

SEQUENCE LISTING

<110> SciRhom GmbH

<120> SD 44419

<130> Protein binders for iRhom2

<160> 46

<170> PatentIn version 3.5

<210> 1

<211> 18

<212> PRT

<213> artificial sequence

<220>

<223> immunization peptide

<400> 1

Ala	Gln	His	Val	Thr	Thr	Gln	Leu	Val	Leu	Arg	Asn	Lys	Gly	Val	Tyr
1				5					10					15	

Glu Cys

<210> 2

<211> 23

<212> PRT

<213> artificial sequence

<220>

<223> immunization peptide

<400> 2

Ala	Pro	Val	Gly	Phe	Ala	Gln	His	Val	Thr	Thr	Gln	Leu	Val	Leu	Arg
1				5					10					15	

Asn	Lys	Gly	Val	Tyr	Glu	Cys
						20

<210> 3

<211> 30

<212> PRT

<213> artificial sequence

<220>

<223> immunization peptide

<400> 3

Ala Gln His Val Thr Thr Gln Leu Val Leu Arg Asn Lys Gly Val Tyr
1 5 10 15

Glu Ser Val Lys Tyr Ile Gln Gln Glu Asn Phe Trp Val Cys
20 25 30

<210> 4

<211> 35

<212> PRT

<213> artificial sequence

<220>

<223> immunization peptide

<400> 4

Ala Pro Val Gly Phe Ala Gln His Val Thr Thr Gln Leu Val Leu Arg
1 5 10 15

Asn Lys Gly Val Tyr Glu Ser Val Lys Tyr Ile Gln Gln Glu Asn Phe
20 25 30

Trp Val Cys
35

<210> 5

<211> 26

<212> PRT

<213> artificial sequence

<220>

<223> immunization peptide

<220>

<221> Xaa

<222> (4)..(4)

