

COMP-003\_ST25.txt  
SEQUENCE LISTING

<110> COMPLIX, NV  
<120> ALPHABODIES SPECIFICALLY BINDING TO VIRAL PROTEINS AND METHODS FOR PRODUCING THE SAME  
<130> COMP-003-PCT  
<160> 29  
<170> PatentIn version 3.5  
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<211> 117  
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<220>  
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<222> (91)..(115)

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<222> (116)..(117)

<400> 1

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Ala Ala Ile Gln Lys Gln  
1 5 10 15

Ile Ala Ala Ile Gln Lys Gln Ile Tyr Arg Met Thr Gly Gly Ser Gly  
20 25 30

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Met Ser Ile Glu  
35 40 45

Glu Ile Gln Lys Gln Ile Ala Ala Ile Gln Lys Gln Ile Ala Ala Ile  
50 55 60

Gln Lys Gln Ile Tyr Arg Met Thr Gly Gly Ser Gly Gly Gly Ser Gly  
 65 70 75 80

Gly Gly Ser Gly Gly Gly Ser Gly Met Ser Ile Glu Glu Ile Gln Lys  
 85 90 95

Gln Ile Ala Ala Ile Gln Lys Gln Ile Ala Ala Ile Gln Lys Gln Ile  
 100 105 110

Tyr Arg Met Thr Pro  
 115

<210> 2  
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 <222> (1)..(22)  
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 <223> Xaa =any amino acid

<220>  
 <221> L1  
 <222> (48)..(66)

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 <222> (67)..(91)

<220>  
 <221> L2  
 <222> (92)..(110)

<220>  
 <221> HRS3  
 <222> (111)..(135)  
 <223> Xaa = any amino acid

<220>  
 <221> C-terminal  
 <222> (136)..(155)

<400> 2

Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Ala  
 1 5 10 15

Ala Gln Pro Ala Met Ser Ile Glu Glu Ile Gln Lys Xaa Ile Ala Xaa  
 20 25 30

Ile Gln Glu Xaa Ile Ala Xaa Ile Gln Lys Xaa Ile Tyr Xaa Met Thr  
 35 40 45

COMP-003\_ST25.txt

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly  
50 55 60

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Ala Ala Ile Gln Lys Gln  
65 70 75 80

Ile Ala Ala Ile Gln Lys Gln Ile Tyr Ala Met Thr Gly Gly Ser Gly  
85 90 95

Gly Gly Ser Gly Gly Gly Ser Gly Gly Ser Gly Met Ser Ile Glu  
100 105 110

Glu Ile Gln Lys Gln Ile Xaa Ala Ile Xaa Glu Gln Ile Xaa Ala Ile  
115 120 125

Xaa Lys Gln Ile Xaa Ala Met Thr Pro Gly Gly Ser Gly Gly Ala Ala  
130 135 140

Ala His His His His His His Gly Arg Ala Glu  
145 150 155

<210> 3  
<211> 134  
<212> PRT  
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<220>  
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<220>  
<221> N-terminal  
<222> (1)..(22)  
  
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<222> (23)..(40)  
<223> Xaa = any amin acid

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<221> L1  
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<220>  
<221> HRS2  
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<220>  
<221> L2  
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<220>  
<221> HRS3  
<222> (97)..(114)  
<223> Xaa = any amino acid

<220>  
<221> C-terminal  
<222> (115)..(134)

&lt;400&gt; 3

Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Ala  
 1 5 10 15

Ala Gln Pro Ala Met Asp Ile Gln Gln Ile Gln Lys Xaa Ile Ala Xaa  
 20 25 30

Ile Gln Glu Xaa Ile Tyr Xaa Met Thr Gly Gly Ser Gly Gly Gly Ser  
 35 40 45

Gly Gly Gly Ser Gly Gly Gly Ser Gly Met Asp Ile Gln Gln Ile Gln  
 50 55 60

Lys Gln Ile Ala Ala Ile Gln Lys Gln Ile Tyr Ala Met Thr Gly Gly  
 65 70 75 80

Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Met Asp  
 85 90 95

Ile Gln Gln Ile Gln Lys Gln Ile Xaa Ala Ile Xaa Glu Gln Ile Xaa  
 100 105 110

Ala Met Thr Pro Gly Gly Ser Gly Gly Ala Ala Ala His His His His  
 115 120 125

His His Gly Arg Ala Glu  
 130

&lt;210&gt; 4

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Sequence including variegated amino acids denoted as X

