SEQUENCE LISTING

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<120> METHODS FOR CULTURING CELLS AND KITS AND APPARATUS FOR SAME

<130> 735042003640

<140> Not Yet Assigned
<141> Herewith

<150> 62/245,252
<151> 2015-10-22

<150> 62/245,261
<151> 2015-10-22

<160> 81

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 159
<212> PRT
<213> Streptomyces avidinii

<220>
<223> Streptavidin

<300>
<308> UniProt No. P22629
<309> 1991-08-01

<400> 1

Asp	Pro	Ser	Lys	Asp	Ser	Lys	Ala	Gln	Val	Ser	Ala	Ala	Glu	Ala	Gly
1				5				10					15		
Ile	Thr	Gly	Thr	Trp	Tyr	Asn	Gln	Leu	Gly	Ser	Thr	Phe	Ile	Val	Thr
			20					25					30		
Ala	Gly	Ala	Asp	Gly	Ala	Leu	Thr	Gly	Thr	Tyr	Glu	Ser	Ala	Val	Gly
		35					40					45			
Asn	Ala	Glu	Ser	Arg	Tyr	Val	Leu	Thr	Gly	Arg	Tyr	Asp	Ser	Ala	Pro
	50					55					60				
Ala	Thr	Asp	Gly	Ser	Gly	Thr	Ala	Leu	Gly	Trp	Thr	Val	Ala	Trp	Lys
65					70					75					80
Asn	Asn	Tyr	Arg	Asn	Ala	His	Ser	Ala	Thr	Thr	Trp	Ser	Gly	Gln	Tyr
				85					90					95	

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Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu Leu Thr Ser
            100                 105                 110
Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val Gly His Asp
        115                 120                 125
Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser Ile Asp Ala Ala Lys
    130                 135                 140
Lys Ala Gly Val Asn Asn Gly Asn Pro Leu Asp Ala Val Gln Gln
145                 150                 155
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<210> 2
<211> 126
<212> PRT
<213> Streptomyces avidinii

<220>
<223> Minimal streptavidin

<400> 2

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Glu Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe
 1               5                  10                  15
Ile Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Glu Ser
            20                  25                  30
Ala Val Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp
        35                  40                  45
Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val
    50                  55                  60
Ala Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser
65                  70                  75                  80
Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu
                85                  90                  95
Leu Thr Ser Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val
            100                 105                 110
Gly His Asp Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser
        115                 120                 125
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<210> 3
<211> 159
<212> PRT
<213> Streptomyces avidinii

<220>
<223> Mutein Streptavidin Val44-Thr45-Ala46-Arg47

<400> 3

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Asp Pro Ser Lys Asp Ser Lys Ala Gln Val Ser Ala Ala Glu Ala Gly
 1               5                  10                  15
Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe Ile Val Thr
            20                  25                  30
Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Val Thr Ala Arg Gly
        35                  40                  45
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```
Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp Ser Ala Pro
    50                  55                  60
Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val Ala Trp Lys
65                  70                  75                  80
Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser Gly Gln Tyr
                85                  90                  95
Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu Leu Thr Ser
            100                 105                 110
Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val Gly His Asp
        115                 120                 125
Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser Ile Asp Ala Ala Lys
    130                 135                 140
Lys Ala Gly Val Asn Asn Gly Asn Pro Leu Asp Ala Val Gln Gln
145                 150                 155


<210> 4
<211> 126
<212> PRT
<213> Streptomyces avidinii

<220>
<223> Mutein Streptavidin Val44-Thr45-Ala46-Arg47

<400> 4
Glu Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe
 1               5                  10                  15
Ile Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Val Thr
            20                  25                  30
Ala Arg Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp
        35                  40                  45
Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val
    50                  55                  60
Ala Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser
65                  70                  75                  80
Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu
                85                  90                  95
Leu Thr Ser Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val
            100                 105                 110
Gly His Asp Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser
        115                 120                 125


<210> 5
<211> 159
<212> PRT
<213> Streptomyces avidinii

<220>
<223> Mutein Streptavidin Ile44-Gly45-Ala-46-Arg47

<400> 5
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Asp Pro Ser Lys Asp Ser Lys Ala Gln Val Ser Ala Ala Glu Ala Gly
 1               5                  10                  15
Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe Ile Val Thr
            20                  25                  30
Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Ile Gly Ala Arg Gly
        35                  40                  45
Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp Ser Ala Pro
    50                  55                  60
Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val Ala Trp Lys
65                  70                  75                  80
Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser Gly Gln Tyr
                85                  90                  95
Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu Leu Thr Ser
            100                 105                 110
Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val Gly His Asp
        115                 120                 125
Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser Ile Asp Ala Ala Lys
    130                 135                 140
Lys Ala Gly Val Asn Asn Gly Asn Pro Leu Asp Ala Val Gln Gln
145                 150                 155


<210> 6
<211> 126
<212> PRT
<213> Streptomyces avidinii

<220>
<223> Mutein Streptavidin Ile44-Gly45-Ala-46-Arg47

<400> 6
Glu Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe
 1               5                  10                  15
Ile Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Ile Gly
            20                  25                  30
Ala Arg Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp
        35                  40                  45
Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val
    50                  55                  60
Ala Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser
65                  70                  75                  80
Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu
                85                  90                  95
Leu Thr Ser Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val
            100                 105                 110
Gly His Asp Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser
        115                 120                 125


<210> 7
<211> 8
<212> PRT
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<213> Artificial Sequence

<220>
<223> Streptavidin binding peptide, Strep-tag

<400> 7
Trp Arg His Pro Gln Phe Gly Gly
 1   5

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

<220>
<223> Strep-tag II

<400> 8
Trp Ser His Pro Gln Phe Glu Lys
 1   5

<210> 9
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Streptavidin Binding peptide

<220>
<221> VARIANT
<222> (3)...(3)
<223> Xaa is Gln, Asp, or Met

<400> 9
His Pro Xaa
 1

<210> 10
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Streptavidin Binding peptide

<400> 10
His Pro Gln Phe
 1

<210> 11
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Streptavidin Binding peptide