<223> Xaa = aminobutyrate

<400> 5

Cys Ser Pro Xaa Ile Arg Lys Asp Gly Gln Ile Glu Gln Leu Val Leu
1 5 10 15

Arg Glu Arg Asp Leu Glu Arg Asp Ser Gly
20 25

<210> 6
<211> 41
<212> PRT
<213> artificial sequence

<220>
<223> immunization peptide

<220>
<221> Xaa
<222> (9)..(9)
<223> Xaa = aminobutyrate

<400> 6

Cys Ile Gln Thr Gln Arg Lys Asp Xaa Ser Glu Thr Leu Ala Thr Phe
1 5 10 15

Val Lys Trp Gln Asp Asp Thr Gly Pro Pro Met Asp Lys Ser Asp Leu
20 25 30

Gly Gln Lys Arg Thr Ser Gly Ala Val
35 40

<210> 7
<211> 23
<212> PRT
<213> artificial sequence

<220>
<223> immunization peptide

<220>
<221> Xaa
<222> (16)..(16)
<223> Xaa = aminobutyrate

<400> 7

Thr Glu Gln Ala Arg Ser Asn His Thr Gly Phe Leu His Met Asp Xaa
1 5 10 15

Glu Ile Lys Gly Arg Pro Cys
20

<210> 8
<211> 17
<212> PRT
<213> artificial sequence

<220>
<223> immunization peptide

<220>
<221> Xaa
<222> (15)..(15)
<223> Xaa = aminobutyrate

<400> 8

Tyr Ile Tyr Pro Ile Asn Trp Pro Trp Ile Glu His Leu Thr Xaa Phe
1 5 10 15

Cys

<210> 9
<211> 22
<212> PRT
<213> artificial sequence

<220>
<223> immunization peptide

<220>
<221> Xaa
<222> (20)..(20)
<223> Xaa = aminobutyrate

<400> 9

Leu Val Leu Trp Leu Tyr Ile Tyr Pro Ile Asn Trp Pro Trp Ile Glu
1 5 10 15

His Leu Thr Xaa Phe Cys
20

<210> 10
<211> 34
<212> PRT
<213> artificial sequence

<220>

<223> immunization peptide

<400> 10

Tyr Ile Tyr Pro Ile Asn Trp Pro Trp Ile Glu His Leu Thr Cys Phe
1 5 10 15

Pro Phe Thr Ser Arg Phe Cys Glu Lys Tyr Glu Leu Asp Gln Val Leu
20 25 30

His Cys

<210> 11

<211> 39

<212> PRT

<213> artificial sequence

<220>

<223> immunization peptide

<400> 11

Leu Val Leu Trp Leu Tyr Ile Tyr Pro Ile Asn Trp Pro Trp Ile Glu
1 5 10 15

His Leu Thr Cys Phe Pro Phe Thr Ser Arg Phe Cys Glu Lys Tyr Glu
20 25 30

Leu Asp Gln Val Leu His Cys
35

<210> 12

<211> 18

<212> PRT

<213> artificial sequence

<220>

<223> immunization peptide

<400> 12

Ser Gln His Glu Thr Val Asp Ser Val Leu Arg Asn Arg Gly Val Tyr
1 5 10 15

Glu Cys

<210> 13
<211> 23
<212> PRT
<213> artificial sequence

<220>
<223> immunization peptide

<400> 13

Ala Pro Val Gly Phe Ser Gln His Glu Thr Val Asp Ser Val Leu Arg
1 5 10 15

Asn Arg Gly Val Tyr Glu Cys
20

<210> 14
<211> 30
<212> PRT
<213> artificial sequence

<220>
<223> immunization peptide

<400> 14

Ser Gln His Glu Thr Val Asp Ser Val Leu Arg Asn Arg Gly Val Tyr
1 5 10 15

Glu Asn Val Lys Tyr Val Gln Gln Glu Asn Phe Trp Ile Cys
20 25 30

<210> 15
<211> 35
<212> PRT
<213> artificial sequence

<220>
<223> immunization peptide

<400> 15

Ala Pro Val Gly Phe Ser Gln His Glu Thr Val Asp Ser Val Leu Arg
1 5 10 15

Asn Arg Gly Val Tyr Glu Asn Val Lys Tyr Val Gln Gln Glu Asn Phe
20 25 30

Trp Ile Cys
35

<210> 16
<211> 856
<212> PRT
<213> Homo sapiens

<400> 16

