys Val Val Ile Leu
 2240 2245 2250

Asp Ser Phe Asp Pro Leu Val Ala Glu Glu Asp Glu Arg Glu Val
 2255 2260 2265

Ser Val Pro Ala Glu Ile Leu Arg Lys Ser Arg Arg Phe Ala Arg
 2270 2275 2280

Ala Leu Pro Val Trp Ala Arg Pro Asp Tyr Asn Pro Pro Leu Val
 2285 2290 2295

Glu Thr Trp Lys Lys Pro Asp Tyr Glu Pro Pro Val Val His Gly
 2300 2305 2310

3923-12-pct.ST25.txt

Cys Pro Leu Pro Pro Pro Arg Ser Pro Pro Val Pro Pro Pro Arg
 2315 2320 2325

Lys Lys Arg Thr Val Val Leu Thr Glu Ser Thr Leu Ser Thr Ala
 2330 2335 2340

Leu Ala Glu Leu Ala Thr Lys Ser Phe Gly Ser Ser Ser Thr Ser
 2345 2350 2355

Gly Ile Thr Gly Asp Asn Thr Thr Thr Ser Ser Glu Pro Ala Pro
 2360 2365 2370

Ser Gly Cys Pro Pro Asp Ser Asp Val Glu Ser Tyr Ser Ser Met
 2375 2380 2385

Pro Pro Leu Glu Gly Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly
 2390 2395 2400

Ser Trp Ser Thr Val Ser Ser Gly Ala Asp Thr Glu Asp Val Val
 2405 2410 2415

Cys Cys Ser Met Ser Tyr Ser Trp Thr Gly Ala Leu Val Thr Pro
 2420 2425 2430

Cys Ala Ala Glu Glu Gln Lys Leu Pro Ile Asn Ala Leu Ser Asn
 2435 2440 2445

Ser Leu Leu Arg His His Asn Leu Val Tyr Ser Thr Thr Ser Arg
 2450 2455 2460

Ser Ala Cys Gln Arg Gln Lys Lys Val Thr Phe Asp Arg Leu Gln
 2465 2470 2475

Val Leu Asp Ser His Tyr Gln Asp Val Leu Lys Glu Val Lys Ala
 2480 2485 2490

Ala Ala Ser Lys Val Lys Ala Asn Leu Leu Ser Val Glu Glu Ala
 2495 2500 2505

Cys Ser Leu Thr Pro Pro His Ser Ala Lys Ser Lys Phe Gly Tyr
 2510 2515 2520

Gly Ala Lys Asp Val Arg Cys His Ala Arg Lys Ala Val Ala His
 2525 2530 2535

Ile Asn Ser Val Trp Lys Asp Leu Leu Glu Asp Ser Val Thr Pro
 2540 2545 2550

3923-12-pct.ST25.txt

Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln
 2555 2560 2565

Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro
 2570 2575 2580

Asp Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val
 2585 2590 2595

Val Ser Lys Leu Pro Leu Ala Val Met Gly Ser Ser Tyr Gly Phe
 2600 2605 2610

Gln Tyr Ser Pro Gly Gln Arg Val Glu Phe Leu Val Gln Ala Trp
 2615 2620 2625

Lys Ser Lys Lys Thr Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys
 2630 2635 2640

Phe Asp Ser Thr Val Thr Glu Ser Asp Ile Arg Thr Glu Glu Ala
 2645 2650 2655

Ile Tyr Gln Cys Cys Asp Leu Asp Pro Gln Ala Arg Val Ala Ile
 2660 2665 2670

Lys Ser Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn
 2675 2680 2685

Ser Arg Gly Glu Asn Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly
 2690 2695 2700

Val Leu Thr Thr Ser Cys Gly Asn Thr Leu Thr Cys Tyr Ile Lys
 2705 2710 2715

Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu Gln Asp Cys Thr Met
 2720 2725 2730

Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys Glu Ser Ala Gly
 2735 2740 2745

Val Gln Glu Asp Ala Ala Asn Leu Arg Ala Phe Thr Glu Ala Met
 2750 2755 2760

Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro Glu Tyr
 2765 2770 2775

Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val Ala
 2780 2785 2790

3923-12-pct.ST25.txt

His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro
 2795 2800 2805

Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr
 2810 2815 2820

Pro Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe Ala Pro Thr
 2825 2830 2835

Leu Trp Ala Arg Met Ile Leu Met Thr His Phe Phe Ser Val Leu
 2840 2845 2850

Ile Ala Arg Asp Gln Leu Glu Gln Ala Leu Asn Cys Glu Ile Tyr
 2855 2860 2865

Gly Ala Cys Tyr Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile
 2870 2875 2880

Gln Arg Leu His Gly Leu Ser Ala Phe Ser Leu His Ser Tyr Ser
 2885 2890 2895

Pro Gly Glu Ile Asn Arg Val Ala Ala Cys Leu Arg Lys Leu Gly
 2900 2905 2910

Val Pro Pro Leu Arg Ala Trp Arg His Arg Ala Arg Ser Val Arg
 2915 2920 2925

Ala Arg Leu Leu Ser Arg Gly Gly Arg Ala Ala Ile Cys Gly Lys
 2930 2935 2940

Tyr Leu Phe Asn Trp Ala Val Arg Thr Lys Leu Lys Leu Thr Pro
 2945 2950 2955

Ile Thr Ala Ala Gly Arg Leu Asp Leu Ser Gly Trp Phe Thr Ala
 2960 2965 2970

Gly Tyr Ser Gly Gly Asp Ile Tyr His Ser Val Ser His Ala Arg
 2975 2980 2985

Pro Arg Trp Phe Trp Phe Cys Leu Leu Leu Leu Ala Ala Gly Val
 2990 2995 3000

Gly Ile Tyr Leu Leu Pro Asn Arg
 3005 3010

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3923-12-pct.ST25.txt

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7