<220>
<221> VARIANT
<222> (1)...(1)
<223> Xaa is Trp, Lys or Arg

<220>
<221> VARIANT
<222> (2)...(2)
<223> Xaa is any amino acid

<220>
<221> VARIANT
<222> (7)...(7)
<223> Xaa is Gly or Glu

<220>
<221> VARIANT
<222> (8)...(8)
<223> Xaa is Gly, Lys or Arg

<400> 11
Xaa Xaa His Pro Gln Phe Xaa Xaa
 1   5

<210> 12
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Streptavidin Binding peptide

<220>
<221> VARIANT
<222> (2)...(2)
<223> Xaa is any amino acid

<220>
<221> VARIANT
<222> (7)...(7)
<223> Xaa is Gly or Glu

<220>
<221> VARIANT
<222> (8)...(8)
<223> Xaa is Gly, Lys or Arg

<400> 12
Trp Xaa His Pro Gln Phe Xaa Xaa
 1   5

<210> 13
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Sequential modules of streptavidin-binding peptide

<220>
<221> VARIANT
<222> (9)...(9)
<223> Xaa is any amino acid

<220>
<221> REPEAT
<222> (9)...(9)
<223> Repeated 8 or 12 times

<400> 13
Trp Ser His Pro Gln Phe Glu Lys Xaa Trp Ser His Pro Gln Phe Glu
 1   5   10   15
Lys

<210> 14
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Sequential modules of streptavidin-binding peptide

<220>
<221> REPEAT
<222> (9)...(12)
<223> Repeated 2 or 3 times

<400> 14
Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Trp Ser His Pro
 1   5   10   15

Gln Phe Glu Lys
            20

<210> 15
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Twin-Strep-tag

<400> 15
Ser Ala Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Gly Gly
 1   5   10   15
Gly Ser Gly Gly Gly Ser Trp Ser His Pro Gln Phe Glu Lys
            20   25   30

<210> 16
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Twin-Strep-tag

<400> 16
Ser Ala Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Gly Gly
 1   5   10   15
Gly Ser Gly Gly Ser Ala Trp Ser His Pro Gln Phe Glu Lys
            20   25   30

<210> 17
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Twin-Strep-tag

<400> 17
Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Gly Gly Gly Ser
 1   5   10   15
Gly Gly Gly Ser Trp Ser His Pro Gln Phe Glu Lys
            20   25

<210> 18
<211> 24
<212> PRT

<213> Artificial Sequence

<220>
<223> Twin-Strep-tag

<400> 18
Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Gly Gly Gly Ser
 1   5   10   15
Trp Ser His Pro Gln Phe Glu Lys
            20

<210> 19
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Twin-Strep-tag

<400> 19
Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Gly Gly Gly Ser
 1   5   10   15
Gly Gly Ser Ala Trp Ser His Pro Gln Phe Glu Lys
            20   25

<210> 20
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> HA-tag

<400> 20
Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
 1   5

<210> 21
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> VSV-G-tag

<400> 21
Tyr Thr Asp Ile Glu Met Asn Arg Leu Gly Lys
 1   5   10

<210> 22
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> HSV-tag

<400> 22
Gln Pro Glu Leu Ala Pro Glu Asp Pro Glu Asp
 1   5   10

<210> 23
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> T7 epitope

<400> 23
Ala Ser Met Thr Gly Gly Gln Gln Met Gly
 1   5   10

<210> 24
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> HSV epitope

<400> 24
Gln Pro Glu Leu Ala Pro Glu Asp Pro Glu Asp
 1   5   10

<210> 25
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Myc epitope

<400> 25
Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
 1   5   10

<210> 26
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> V5-tag

<400> 26
Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr
 1   5   10

<210> 27
<211> 126
<212> PRT
<213> Streptomyces avidinii

<220>
<223> Mutein Streptavidin Val44-Thr45-Ala46-Arg47 and
      Glu117, Gly120, Try121 (mutein m1-9)

<400> 27
Glu Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe
 1   5   10   15
Ile Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Val Thr
            20   25   30
Ala Arg Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp
        35   40   45
Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val
    50   55   60
Ala Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser
65   70   75   80
Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu
                85   90   95
Leu Thr Ser Gly Thr Thr Glu Glu Asn Ala Gly Tyr Ser Thr Leu Val
            100   105   110
Gly His Asp Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser
        115   120   125

<210> 28
<211> 139
<212> PRT
<213> Streptomyces avidinii

<220>
<223> Mutein Streptavidin Val44-Thr45-Ala46-Arg47 and
      Glu117, Gly120, Try121 (mutein m1-9)

<400> 28

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Asp Pro Ser Lys Asp Ser Lys Ala Gln Val Ser Ala Ala Glu Ala Gly
 1               5                  10                  15
Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe Ile Val Thr
            20                  25                  30
Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Val Thr Ala Arg Gly
        35                  40                  45
Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp Ser Ala Pro
    50                  55                  60
Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val Ala Trp Lys
65                  70                  75                  80
Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser Gly Gln Tyr
                85                  90                  95
Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu Leu Thr Ser
            100                 105                 110
Gly Thr Thr Glu Glu Asn Ala Gly Tyr Ser Thr Leu Val Gly His Asp
        115                 120                 125
Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser
    130                 135


<210> 29
<211> 253
<212> PRT
<213> Artificial Sequence

<220>
<223> Variable Heavy chain of Fab fragment m13B8.2

<400> 29
Ala Met Gln Val Gln Leu Lys Gln Ser Gly Pro Gly Leu Val Gln Pro
 1               5                  10                  15
Ser Gln Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr
            20                  25                  30
Thr Phe Gly Val His Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu
        35                  40                  45
Trp Leu Gly Val Ile Trp Ala Ser Gly Ile Thr Asp Tyr Asn Val Pro
    50                  55                  60
Phe Met Ser Arg Leu Ser Ile Thr Lys Asp Asn Ser Lys Ser Gln Val
65                  70                  75                  80
Phe Phe Lys Leu Asn Ser Leu Gln Pro Asp Asp Thr Ala Ile Tyr Tyr
                85                  90                  95
Cys Ala Lys Asn Asp Pro Gly Thr Gly Phe Ala Tyr Trp Gly Gln Gly
            100                 105                 110
Thr Leu Val Thr Val Ser Ala Gly Ser Thr Lys Gly Pro Ser Val Phe
        115                 120                 125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    130                 135                 140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
145                 150                 155                 160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                165                 170                 175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
```