Met Ala Ser Ala Asp Lys Asn Gly Gly Ser Val Ser Ser Val Ser Ser
1 5 10 15

Ser Arg Leu Gln Ser Arg Lys Pro Pro Asn Leu Ser Ile Thr Ile Pro
20 25 30

Pro Pro Glu Lys Glu Thr Gln Ala Pro Gly Glu Gln Asp Ser Met Leu
35 40 45

Pro Glu Gly Phe Gln Asn Arg Arg Leu Lys Lys Ser Gln Pro Arg Thr
50 55 60

Trp Ala Ala His Thr Thr Ala Cys Pro Pro Ser Phe Leu Pro Lys Arg
65 70 75 80

Lys Asn Pro Ala Tyr Leu Lys Ser Val Ser Leu Gln Glu Pro Arg Ser
85 90 95

Arg Trp Gln Glu Ser Ser Glu Lys Arg Pro Gly Phe Arg Arg Gln Ala
100 105 110

Ser Leu Ser Gln Ser Ile Arg Lys Gly Ala Ala Gln Trp Phe Gly Val
115 120 125

Ser Gly Asp Trp Glu Gly Gln Arg Gln Gln Trp Gln Arg Arg Ser Leu
130 135 140

His His Cys Ser Met Arg Tyr Gly Arg Leu Lys Ala Ser Cys Gln Arg
145 150 155 160

Asp Leu Glu Leu Pro Ser Gln Glu Ala Pro Ser Phe Gln Gly Thr Glu
165 170 175

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

Gly Arg Ala Phe Arg His Pro Glu Glu Met Asp Arg Pro His Ala Pro
195 200 205

His Pro Pro Leu Thr Pro Gly Val Leu Ser Leu Thr Ser Phe Thr Ser
210 215 220

Val Arg Ser Gly Tyr Ser His Leu Pro Arg Arg Lys Arg Met Ser Val
225 230 235 240

Ala His Met Ser Leu Gln Ala Ala Ala Leu Leu Lys Gly Arg Ser
245 250 255

Val Leu Asp Ala Thr Gly Gln Arg Cys Arg Val Val Lys Arg Ser Phe
260 265 270

Ala Phe Pro Ser Phe Leu Glu Glu Asp Val Val Asp Gly Ala Asp Thr
275 280 285

Phe Asp Ser Ser Phe Phe Ser Lys Glu Glu Met Ser Ser Met Pro Asp
290 295 300

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

Pro His Ser Ala Ser Pro Val Ser Pro Asp Gly Val Gln Ile Pro Leu
325 330 335

Lys Glu Tyr Gly Arg Ala Pro Val Pro Gly Pro Arg Arg Gly Lys Arg
340 345 350

Ile Ala Ser Lys Val Lys His Phe Ala Phe Asp Arg Lys Lys Arg His
355 360 365

Tyr Gly Leu Gly Val Val Gly Asn Trp Leu Asn Arg Ser Tyr Arg Arg

370

375

380

Ser Ile Ser Ser Thr Val Gln Arg Gln Leu Glu Ser Phe Asp Ser His
 385 390 395 400

Arg Pro Tyr Phe Thr Tyr Trp Leu Thr Phe Val His Val Ile Ile Thr
 405 410 415

Leu Leu Val Ile Cys Thr Tyr Gly Ile Ala Pro Val Gly Phe Ala Gln
 420 425 430

His Val Thr Thr Gln Leu Val Leu Arg Asn Lys Gly Val Tyr Glu Ser
 435 440 445

Val Lys Tyr Ile Gln Gln Glu Asn Phe Trp Val Gly Pro Ser Ser Ile
 450 455 460

Asp Leu Ile His Leu Gly Ala Lys Phe Ser Pro Cys Ile Arg Lys Asp
 465 470 475 480

Gly Gln Ile Glu Gln Leu Val Leu Arg Glu Arg Asp Leu Glu Arg Asp
 485 490 495

Ser Gly Cys Cys Val Gln Asn Asp His Ser Gly Cys Ile Gln Thr Gln
 500 505 510

Arg Lys Asp Cys Ser Glu Thr Leu Ala Thr Phe Val Lys Trp Gln Asp
 515 520 525

Asp Thr Gly Pro Pro Met Asp Lys Ser Asp Leu Gly Gln Lys Arg Thr
 530 535 540

Ser Gly Ala Val Cys His Gln Asp Pro Arg Thr Cys Glu Glu Pro Ala
 545 550 555 560

Ser Ser Gly Ala His Ile Trp Pro Asp Asp Ile Thr Lys Trp Pro Ile
 565 570 575