&lt;220&gt;

&lt;221&gt; N-terminal

&lt;222&gt; (1)..(22)

&lt;220&gt;

&lt;221&gt; HRS1

&lt;222&gt; (23)..(47)

&lt;220&gt;

&lt;221&gt; L1

&lt;222&gt; (48)..(66)

&lt;220&gt;

&lt;221&gt; HRS2

&lt;222&gt; (67)..(91)

&lt;220&gt;

&lt;221&gt; L2

&lt;222&gt; (92)..(110)

&lt;220&gt;

<221> HRS3  
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 <223> Xaa = any amino acid

<220>  
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 <222> (136)..(155)  
 <223> x= any amino acid

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Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala  
 1 5 10 15

Ala Gln Pro Ala Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Ala Ala  
 20 25 30

Ile Gln Lys Gln Ile Ala Ala Ile Gln Lys Gln Ile Tyr Ala Met Thr  
 35 40 45

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly  
 50 55 60

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Ala Ala Ile Gln Lys Gln  
 65 70 75 80

Ile Ala Ala Ile Gln Lys Gln Ile Tyr Ala Met Thr Gly Gly Ser Gly  
 85 90 95

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Met Ser Ile Glu  
 100 105 110

Glu Ile Gln Xaa Gln Ile Xaa Xaa Ile Gln Xaa Gln Ile Xaa Xaa Ile  
 115 120 125

Gln Xaa Gln Ile Xaa Xaa Met Thr Pro Gly Gly Ser Gly Gly Ala Ala  
 130 135 140

Ala His His His His His His Gly Arg Ala Glu  
 145 150 155

<210> 5  
 <211> 856  
 <212> PRT  
 <213> Human immunodeficiency virus type 1

<400> 5

Met Arg Val Lys Glu Lys Tyr Gln His Leu Trp Arg Trp Gly Trp Arg  
 1 5 10 15

Trp Gly Thr Met Leu Leu Gly Met Leu Met Ile Cys Ser Ala Thr Glu  
 20 25 30

Lys Leu Trp Val Thr Val Tyr Tyr Gly Val Pro Val Trp Lys Glu Ala  
 35 40 45

COMP-003\_ST25.txt

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

COMP-003\_ST25.txt

Gly Lys Ile Gly Asn 325 Met Arg Gln Ala His 330 Cys Asn Ile Ser Arg 335 Ala  
Lys Trp Asn Asn 340 Thr Leu Lys Gln Ile 345 Ala Ser Lys Leu Arg 350 Glu Gln  
Phe Gly Asn 355 Asn Lys Thr Ile Ile 360 Phe Lys Gln Ser Ser 365 Gly Gly Asp  
Pro Glu 370 Ile Val Thr His Ser 375 Phe Asn Cys Gly Gly 380 Glu Phe Phe Tyr  
Cys 385 Asn Ser Thr Gln Leu 390 Phe Asn Ser Thr Trp 395 Phe Asn Ser Thr Trp 400  
Ser Thr Glu Gly Ser 405 Asn Asn Thr Glu Gly 410 Ser Asp Thr Ile Thr 415 Leu  
Pro Cys Arg Ile 420 Lys Gln Ile Ile Asn 425 Met Trp Gln Lys Val 430 Gly Lys  
Ala Met Tyr 435 Ala Pro Pro Ile Ser 440 Gly Gln Ile Arg Cys 445 Ser Ser Asn  
Ile Thr 450 Gly Leu Leu Leu Thr 455 Arg Asp Gly Gly Asn 460 Ser Asn Asn Glu  
Ser Glu 465 Ile Phe Arg Pro 470 Gly Gly Gly Asp Met 475 Arg Asp Asn Trp Arg 480  
Ser Glu Leu Tyr Lys 485 Tyr Lys Val Val Lys 490 Ile Glu Pro Leu Gly 495 Val  
Ala Pro Thr Lys 500 Ala Lys Arg Arg Val 505 Val Gln Arg Glu Lys 510 Arg Ala  
Val Gly Ile 515 Gly Ala Leu Phe Leu 520 Gly Phe Leu Gly Ala 525 Ala Gly Ser  
Thr Met 530 Gly Ala Ala Ser Met 535 Thr Leu Thr Val Gln 540 Ala Arg Gln Leu  
Leu 545 Ser Gly Ile Val Gln 550 Gln Gln Asn Asn Leu 555 Leu Arg Ala Ile Glu 560  
Ala Gln Gln His Leu 565 Leu Gln Leu Thr Val 570 Trp Gly Ile Lys Gln 575 Leu  
Gln Ala Arg Ile 580 Leu Ala Val Glu Arg 585 Tyr Leu Lys Asp Gln 590 Gln Leu

Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr Thr Ala Val  
 595 600 605  
 Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu Glu Gln Ile Trp Asn  
 610 615 620  
 His Thr Thr Trp Met Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr Ser  
 625 630 635 640  
 Leu Ile His Ser Leu Ile Glu Glu Ser Gln Asn Gln Gln Glu Lys Asn  
 645 650 655  
 Glu Gln Glu Leu Leu Glu Leu Asp Lys Trp Ala Ser Leu Trp Asn Trp  
 660 665 670  
 Phe Asn Ile Thr Asn Trp Leu Trp Tyr Ile Lys Leu Phe Ile Met Ile  
 675 680 685  
 Val Gly Gly Leu Val Gly Leu Arg Ile Val Phe Ala Val Leu Ser Ile  
 690 695 700  
 Val Asn Arg Val Arg Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr His  
 705 710 715 720  
 Leu Pro Thr Pro Arg Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Glu  
 725 730 735  
 Gly Gly Glu Arg Asp Arg Asp Arg Ser Ile Arg Leu Val Asn Gly Ser  
 740 745 750  
 Leu Ala Leu Ile Trp Asp Asp Leu Arg Ser Leu Cys Leu Phe Ser Tyr  
 755 760 765  
 His Arg Leu Arg Asp Leu Leu Leu Ile Val Thr Arg Ile Val Glu Leu  
 770 775 780  
 Leu Gly Arg Arg Gly Trp Glu Ala Leu Lys Tyr Trp Trp Asn Leu Leu  
 785 790 795 800  
 Gln Tyr Trp Ser Gln Glu Leu Lys Asn Ser Ala Val Ser Leu Leu Asn  
 805 810 815  
 Ala Thr Ala Ile Ala Val Ala Glu Gly Thr Asp Arg Val Ile Glu Val  
 820 825 830  
 Val Gln Gly Ala Cys Arg Ala Ile Arg His Ile Pro Arg Arg Ile Arg  
 835 840 845  
 Gln Gly Leu Glu Arg Ile Leu Leu  
 850 855



<210> 6  
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 <212> PRT  
 <213> Human immunodeficiency virus type 1

<400> 6

Trp Met Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr Ser Leu Ile His  
 1 5 10 15

Ser Leu Ile Glu Glu Ser Gln Asn Gln Gln Glu Lys Asn Glu Gln Glu  
 20 25 30

Leu Leu Glu Leu  
 35

<210> 7  
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 <223> biotinylated protein

<400> 7

Gly Ser Gly Ser Trp Met Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr  
 1 5 10 15

Ser Leu Ile His Ser Leu Ile Glu Glu Ser Gln Asn Gln Gln Glu Lys  
 20 25 30

Asn Glu Gln Glu Leu Leu Glu Leu  
 35 40

<210> 8  
 <211> 138  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Single-chain Antibody scAB\_ENV03