```
            180                 185                 190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        195                 200                 205
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Gly Ser
    210                 215                 220
Ala Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Gly Gly Gly
225                 230                 235                 240
Ser Gly Gly Ser Ala Trp Ser His Pro Gln Phe Glu Lys
                245                 250
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<210> 30
<211> 218
<212> PRT
<213> Artificial Sequence

<220>
<223> Variable Light chain of Fab Fragment m13B8.2

<400> 30

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Ala Met Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser
 1               5                  10                  15
Val Gly Glu Thr Val Thr Phe Thr Cys Arg Ala Ser Glu Met Ile Tyr
            20                  25                  30
Ser Tyr Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu
        35                  40                  45
Leu Val His Asp Ala Lys Thr Leu Ala Glu Gly Val Pro Ser Arg Phe
    50                  55                  60
Ser Gly Gly Gly Ser Gly Thr Gln Phe Ser Leu Lys Ile Asn Thr Leu
65                  70                  75                  80
Gln Pro Glu Asp Phe Gly Thr Tyr Tyr Cys Gln Ala His Tyr Gly Asn
                85                  90                  95
Pro Pro Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Gly Ile
            100                 105                 110
Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
        115                 120                 125
Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg
    130                 135                 140
Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn
145                 150                 155                 160
Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser
                165                 170                 175
Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys
            180                 185                 190
Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr
        195                 200                 205
Lys Ser Phe Asn Arg Gly Glu Cys Gly Ser
    210                 215
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<210> 31
<211> 119

<212> PRT
<213> Artificial Sequence

<220>
<223> Variable Heavy chain of anti-CD3 antibody OKT3

<400> 31
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala
 1   5   10   15
Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Tyr
            20   25   30
Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
        35   40   45
Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe
    50   55   60
Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr
65   70   75   80
Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly
            100   105   110
Thr Thr Leu Thr Val Ser Ser
        115

<210> 32
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Variable Light chain of anti-CD3 antibody OKT3

<400> 32
Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
 1   5   10   15
Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
            20   25   30
Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
        35   40   45
Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala His Phe Arg Gly Ser
    50   55   60
Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Gly Met Glu Ala Glu
65   70   75   80
Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr
                85   90   95
Phe Gly Ser Gly Thr Lys Leu Glu Ile Asn
            100   105

<210> 33
<211> 116

<212> PRT
<213> Artificial Sequence

<220>
<223> Variable Heavy chain of anti-CD28 antibody CD28.3

<400> 33
Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala Ser Val Arg
 1   5   10   15
Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Glu Tyr Ile Ile His
            20   25   30
Trp Ile Lys Leu Arg Ser Gly Gln Gly Leu Glu Trp Ile Gly Trp Phe
        35   40   45
Tyr Pro Gly Ser Asn Asp Ile Gln Tyr Asn Ala Lys Phe Lys Gly Lys
    50   55   60
Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Val Tyr Met Glu Leu
65   70   75   80
Thr Gly Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys Ala Arg Arg
                85   90   95
Asp Asp Phe Ser Gly Tyr Asp Ala Leu Pro Tyr Trp Gly Gln Gly Thr
            100   105   110
Met Val Thr Val
        115

<210> 34
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Variable Light chain of anti-CD28 antibody CD28.3

<400> 34
Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Val Ser Val Gly
 1   5   10   15
Glu Thr Val Thr Ile Thr Cys Arg Thr Asn Glu Asn Ile Tyr Ser Asn
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Ile
        35   40   45
Tyr Ala Ala Thr His Leu Val Glu Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Thr Ser Leu Gln Ser
65   70   75   80
Glu Asp Phe Gly Asn Tyr Tyr Cys Gln His Phe Trp Gly Thr Pro Cys
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
            100   105

<210> 35
<211> 11

<212> PRT
<213> Artificial Sequence

<220>
<223> MAT tag

<400> 35
His Asn His Arg His Lys His Gly Gly Gly Cys
 1   5   10

<210> 36
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-CD16 antibody 3G8 VH

<400> 36
Gln Val Thr Leu Lys Glu Ser Gly Pro Gly Ile Leu Gln Pro Ser Gln
 1   5   10   15
Thr Leu Ser Leu Thr Cys Ser Phe Ser Gly Phe Ser Leu Arg Thr Ser
            20   25   30
Gly Met Gly Val Gly Trp Ile Arg Gln Pro Ser Gly Lys Gly Leu Glu
        35   40   45
Trp Leu Ala His Ile Trp Trp Asp Asp Asp Lys Arg Tyr Asn Pro Ala
    50   55   60
Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Ser Asn Gln Val
65   70   75   80
Phe Leu Lys Ile Ala Ser Val Asp Thr Ala Asp Thr Ala Thr Tyr Tyr
                85   90   95
Cys Ala Gln Ile Asn Pro Ala Trp Phe Ala Tyr Trp Gly Gln Gly Thr
            100   105   110
Leu Val Thr Val Ser Ser
        115

<210> 37
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-CD16 antibody 3G8 VL