Cys Thr Glu Gln Ala Arg Ser Asn His Thr Gly Phe Leu His Met Asp
 580 585 590

Cys Glu Ile Lys Gly Arg Pro Cys Cys Ile Gly Thr Lys Gly Ser Cys
595 600 605

Glu Ile Thr Thr Arg Glu Tyr Cys Glu Phe Met His Gly Tyr Phe His
610 615 620

Glu Glu Ala Thr Leu Cys Ser Gln Val His Cys Leu Asp Lys Val Cys
625 630 635 640

Gly Leu Leu Pro Phe Leu Asn Pro Glu Val Pro Asp Gln Phe Tyr Arg
645 650 655

Leu Trp Leu Ser Leu Phe Leu His Ala Gly Val Val His Cys Leu Val
660 665 670

Ser Val Val Phe Gln Met Thr Ile Leu Arg Asp Leu Glu Lys Leu Ala
675 680 685

Gly Trp His Arg Ile Ala Ile Ile Phe Ile Leu Ser Gly Ile Thr Gly
690 695 700

Asn Leu Ala Ser Ala Ile Phe Leu Pro Tyr Arg Ala Glu Val Gly Pro
705 710 715 720

Ala Gly Ser Gln Phe Gly Leu Leu Ala Cys Leu Phe Val Glu Leu Phe
725 730 735

Gln Ser Trp Pro Leu Leu Glu Arg Pro Trp Lys Ala Phe Leu Asn Leu
740 745 750

Ser Ala Ile Val Leu Phe Leu Phe Ile Cys Gly Leu Leu Pro Trp Ile
755 760 765

Asp Asn Ile Ala His Ile Phe Gly Phe Leu Ser Gly Leu Leu Leu Ala
770 775 780

Phe Ala Phe Leu Pro Tyr Ile Thr Phe Gly Thr Ser Asp Lys Tyr Arg
785 790 795 800

Lys Arg Ala Leu Ile Leu Val Ser Leu Leu Ala Phe Ala Gly Leu Phe

805

810

815

Ala Ala Leu Val Leu Trp Leu Tyr Ile Tyr Pro Ile Asn Trp Pro Trp
 820 825 830

Ile Glu His Leu Thr Cys Phe Pro Phe Thr Ser Arg Phe Cys Glu Lys
 835 840 845

Tyr Glu Leu Asp Gln Val Leu His
 850 855

<210> 17

<211> 855

<212> PRT

<213> Homo sapiens

<400> 17

Met Ser Glu Ala Arg Arg Asp Ser Thr Ser Ser Leu Gln Arg Lys Lys
 1 5 10 15

Pro Pro Trp Leu Lys Leu Asp Ile Pro Ser Ala Val Pro Leu Thr Ala
 20 25 30

Glu Glu Pro Ser Phe Leu Gln Pro Leu Arg Arg Gln Ala Phe Leu Arg
 35 40 45

Ser Val Ser Met Pro Ala Glu Thr Ala His Ile Ser Ser Pro His His
 50 55 60

Glu Leu Arg Arg Pro Val Leu Gln Arg Gln Thr Ser Ile Thr Gln Thr
 65 70 75 80

Ile Arg Arg Gly Thr Ala Asp Trp Phe Gly Val Ser Lys Asp Ser Asp
 85 90 95

Ser Thr Gln Lys Trp Gln Arg Lys Ser Ile Arg His Cys Ser Gln Arg
 100 105 110

Tyr Gly Lys Leu Lys Pro Gln Val Leu Arg Glu Leu Asp Leu Pro Ser
 115 120 125

Gln Asp Asn Val Ser Leu Thr Ser Thr Glu Thr Pro Pro Pro Leu Tyr
130 135 140

Val Gly Pro Cys Gln Leu Gly Met Gln Lys Ile Ile Asp Pro Leu Ala
145 150 155 160

Arg Gly Arg Ala Phe Arg Val Ala Asp Asp Thr Ala Glu Gly Leu Ser
165 170 175

Ala Pro His Thr Pro Val Thr Pro Gly Ala Ala Ser Leu Cys Ser Phe
180 185 190

Ser Ser Ser Arg Ser Gly Phe His Arg Leu Pro Arg Arg Arg Lys Arg
195 200 205

Glu Ser Val Ala Lys Met Ser Phe Arg Ala Ala Ala Ala Leu Met Lys
210 215 220

Gly Arg Ser Val Arg Asp Gly Thr Phe Arg Arg Ala Gln Arg Arg Ser
225 230 235 240

Phe Thr Pro Ala Ser Phe Leu Glu Glu Asp Thr Thr Asp Phe Pro Asp
245 250 255

Glu Leu Asp Thr Ser Phe Phe Ala Arg Glu Gly Ile Leu His Glu Glu
260 265 270