<400> 8

Met Gly His His His His His His His His His Ser Ser Gly His  
 1 5 10 15

Ile Glu Gly Arg His Met Ser Ile Glu Glu Ile Gln Lys Pro Ile Ala  
 20 25 30

Thr Ile Gln Glu Ala Ile Ala Trp Ile Gln Lys Lys Ile Tyr Met Met  
 35 40 45

Thr Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser  
 50 55 60

COMP-003\_ST25.txt

Gly Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Ala Ala Ile Gln Lys  
65 70 75 80

Gln Ile Ala Ala Ile Gln Lys Gln Ile Tyr Ala Met Thr Gly Gly Ser  
85 90 95

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Met Ser Ile  
100 105 110

Glu Glu Ile Gln Lys Gln Ile Val Ala Ile Met Glu Gln Ile Val Ala  
115 120 125

Ile Val Lys Gln Ile Ser Ala Met Thr Pro  
130 135

<210> 9  
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<223> Alphabody AC11 A helix

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<223> Xaa can be any naturally occurring amino acid

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<222> (12)..(12)  
<223> Xaa can be any naturally occurring amino acid

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<222> (16)..(16)  
<223> Xaa can be any naturally occurring amino acid

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<222> (19)..(19)  
<223> Xaa can be any naturally occurring amino acid

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<223> Xaa can be any naturally occurring amino acid

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<222> (26)..(26)  
<223> Xaa can be any naturally occurring amino acid

<400> 9

Met Ser Ile Glu Glu Ile Gln Lys Xaa Ile Ala Xaa Ile Gln Glu Xaa  
1 5 10 15

Ile Ala Xaa Ile Gln Lys Xaa Ile Tyr Xaa Met Thr  
20 25

<210> 10  
 <211> 60  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Alphabody AC11 L16-B-L16

<400> 10

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly  
 1 5 10 15

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Ala Ala Ile Gln Lys Gln  
 20 25 30

Ile Ala Ala Ile Gln Lys Gln Ile Tyr Ala Met Thr Gly Gly Ser Gly  
 35 40 45

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly  
 50 55 60

<210> 11  
 <211> 29  
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<220>  
 <223> Alphabody AC11 C helix

<220>  
 <221> misc\_feature  
 <222> (11)..(11)  
 <223> Xaa can be any naturally occurring amino acid

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 <222> (14)..(14)  
 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <222> (18)..(18)  
 <223> Xaa can be any naturally occurring amino acid

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 <222> (21)..(21)  
 <223> Xaa can be any naturally occurring amino acid

<220>  
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 <222> (25)..(25)  
 <223> Xaa can be any naturally occurring amino acid

<400> 11

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Xaa Ala Ile Xaa Glu Gln  
 1 5 10 15

Ile Xaa Ala Ile Xaa Lys Gln Ile Xaa Ala Met Thr Pro  
 20 25

<210> 12  
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 <213> Artificial Sequence

<220>  
 <223> Env02 Helix A

<400> 12

Met Ser Ile Glu Glu Ile Gln Lys Pro Ile Ala Thr Ile Gln Glu Ala  
 1 5 10 15

Ile Ala Trp Ile Gln Lys Lys Ile Tyr Met Met Thr  
 20 25

<210> 13  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Env02 Helix C

<400> 13

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Gln Ala Ile Thr Glu Gln  
 1 5 10 15

Ile Ile Ala Ile Ser Lys Gln Ile Ile Ala Met Thr Pro  
 20 25

<210> 14  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Env03 helix A

<400> 14

Met Ser Ile Glu Glu Ile Gln Lys Pro Ile Ala Thr Ile Gln Glu Ala  
 1 5 10 15

Ile Ala Trp Ile Gln Lys Lys Ile Tyr Met Met Thr  
 20 25

<210> 15  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Env03 helix C

<400> 15

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Val Ala Ile Met Glu Gln  
 1 5 10 15

Ile Val Ala Ile Val Lys Gln Ile Ser Ala Met Thr Pro  
 20 25

<210> 16  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Env04 helix A

<400> 16

Met Ser Ile Glu Glu Ile Gln Lys Pro Ile Ala Thr Ile Gln Glu Thr  
 1 5 10 15

Ile Ala Trp Ile Gln Lys Thr Ile Tyr Gly Met Thr  
 20 25

<210> 17  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Env04 helix C

<400> 17

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Arg Ala Ile Phe Glu Gln  
 1 5 10 15