<400> 37
Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
 1   5   10   15
Gln Arg Ala Thr Ile Ser Cys Lys Ala Ser Gln Ser Val Asp Phe Asp
            20   25   30
Gly Asp Ser Phe Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro

```
        35                  40                  45
Lys Leu Leu Ile Tyr Thr Thr Ser Asn Leu Glu Ser Gly Ile Pro Ala
    50                  55                  60
Arg Phe Ser Ala Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
65                  70                  75                  80
Pro Val Glu Glu Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Ser Asn
                85                  90                  95
Glu Asp Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
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<210> 38
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> antigen-specific peptide

<400> 38
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Cys Arg Val Leu Cys Cys Tyr Val Leu
 1               5
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<210> 39
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> pp65 epitope of CMV (amino acids 341-350)

<400> 39
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Gln Tyr Asp Pro Val Ala Ala Leu Phe
 1               5
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<210> 40
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> pp65 epitope of CMV (amino acids 265-274)

<400> 40
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Arg Pro His Glu Arg Asn Gly Phe Thr Val
 1               5                  10
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<210> 41
<211> 11

<212> PRT
<213> Artificial Sequence

<220>
<223> hexon 5 epitope of adenovirus (amino acids
114-124)

<400> 41
Cys Pro Tyr Ser Gly Thr Ala Tyr Asn Ser Leu
1 5 10

<210> 42
<211> 314
<212> PRT
<213> Artificial Sequence

<220>
<223> HLA-A*2402

<400> 42
Met Gly Ser His Ser Met Arg Tyr Phe Ser Thr Ser Val Ser Arg Pro
1 5 10 15
Gly Arg Gly Glu Pro Arg Phe Ile Ala Val Gly Tyr Val Asp Asp Thr
20 25 30
Gln Phe Val Arg Phe Asp Ser Asp Ala Ala Ser Gln Arg Met Glu Pro
35 40 45
Arg Ala Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp Asp Glu Glu
50 55 60
Thr Gly Lys Val Lys Ala His Ser Gln Thr Asp Arg Glu Asn Leu Arg
65 70 75 80
Ile Ala Leu Arg Tyr Tyr Asn Gln Ser Glu Ala Gly Ser His Thr Leu
85 90 95
Gln Met Met Phe Gly Cys Asp Val Gly Ser Asp Gly Arg Phe Leu Arg
100 105 110
Gly Tyr His Gln Tyr Ala Tyr Asp Gly Lys Asp Tyr Ile Ala Leu Lys
115 120 125
Glu Asp Leu Arg Ser Trp Thr Ala Ala Asp Met Ala Ala Gln Ile Thr
130 135 140
Lys Arg Lys Trp Glu Ala Ala His Val Ala Glu Gln Gln Arg Ala Tyr
145 150 155 160
Leu Glu Gly Thr Cys Val Asp Gly Leu Arg Arg Tyr Leu Glu Asn Gly
165 170 175
Lys Glu Thr Leu Gln Arg Thr Asp Pro Pro Lys Thr His Met Thr His
180 185 190
His Pro Ile Ser Asp His Glu Ala Thr Leu Arg Cys Trp Ala Leu Gly
195 200 205
Phe Tyr Pro Ala Glu Ile Thr Leu Thr Trp Gln Arg Asp Gly Glu Asp
210 215 220
Gln Thr Gln Asp Thr Glu Leu Val Glu Thr Arg Pro Ala Gly Asp Gly
225 230 235 240
Thr Phe Gln Lys Trp Ala Ala Val Val Val Pro Ser Gly Glu Glu Gln