Leu Ser Thr Tyr Pro Asp Glu Val Phe Glu Ser Pro Ser Glu Ala Ala
275 280 285

Leu Lys Asp Trp Glu Lys Ala Pro Glu Gln Ala Asp Leu Thr Gly Gly
290 295 300

Ala Leu Asp Arg Ser Glu Leu Glu Arg Ser His Leu Met Leu Pro Leu
305 310 315 320

Glu Arg Gly Trp Arg Lys Gln Lys Glu Gly Ala Ala Ala Pro Gln Pro
325 330 335

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

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

Arg Pro Tyr Gly Leu Gly Met Val Gly Arg Leu Thr Asn Arg Thr Tyr
370 375 380

Arg Lys Arg Ile Asp Ser Phe Val Lys Arg Gln Ile Glu Asp Met Asp
385 390 395 400

Asp His Arg Pro Phe Phe Thr Tyr Trp Leu Thr Phe Val His Ser Leu
405 410 415

Val Thr Ile Leu Ala Val Cys Ile Tyr Gly Ile Ala Pro Val Gly Phe
420 425 430

Ser Gln His Glu Thr Val Asp Ser Val Leu Arg Asn Arg Gly Val Tyr
435 440 445

Glu Asn Val Lys Tyr Val Gln Gln Glu Asn Phe Trp Ile Gly Pro Ser
450 455 460

Ser Glu Ala Leu Ile His Leu Gly Ala Lys Phe Ser Pro Cys Met Arg
465 470 475 480

Gln Asp Pro Gln Val His Ser Phe Ile Arg Ser Ala Arg Glu Arg Glu
485 490 495

Lys His Ser Ala Cys Cys Val Arg Asn Asp Arg Ser Gly Cys Val Gln
500 505 510

Thr Ser Glu Glu Glu Cys Ser Ser Thr Leu Ala Val Trp Val Lys Trp
515 520 525

Pro Ile His Pro Ser Ala Pro Glu Leu Ala Gly His Lys Arg Gln Phe
530 535 540

Gly Ser Val Cys His Gln Asp Pro Arg Val Cys Asp Glu Pro Ser Ser
545 550 555 560

Glu Asp Pro His Glu Trp Pro Glu Asp Ile Thr Lys Trp Pro Ile Cys
565 570 575

Thr Lys Asn Ser Ala Gly Asn His Thr Asn His Pro His Met Asp Cys
580 585 590

Val Ile Thr Gly Arg Pro Cys Cys Ile Gly Thr Lys Gly Arg Cys Glu
595 600 605

Ile Thr Ser Arg Glu Tyr Cys Asp Phe Met Arg Gly Tyr Phe His Glu
610 615 620

Glu Ala Thr Leu Cys Ser Gln Val His Cys Met Asp Asp Val Cys Gly
625 630 635 640

Leu Leu Pro Phe Leu Asn Pro Glu Val Pro Asp Gln Phe Tyr Arg Leu
645 650 655

Trp Leu Ser Leu Phe Leu His Ala Gly Ile Leu His Cys Leu Val Ser
660 665 670

Ile Cys Phe Gln Met Thr Val Leu Arg Asp Leu Glu Lys Leu Ala Gly
675 680 685

Trp His Arg Ile Ala Ile Ile Tyr Leu Leu Ser Gly Val Thr Gly Asn
690 695 700

Leu Ala Ser Ala Ile Phe Leu Pro Tyr Arg Ala Glu Val Gly Pro Ala
705 710 715 720

Gly Ser Gln Phe Gly Ile Leu Ala Cys Leu Phe Val Glu Leu Phe Gln
725 730 735

Ser Trp Gln Ile Leu Ala Arg Pro Trp Arg Ala Phe Phe Lys Leu Leu
740 745 750

Ala Val Val Leu Phe Leu Phe Thr Phe Gly Leu Leu Pro Trp Ile Asp
755 760 765

Asn Phe Ala His Ile Ser Gly Phe Ile Ser Gly Leu Phe Leu Ser Phe
770 775 780

Ala Phe Leu Pro Tyr Ile Ser Phe Gly Lys Phe Asp Leu Tyr Arg Lys
785 790 795 800

Arg Cys Gln Ile Ile Ile Phe Gln Val Val Phe Leu Gly Leu Leu Ala
805 810 815

Gly Leu Val Val Leu Phe Tyr Val Tyr Pro Val Arg Cys Glu Trp Cys
820 825 830

Glu Phe Leu Thr Cys Ile Pro Phe Thr Asp Lys Phe Cys Glu Lys Tyr
835 840 845

Glu Leu Asp Ala Gln Leu His