Ile Val Ala Ile Cys Lys Gln Ile Ile Ala Met Thr Pro  
 20 25

<210> 18  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Env05 helix A

<400> 18

Met Ser Ile Glu Glu Ile Gln Lys His Ile Ala Ser Ile Gln Glu Tyr  
 1 5 10 15

Ile Ala Trp Ile Gln Lys Glu Ile Tyr Arg Met Thr  
 20 25

<210> 19  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Env05 helix C

<400> 19

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Leu Ala Ile Met Glu Gln  
1 5 10 15

Ile Tyr Ala Ile Val Lys Gln Ile Asn Ala Met Thr Pro  
20 25

<210> 20

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Env03\_PA

<400> 20

Met Ser Ile Glu Glu Ile Gln Lys Ala Ile Ala Thr Ile Gln Glu Ala  
1 5 10 15

Ile Ala Trp Ile Gln Lys Lys Ile Tyr Met Met Thr  
20 25

<210> 21

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Env03\_PA C helix

<400> 21

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Val Ala Ile Met Glu Gln  
1 5 10 15

Ile Val Ala Ile Val Lys Gln Ile Ser Ala Met Thr Pro  
20 25

<210> 22

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Env03\_noM helix A

<400> 22

Gly Ser Ile Glu Glu Ile Gln Lys Pro Ile Ala Thr Ile Gln Glu Ala  
1 5 10 15

Ile Ala Trp Ile Gln Lys Lys Ile Tyr Met Ile Thr  
20 25

<210> 23

<211> 60

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> L16-B\*-L16

<400> 23

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly  
 1 5 10 15

Gly Ser Ile Glu Glu Ile Gln Lys Gln Ile Ala Ala Ile Gln Lys Gln  
 20 25 30

Ile Ala Ala Ile Gln Lys Gln Ile Tyr Ala Ile Thr Gly Gly Ser Gly  
 35 40 45

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly  
 50 55 60

<210> 24  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Env03\_noM helix C

<400> 24

Gly Ser Ile Glu Glu Ile Gln Lys Gln Ile Val Ala Ile Met Glu Gln  
 1 5 10 15

Ile Val Ala Ile Val Lys Gln Ile Ser Ala Ile Thr Pro  
 20 25

<210> 25  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Env03\_KC helix A

<400> 25

Met Ser Ile Glu Glu Ile Gln Lys Pro Ile Ala Thr Ile Gln Glu Ala  
 1 5 10 15

Ile Ala Trp Ile Gln Lys Lys Ile Tyr Met Met Thr  
 20 25

<210> 26  
 <211> 60  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> L16-B'-L16

&lt;400&gt; 26

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly  
 1 5 10 15

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Ala Ala Ile Gln Cys Gln  
 20 25 30

Ile Ala Ala Ile Gln Lys Gln Ile Tyr Ala Met Thr Gly Gly Ser Gly  
 35 40 45

Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly  
 50 55 60

&lt;210&gt; 27

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Env03\_KC helix C

&lt;400&gt; 27

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Val Ala Ile Met Glu Gln  
 1 5 10 15

Ile Val Ala Ile Val Lys Gln Ile Ser Ala Met Thr Pro  
 20 25

&lt;210&gt; 28

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; B\*

&lt;400&gt; 28

Gly Ser Ile Glu Glu Ile Gln Lys Gln Ile Ala Ala Ile Gln Lys Gln  
 1 5 10 15

Ile Ala Ala Ile Gln Lys Gln Ile Tyr Ala Ile Thr  
 20 25

&lt;210&gt; 29

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; B'

&lt;400&gt; 29

Met Ser Ile Glu Glu Ile Gln Lys Gln Ile Ala Ala Ile Gln Cys Gln  
 1 5 10 15



COMP-003\_ST25.txt  
Ile Ala Ala Ile Gln Lys Gln Ile Tyr Ala Met Thr  
20 25