```
                245                 250                 255
Arg Tyr Thr Cys His Val Gln His Glu Gly Leu Pro Lys Pro Leu Thr
            260                 265                 270
Leu Arg Trp Glu Pro Pro Pro Ser Gly Ser Ser Ala Trp Ser His Pro
        275                 280                 285
Gln Phe Glu Lys Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
    290                 295                 300
Ser Ala Trp Ser His Pro Gln Phe Glu Lys
305                 310
```

<210> 43
<211> 314
<212> PRT
<213> Artificial Sequence

<220>
<223> HLA-B*0702

<400> 43

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

Arg Tyr Thr Cys His Val Gln His Glu Gly Leu Pro Lys Pro Leu Thr
260 265 270
Leu Arg Trp Glu Pro Pro Pro Ser Gly Ser Ser Ala Trp Ser His Pro
275 280 285
Gln Phe Glu Lys Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
290 295 300
Ser Ala Trp Ser His Pro Gln Phe Glu Lys
305 310

<210> 44
<211> 321
<212> PRT
<213> Artificial Sequence

<220>
<223> HLA-C*0702

<400> 44
Met Ala Leu Thr Glu Thr Trp Ala Cys Ser His Ser Met Arg Tyr Phe
1 5 10 15
Asp Thr Ala Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ser
20 25 30
Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala
35 40 45
Ala Ser Pro Arg Gly Glu Pro Arg Ala Pro Trp Val Glu Gln Glu Gly
50 55 60
Pro Glu Tyr Trp Asp Arg Glu Thr Gln Lys Tyr Lys Arg Gln Ala Gln
65 70 75 80
Ala Asp Arg Val Ser Leu Arg Asn Leu Arg Gly Tyr Tyr Asn Gln Ser
85 90 95
Glu Asp Gly Ser His Thr Leu Gln Arg Met Ser Gly Cys Asp Leu Gly
100 105 110
Pro Asp Gly Arg Leu Leu Arg Gly Tyr Asp Gln Ser Ala Tyr Asp Gly
115 120 125
Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala
130 135 140
Asp Thr Ala Ala Gln Ile Thr Gln Arg Lys Leu Glu Ala Ala Arg Ala
145 150 155 160
Ala Glu Gln Leu Arg Ala Tyr Leu Glu Gly Thr Cys Val Glu Trp Leu
165 170 175
Arg Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Ala Glu Pro
180 185 190
Pro Lys Thr His Val Thr His His Pro Leu Ser Asp His Glu Ala Thr
195 200 205
Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr Leu Thr
210 215 220
Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu Val Glu
225 230 235 240
Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala Val Val
245 250 255
Val Pro Ser Gly Gln Glu Gln Arg Tyr Thr Cys His Met Gln His Glu

260 265 270
Gly Leu Gln Glu Pro Leu Thr Leu Ser Trp Glu Pro Ser Ser Gln Pro
275 280 285
Thr Ile Gly Ser Ala Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly
290 295 300
Ser Gly Gly Gly Ser Gly Gly Ser Ala Trp Ser His Pro Gln Phe Glu
305 310 315 320
Lys

<210> 45
<211> 100
<212> PRT
<213> Artificial Sequence

<220>
<223> B2 microglobulin

<400> 45
Met Ile Gln Arg Thr Pro Lys Ile Gln Val Tyr Ser Arg His Pro Ala
1 5 10 15
Glu Asn Gly Lys Ser Asn Phe Leu Asn Cys Tyr Val Ser Gly Phe His
20 25 30
Pro Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly Glu Arg Ile Glu
35 40 45
Lys Val Glu His Ser Asp Leu Ser Phe Ser Lys Asp Trp Ser Phe Tyr
50 55 60
Leu Leu Tyr Tyr Thr Glu Phe Thr Pro Thr Glu Lys Asp Glu Tyr Ala
65 70 75 80
Cys Arg Val Asn His Val Thr Leu Ser Gln Pro Lys Ile Val Lys Trp
85 90 95
Asp Arg Asp Met
100

<210> 46
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> 10 amino acid tag from the collagen-binding domain
of von Willebrand factor

<400> 46
Trp Arg Glu Pro Gly Arg Met Glu Leu Asn
1 5 10

<210> 47
<211> 283

<212> PRT
<213> Artificial Sequence

<220>
<223> human CD19 extracellular domain with His-Tag

<400> 47
Pro Glu Glu Pro Leu Val Val Lys Val Glu Glu Gly Asp Asn Ala Val
 1   5   10   15
Leu Gln Cys Leu Lys Gly Thr Ser Asp Gly Pro Thr Gln Gln Leu Thr
            20   25   30
Trp Ser Arg Glu Ser Pro Leu Lys Pro Phe Leu Lys Leu Ser Leu Gly
        35   40   45
Leu Pro Gly Leu Gly Ile His Met Arg Pro Leu Ala Ile Trp Leu Phe
    50   55   60
Ile Phe Asn Val Ser Gln Gln Met Gly Gly Phe Tyr Leu Cys Gln Pro
65   70   75   80
Gly Pro Pro Ser Glu Lys Ala Trp Gln Pro Gly Trp Thr Val Asn Val
                85   90   95
Glu Gly Ser Gly Glu Leu Phe Arg Trp Asn Val Ser Asp Leu Gly Gly
            100   105   110
Leu Gly Cys Gly Leu Lys Asn Arg Ser Ser Glu Gly Pro Ser Ser Pro
        115   120   125
Ser Gly Lys Leu Met Ser Pro Lys Leu Tyr Val Trp Ala Lys Asp Arg
    130   135   140
Pro Glu Ile Trp Glu Gly Glu Pro Pro Cys Leu Pro Pro Arg Asp Ser
145   150   155   160
Leu Asn Gln Ser Leu Ser Gln Asp Leu Thr Met Ala Pro Gly Ser Thr
                165   170   175
Leu Trp Leu Ser Cys Gly Val Pro Pro Asp Ser Val Ser Arg Gly Pro
            180   185   190
Leu Ser Trp Thr His Val His Pro Lys Gly Pro Lys Ser Leu Leu Ser
        195   200   205
Leu Glu Leu Lys Asp Asp Arg Pro Ala Arg Asp Met Trp Val Met Glu
    210   215   220
Thr Gly Leu Leu Leu Pro Arg Ala Thr Ala Gln Asp Ala Gly Lys Tyr
225   230   235   240
Tyr Cys His Arg Gly Asn Leu Thr Met Ser Phe His Leu Glu Ile Thr
                245   250   255
Ala Arg Pro Val Leu Trp His Trp Leu Leu Arg Thr Gly Gly Trp Lys
            260   265   270
Ala His His His His His His His His His His
        275   280

<210> 48
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-CD16 antibody 3G8 VH

<400> 48
Gln Val Thr Leu Lys Glu Ser Gly Pro Gly Ile Leu Gln Pro Ser Gln
 1   5   10   15
Thr Leu Ser Leu Thr Cys Ser Phe Ser Gly Phe Ser Leu Arg Thr Ser
            20   25   30
Gly Met Gly Val Gly Trp Ile Arg Gln Pro Ser Gly Lys Gly Leu Glu
        35   40   45
Trp Leu Ala His Ile Trp Trp Asp Asp Asp Lys Arg Tyr Asn Pro Ala
    50   55   60
Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Ser Asn Gln Val
65   70   75   80
Phe Leu Lys Ile Ala Ser Val Asp Thr Ala Asp Thr Ala Thr Tyr Tyr
                85   90   95
Cys Ala Gln Ile Asn Pro Ala Trp Phe Ala Tyr Trp Gly Gln Gly Thr
            100   105   110
Leu Val Thr Val Ser Ser
        115

<210> 49
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-CD16 antibody 3G8 VL

<400> 49
Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
 1   5   10   15
Gln Arg Ala Thr Ile Ser Cys Lys Ala Ser Gln Ser Val Asp Phe Asp
            20   25   30
Gly Asp Ser Phe Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
        35   40   45
Lys Leu Leu Ile Tyr Thr Thr Ser Asn Leu Glu Ser Gly Ile Pro Ala
    50   55   60
Arg Phe Ser Ala Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
65   70   75   80
Pro Val Glu Glu Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Ser Asn
                85   90   95
Glu Asp Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 50
<211> 133
<212> PRT
<213> Homo sapiens

<220>

<223> IL-2

<400> 50

```
Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
 1               5                  10                  15
Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
            20                  25                  30
Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
        35                  40                  45
Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
    50                  55                  60
Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu
65                  70                  75                  80
Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
                85                  90                  95
Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
            100                 105                 110
Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser Ile
        115                 120                 125
Ile Ser Thr Leu Thr
    130
```

<210> 51
<211> 152
<212> PRT
<213> Homo sapiens

<220>
<223> IL-7

<400> 51