850 855

<210> 18
<211> 17
<212> PRT
<213> Homo sapiens

<400> 18

Ala Gln His Val Thr Thr Gln Leu Val Leu Arg Asn Lys Gly Val Tyr
1 5 10 15

Glu

<210> 19
<211> 22
<212> PRT
<213> Homo sapiens

<400> 19

Ala Pro Val Gly Phe Ala Gln His Val Thr Thr Gln Leu Val Leu Arg
1 5 10 15

Asn Lys Gly Val Tyr Glu
20

<210> 20
<211> 29

<212> PRT
<213> Homo sapiens

<400> 20

Ala Gln His Val Thr Thr Gln Leu Val Leu Arg Asn Lys Gly Val Tyr
1 5 10 15

Glu Ser Val Lys Tyr Ile Gln Gln Glu Asn Phe Trp Val
20 25

<210> 21
<211> 34
<212> PRT
<213> Homo sapiens

<400> 21

Ala Pro Val Gly Phe Ala Gln His Val Thr Thr Gln Leu Val Leu Arg
1 5 10 15

Asn Lys Gly Val Tyr Glu Ser Val Lys Tyr Ile Gln Gln Glu Asn Phe
20 25 30

Trp Val

<210> 22
<211> 25
<212> PRT
<213> Homo sapiens

<400> 22

Ser Pro Cys Ile Arg Lys Asp Gly Gln Ile Glu Gln Leu Val Leu Arg
1 5 10 15

Glu Arg Asp Leu Glu Arg Asp Ser Gly
20 25

<210> 23
<211> 41
<212> PRT
<213> Homo sapiens

<400> 23

Cys Ile Gln Thr Gln Arg Lys Asp Cys Ser Glu Thr Leu Ala Thr Phe
1 5 10 15

Val Lys Trp Gln Asp Asp Thr Gly Pro Pro Met Asp Lys Ser Asp Leu
20 25 30

Gly Gln Lys Arg Thr Ser Gly Ala Val
35 40

<210> 24
<211> 23
<212> PRT
<213> Homo sapiens

<400> 24

Thr Glu Gln Ala Arg Ser Asn His Thr Gly Phe Leu His Met Asp Cys
1 5 10 15

Glu Ile Lys Gly Arg Pro Cys
20

<210> 25
<211> 16
<212> PRT
<213> Homo sapiens

<400> 25

Tyr Ile Tyr Pro Ile Asn Trp Pro Trp Ile Glu His Leu Thr Cys Phe
1 5 10 15

<210> 26
<211> 21
<212> PRT
<213> Homo sapiens

<400> 26

Leu Val Leu Trp Leu Tyr Ile Tyr Pro Ile Asn Trp Pro Trp Ile Glu
1 5 10 15

His Leu Thr Cys Phe
20

<210> 27

<211> 33
<212> PRT
<213> Homo sapiens

<400> 27

Tyr Ile Tyr Pro Ile Asn Trp Pro Trp Ile Glu His Leu Thr Cys Phe
1 5 10 15

Pro Phe Thr Ser Arg Phe Cys Glu Lys Tyr Glu Leu Asp Gln Val Leu
20 25 30

His

<210> 28
<211> 38
<212> PRT
<213> Homo sapiens

<400> 28

Leu Val Leu Trp Leu Tyr Ile Tyr Pro Ile Asn Trp Pro Trp Ile Glu
1 5 10 15

His Leu Thr Cys Phe Pro Phe Thr Ser Arg Phe Cys Glu Lys Tyr Glu
20 25 30

Leu Asp Gln Val Leu His
35

<210> 29
<211> 17
<212> PRT
<213> Homo sapiens

<400> 29

Ser Gln His Glu Thr Val Asp Ser Val Leu Arg Asn Arg Gly Val Tyr
1 5 10 15

Glu

<210> 30
<211> 22

<212> PRT
<213> Homo sapiens

<400> 30

Ala Pro Val Gly Phe Ser Gln His Glu Thr Val Asp Ser Val Leu Arg
1 5 10 15

Asn Arg Gly Val Tyr Glu
20

<210> 31
<211> 29
<212> PRT
<213> Homo sapiens

<400> 31

Ser Gln His Glu Thr Val Asp Ser Val Leu Arg Asn Arg Gly Val Tyr
1 5 10 15

Glu Asn Val Lys Tyr Val Gln Gln Glu Asn Phe Trp Ile
20 25

<210> 32
<211> 34
<212> PRT
<213> Homo sapiens

<400> 32

Ala Pro Val Gly Phe Ser Gln His Glu Thr Val Asp Ser Val Leu Arg
1 5 10 15

Asn Arg Gly Val Tyr Glu Asn Val Lys Tyr Val Gln Gln Glu Asn Phe
20 25 30

Trp Ile

<210> 33