```
Asp Cys Asp Ile Glu Gly Lys Asp Gly Lys Gln Tyr Glu Ser Val Leu
 1               5                  10                  15
Met Val Ser Ile Asp Gln Leu Leu Asp Ser Met Lys Glu Ile Gly Ser
            20                  25                  30
Asn Cys Leu Asn Asn Glu Phe Asn Phe Phe Lys Arg His Ile Cys Asp
        35                  40                  45
Ala Asn Lys Glu Gly Met Phe Leu Phe Arg Ala Ala Arg Lys Leu Arg
    50                  55                  60
Gln Phe Leu Lys Met Asn Ser Thr Gly Asp Phe Asp Leu His Leu Leu
65                  70                  75                  80
Lys Val Ser Glu Gly Thr Thr Ile Leu Leu Asn Cys Thr Gly Gln Val
                85                  90                  95
Lys Gly Arg Lys Pro Ala Ala Leu Gly Glu Ala Gln Pro Thr Lys Ser
            100                 105                 110
Leu Glu Glu Asn Lys Ser Leu Lys Glu Gln Lys Lys Leu Asn Asp Leu
        115                 120                 125
Cys Phe Leu Lys Arg Leu Leu Gln Glu Ile Lys Thr Cys Trp Asn Lys
    130                 135                 140
Ile Leu Met Gly Thr Lys Glu His
145                 150
```

<210> 52
<211> 133
<212> PRT
<213> Homo sapiens

<220>
<223> IL-21

<400> 52
Gln Gly Gln Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile
 1   5   10   15
Val Asp Gln Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu
            20   25   30
Pro Ala Pro Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser
        35   40   45
Cys Phe Gln Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu
    50   55   60
Arg Ile Ile Asn Val Ser Ile Lys Lys Leu Lys Arg Lys Pro Pro Ser
65   70   75   80
Thr Asn Ala Gly Arg Arg Gln Lys His Arg Leu Thr Cys Pro Ser Cys
                85   90   95
Asp Ser Tyr Glu Lys Lys Pro Pro Lys Glu Phe Leu Glu Arg Phe Lys
            100   105   110
Ser Leu Leu Gln Lys Met Ile His Gln His Leu Ser Ser Arg Thr His
        115   120   125
Gly Ser Glu Asp Ser
    130

<210> 53
<211> 159
<212> PRT
<213> Homo sapiens

<220>
<223> IL-1alpha

<400> 53
Ser Ala Pro Phe Ser Phe Leu Ser Asn Val Lys Tyr Asn Phe Met Arg
 1   5   10   15
Ile Ile Lys Tyr Glu Phe Ile Leu Asn Asp Ala Leu Asn Gln Ser Ile
            20   25   30
Ile Arg Ala Asn Asp Gln Tyr Leu Thr Ala Ala Ala Leu His Asn Leu
        35   40   45
Asp Glu Ala Val Lys Phe Asp Met Gly Ala Tyr Lys Ser Ser Lys Asp
    50   55   60
Asp Ala Lys Ile Thr Val Ile Leu Arg Ile Ser Lys Thr Gln Leu Tyr
65   70   75   80
Val Thr Ala Gln Asp Glu Asp Gln Pro Val Leu Leu Lys Glu Met Pro
                85   90   95

```
Glu Ile Pro Lys Thr Ile Thr Gly Ser Glu Thr Asn Leu Leu Phe Phe
            100                 105                 110
Trp Glu Thr His Gly Thr Lys Asn Tyr Phe Thr Ser Val Ala His Pro
        115                 120                 125
Asn Leu Phe Ile Ala Thr Lys Gln Asp Tyr Trp Val Cys Leu Ala Gly
    130                 135                 140
Gly Pro Pro Ser Ile Thr Asp Phe Gln Ile Leu Glu Asn Gln Ala
145                 150                 155


<210> 54
<211> 153
<212> PRT
<213> Homo sapiens

<220>
<223> IL-1beta

<400> 54
Ala Pro Val Arg Ser Leu Asn Cys Thr Leu Arg Asp Ser Gln Gln Lys
 1               5                  10                  15
Ser Leu Val Met Ser Gly Pro Tyr Glu Leu Lys Ala Leu His Leu Gln
            20                  25                  30
Gly Gln Asp Met Glu Gln Gln Val Val Phe Ser Met Ser Phe Val Gln
        35                  40                  45
Gly Glu Glu Ser Asn Asp Lys Ile Pro Val Ala Leu Gly Leu Lys Glu
    50                  55                  60
Lys Asn Leu Tyr Leu Ser Cys Val Leu Lys Asp Asp Lys Pro Thr Leu
65                  70                  75                  80
Gln Leu Glu Ser Val Asp Pro Lys Asn Tyr Pro Lys Lys Lys Met Glu
                85                  90                  95
Lys Arg Phe Val Phe Asn Lys Ile Glu Ile Asn Asn Lys Leu Glu Phe
            100                 105                 110
Glu Ser Ala Gln Phe Pro Asn Trp Tyr Ile Ser Thr Ser Gln Ala Glu
        115                 120                 125
Asn Met Pro Val Phe Leu Gly Gly Thr Lys Gly Gly Gln Asp Ile Thr
    130                 135                 140
Asp Phe Thr Met Gln Phe Val Ser Ser
145                 150


<210> 55
<211> 133
<212> PRT
<213> Homo sapiens

<220>
<223> IL-15

<400> 55
Gly Ile His Val Phe Ile Leu Gly Cys Phe Ser Ala Gly Leu Pro Lys
 1               5                  10                  15
```

```
Thr Glu Ala Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile Glu
            20                  25                  30
Asp Leu Ile Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr Glu Ser
        35                  40                  45
Asp Val His Pro Ser Cys Lys Val Thr Ala Met Lys Cys Phe Leu Leu
    50                  55                  60
Glu Leu Gln Val Ile Ser Leu Glu Ser Gly Asp Ala Ser Ile His Asp
65                  70                  75                  80
Thr Val Glu Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser Ser Asn
                85                  90                  95
Gly Asn Val Thr Glu Ser Gly Cys Lys Glu Cys Glu Glu Leu Glu Glu
            100                 105                 110
Lys Asn Ile Lys Glu Phe Leu Gln Ser Phe Val His Ile Val Gln Met
        115                 120                 125
Phe Ile Asn Thr Ser
    130
```

<210> 56
<211> 138
<212> PRT
<213> Homo sapiens

<220>
<223> Interferon (IFN)-gamma

<400> 56

```
Gln Asp Pro Tyr Val Lys Glu Ala Glu Asn Leu Lys Lys Tyr Phe Asn
 1               5                  10                  15
Ala Gly His Ser Asp Val Ala Asp Asn Gly Thr Leu Phe Leu Gly Ile
            20                  25                  30
Leu Lys Asn Trp Lys Glu Glu Ser Asp Arg Lys Ile Met Gln Ser Gln
        35                  40                  45
Ile Val Ser Phe Tyr Phe Lys Leu Phe Lys Asn Phe Lys Asp Asp Gln
    50                  55                  60
Ser Ile Gln Lys Ser Val Glu Thr Ile Lys Glu Asp Met Asn Val Lys
65                  70                  75                  80
Phe Phe Asn Ser Asn Lys Lys Lys Arg Asp Asp Phe Glu Lys Leu Thr
                85                  90                  95
Asn Tyr Ser Val Thr Asp Leu Asn Val Gln Arg Lys Ala Ile His Glu
            100                 105                 110
Leu Ile Gln Val Met Ala Glu Leu Ser Pro Ala Ala Lys Thr Gly Lys
        115                 120                 125
Arg Lys Arg Ser Gln Met Leu Phe Arg Gly
    130                 135
```

<210> 57
<211> 233
<212> PRT
<213> Homo sapiens

<220>
<223> tumor necrosis factor (TNF)-alpha

<400> 57
Met Ser Thr Glu Ser Met Ile Arg Asp Val Glu Leu Ala Glu Glu Ala
 1   5   10   15
Leu Pro Lys Lys Thr Gly Gly Pro Gln Gly Ser Arg Arg Cys Leu Phe
            20   25   30
Leu Ser Leu Phe Ser Phe Leu Ile Val Ala Gly Ala Thr Thr Leu Phe
        35   40   45
Cys Leu Leu His Phe Gly Val Ile Gly Pro Gln Arg Glu Glu Phe Pro
    50   55   60
Arg Asp Leu Ser Leu Ile Ser Pro Leu Ala Gln Ala Val Arg Ser Ser
65   70   75   80
Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro
                85   90   95
Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu
            100   105   110
Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser
        115   120   125
Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly
    130   135   140
Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala
145   150   155   160
Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro
                165   170   175
Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu
            180   185   190
Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu
        195   200   205
Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp Phe Ala Glu Ser Gly
    210   215   220
Gln Val Tyr Phe Gly Ile Ile Ala Leu
225   230

<210> 58
<211> 129
<212> PRT
<213> Homo sapiens

<220>
<223> IL-4

<400> 58
His Lys Cys Asp Ile Thr Leu Gln Glu Ile Ile Lys Thr Leu Asn Ser
 1   5   10   15
Leu Thr Glu Gln Lys Thr Leu Cys Thr Glu Leu Thr Val Thr Asp Ile
            20   25   30
Phe Ala Ala Ser Lys Asn Thr Thr Glu Lys Glu Thr Phe Cys Arg Ala
        35   40   45
Ala Thr Val Leu Arg Gln Phe Tyr Ser His His Glu Lys Asp Thr Arg

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

<210> 59
<211> 160
<212> PRT
<213> Homo sapiens

<220>
<223> IL-10

<400> 59

```
Ser Pro Gly Gln Gly Thr Gln Ser Glu Asn Ser Cys Thr His Phe Pro
 1               5                  10                  15
Gly Asn Leu Pro Asn Met Leu Arg Asp Leu Arg Asp Ala Phe Ser Arg
            20                  25                  30
Val Lys Thr Phe Phe Gln Met Lys Asp Gln Leu Asp Asn Leu Leu Leu
        35                  40                  45
Lys Glu Ser Leu Leu Glu Asp Phe Lys Gly Tyr Leu Gly Cys Gln Ala
    50                  55                  60
Leu Ser Glu Met Ile Gln Phe Tyr Leu Glu Glu Val Met Pro Gln Ala
65                  70                  75                  80
Glu Asn Gln Asp Pro Asp Ile Lys Ala His Val Asn Ser Leu Gly Glu
                85                  90                  95
Asn Leu Lys Thr Leu Arg Leu Arg Leu Arg Arg Cys His Arg Phe Leu
            100                 105                 110
Pro Cys Glu Asn Lys Ser Lys Ala Val Glu Gln Val Lys Asn Ala Phe
        115                 120                 125
Asn Lys Leu Gln Glu Lys Gly Ile Tyr Lys Ala Met Ser Glu Phe Asp
    130                 135                 140
Ile Phe Ile Asn Tyr Ile Glu Ala Tyr Met Thr Met Lys Ile Arg Asn
145                 150                 155                 160
```

<210> 60
<211> 165
<212> PRT
<213> Homo sapiens

<220>
<223> interferon (IFN)-alpha2

<400> 60
Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
 1   5   10   15
Leu Leu Ala Gln Met Arg Lys Ile Ser Leu Phe Ser Cys Leu Lys Asp
            20   25   30
Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
        35   40   45
Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
    50   55   60
Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
65   70   75   80
Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
                85   90   95
Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
            100   105   110
Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
        115   120   125
Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
    130   135   140
Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
145   150   155   160
Leu Arg Ser Lys Glu
                165

<210> 61
<211> 165
<212> PRT
<213> Homo sapiens

<220>
<223> interferon (IFN)-beta1

<400> 61
Met Ser Tyr Asp Val Leu Arg Tyr Gln Gln Arg Ser Ser Asn Leu Ala
 1   5   10   15
Cys Gln Lys Leu Leu Gly Gln Leu Pro Gly Thr Pro Gln Tyr Cys Leu
            20   25   30
Glu Asp Arg Met Asn Phe Glu Val Pro Glu Glu Ile Met Gln Pro Pro
        35   40   45
Gln Phe Gln Lys Glu Asp Ala Val Leu Ile Ile His Glu Met Leu Gln
    50   55   60
Gln Ile Phe Gly Ile Leu Arg Arg Asn Phe Ser Ser Thr Gly Trp Asn
65   70   75   80
Glu Thr Val Ile Lys Thr Ile Leu Val Glu Leu Asp Gly Gln Met Asp
                85   90   95
Asp Leu Glu Thr Ile Leu Glu Glu Ile Met Glu Glu Glu Asn Phe Pro
            100   105   110
Arg Gly Asp Met Thr Ile Leu His Leu Lys Lys Tyr Tyr Leu Ser Ile
        115   120   125
Leu Gln Tyr Leu Lys Ser Lys Glu Tyr Arg Ser Cys Ala Trp Thr Val
    130   135   140

Val Gln Val Glu Ile Leu Arg Asn Phe Ser Phe Leu Asn Arg Leu Thr
145 150 155 160
Asp Tyr Leu Arg Asn
165

<210> 62
<211> 197
<212> PRT
<213> Homo sapiens

<220>
<223> IL-12alpha

<400> 62
Arg Asn Leu Pro Val Ala Thr Pro Asp Pro Gly Met Phe Pro Cys Leu
1 5 10 15
His His Ser Gln Asn Leu Leu Arg Ala Val Ser Asn Met Leu Gln Lys
20 25 30
Ala Arg Gln Thr Leu Glu Phe Tyr Pro Cys Thr Ser Glu Glu Ile Asp
35 40 45
His Glu Asp Ile Thr Lys Asp Lys Thr Ser Thr Val Glu Ala Cys Leu
50 55 60
Pro Leu Glu Leu Thr Lys Asn Glu Ser Cys Leu Asn Ser Arg Glu Thr
65 70 75 80
Ser Phe Ile Thr Asn Gly Ser Cys Leu Ala Ser Arg Lys Thr Ser Phe
85 90 95
Met Met Ala Leu Cys Leu Ser Ser Ile Tyr Glu Asp Leu Lys Met Tyr
100 105 110
Gln Val Glu Phe Lys Thr Met Asn Ala Lys Leu Leu Met Asp Pro Lys
115 120 125
Arg Gln Ile Phe Leu Asp Gln Asn Met Leu Ala Val Ile Asp Glu Leu
130 135 140
Met Gln Ala Leu Asn Phe Asn Ser Glu Thr Val Pro Gln Lys Ser Ser
145 150 155 160
Leu Glu Glu Pro Asp Phe Tyr Lys Thr Lys Ile Lys Leu Cys Ile Leu
165 170 175
Leu His Ala Phe Arg Ile Arg Ala Val Thr Ile Asp Arg Val Met Ser
180 185 190
Tyr Leu Asn Ala Ser
195

<210> 63
<211> 306
<212> PRT
<213> Homo sapiens

<220>
<223> IL-12beta

<400> 63