<211> 117
<212> PRT
<213> artificial sequence

<220>
<223> antibody sequence

<400> 33

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Tyr Met Asn Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ser Tyr Asn Gln Lys Phe
50 55 60

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

Met Glu Phe Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Arg Gly Tyr Tyr Gly Val Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser
115

<210> 34

<211> 5

<212> PRT

<213> artificial sequence

<220>

<223> antibody sequence

<400> 34

Asp Tyr Tyr Met Asn
1 5

<210> 35

<211> 17

<212> PRT

<213> artificial sequence

<220>

<223> antibody sequence

<400> 35

Asp Ile Asn Pro Asn Asn Gly Gly Thr Ser Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

<210> 36

<211> 8

<212> PRT

<213> artificial sequence

<220>

<223> antibody sequence

<400> 36

Arg Gly Tyr Tyr Gly Val Asp Tyr
1 5

<210> 37

<211> 9

<212> PRT

<213> artificial sequence

<220>

<223> antibody sequence

<400> 37

Tyr Thr Phe Thr Asp Tyr Tyr Met Asn
1 5

<210> 38

<211> 14

<212> PRT

<213> artificial sequence

<220>

<223> antibody sequence

<400> 38

Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ser Tyr
1 5 10

<210> 39
<211> 9
<212> PRT
<213> artificial sequence

<220>
<223> antibody sequence

<400> 39

Arg Arg Gly Tyr Tyr Gly Val Asp Tyr
1 5

<210> 40
<211> 107
<212> PRT
<213> artificial sequence

<220>
<223> antibody sequence

<400> 40

Asn Ile Val Met Thr Gln Ser Pro Lys Ser Met Ser Met Ser Val Gly
1 5 10 15

Glu Arg Val Thr Leu Asn Cys Lys Ala Ser Glu Asn Val Gly Thr Tyr
20 25 30

Val Ser Trp Tyr Gln Gln Lys Pro Glu Gln Ser Pro Lys Leu Leu Ile
35 40 45

Phe Gly Ala Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg Phe Ile Gly
50 55 60

Ser Gly Phe Ala Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala
65 70 75 80

Glu Asp Leu Ala Asp Tyr His Cys Gly Gln Ser Tyr Ser Tyr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 41

<211> 11
<212> PRT
<213> artificial sequence

<220>
<223> antibody sequence

<400> 41

Lys Ala Ser Glu Asn Val Gly Thr Tyr Val Ser
1 5 10

<210> 42
<211> 7
<212> PRT
<213> artificial sequence

<220>
<223> antibody sequence

<400> 42

Gly Ala Ser Asn Arg Tyr Thr
1 5

<210> 43
<211> 9
<212> PRT
<213> artificial sequence

<220>
<223> antibody sequence

<400> 43

Gly Gln Ser Tyr Ser Tyr Pro Tyr Thr
1 5

<210> 44
<211> 8
<212> PRT
<213> artificial sequence

<220>
<223> antibody sequence

<400> 44

Glu Asn Val Gly Thr Tyr Val Ser
1 5

<210> 45
<211> 11
<212> PRT
<213> artificial sequence

<220>
<223> antibody sequence

<400> 45

Leu Leu Ile Phe Gly Ala Ser Asn Arg Tyr Thr
1 5 10

<210> 46
<211> 8
<212> PRT
<213> artificial sequence

<220>
<223> antibody sequence

<400> 46

Gly Gln Ser Tyr Ser Tyr Pro Tyr
1 5