```
Ile Trp Glu Leu Lys Lys Asp Val Tyr Val Val Glu Leu Asp Trp Tyr
 1               5                  10                  15
Pro Asp Ala Pro Gly Glu Met Val Val Leu Thr Cys Asp Thr Pro Glu
            20                  25                  30
Glu Asp Gly Ile Thr Trp Thr Leu Asp Gln Ser Ser Glu Val Leu Gly
        35                  40                  45
Ser Gly Lys Thr Leu Thr Ile Gln Val Lys Glu Phe Gly Asp Ala Gly
    50                  55                  60
Gln Tyr Thr Cys His Lys Gly Gly Glu Val Leu Ser His Ser Leu Leu
65                  70                  75                  80
Leu Leu His Lys Lys Glu Asp Gly Ile Trp Ser Thr Asp Ile Leu Lys
                85                  90                  95
Asp Gln Lys Glu Pro Lys Asn Lys Thr Phe Leu Arg Cys Glu Ala Lys
            100                 105                 110
Asn Tyr Ser Gly Arg Phe Thr Cys Trp Trp Leu Thr Thr Ile Ser Thr
        115                 120                 125
Asp Leu Thr Phe Ser Val Lys Ser Ser Arg Gly Ser Ser Asp Pro Gln
    130                 135                 140
Gly Val Thr Cys Gly Ala Ala Thr Leu Ser Ala Glu Arg Val Arg Gly
145                 150                 155                 160
Asp Asn Lys Glu Tyr Glu Tyr Ser Val Glu Cys Gln Glu Asp Ser Ala
                165                 170                 175
Cys Pro Ala Ala Glu Glu Ser Leu Pro Ile Glu Val Met Val Asp Ala
            180                 185                 190
Val His Lys Leu Lys Tyr Glu Asn Tyr Thr Ser Ser Phe Phe Ile Arg
        195                 200                 205
Asp Ile Ile Lys Pro Asp Pro Pro Lys Asn Leu Gln Leu Lys Pro Leu
    210                 215                 220
Lys Asn Ser Arg Gln Val Glu Val Ser Trp Glu Tyr Pro Asp Thr Trp
225                 230                 235                 240
Ser Thr Pro His Ser Tyr Phe Ser Leu Thr Phe Cys Val Gln Val Gln
                245                 250                 255
Gly Lys Ser Lys Arg Glu Lys Lys Asp Arg Val Phe Thr Asp Lys Thr
            260                 265                 270
Ser Ala Thr Val Ile Cys Arg Lys Asn Ala Ser Ile Ser Val Arg Ala
        275                 280                 285
Gln Asp Arg Tyr Tyr Ser Ser Ser Trp Ser Glu Trp Ala Ser Val Pro
    290                 295                 300
Cys Ser
305


<210> 64
<211> 132
<212> PRT
<213> Homo sapiens

<220>
<223> IL-17

<400> 64
Gly Ile Thr Ile Pro Arg Asn Pro Gly Cys Pro Asn Ser Glu Asp Lys
```

```
 1               5                  10                  15
Asn Phe Pro Arg Thr Val Met Val Asn Leu Asn Ile His Asn Arg Asn
            20                  25                  30
Thr Asn Thr Asn Pro Lys Arg Ser Ser Asp Tyr Tyr Asn Arg Ser Thr
        35                  40                  45
Ser Pro Trp Asn Leu His Arg Asn Glu Asp Pro Glu Arg Tyr Pro Ser
    50                  55                  60
Val Ile Trp Glu Ala Lys Cys Arg His Leu Gly Cys Ile Asn Ala Asp
65                  70                  75                  80
Gly Asn Val Asp Tyr His Met Asn Ser Val Pro Ile Gln Gln Glu Ile
                85                  90                  95
Leu Val Leu Arg Arg Glu Pro Pro His Cys Pro Asn Ser Phe Arg Leu
            100                 105                 110
Glu Lys Ile Leu Val Ser Val Gly Cys Thr Cys Val Thr Pro Ile Val
        115                 120                 125
His His Val Ala
    130
```

<210> 65
<211> 103
<212> PRT
<213> Homo sapiens

<220>
<223> CXCL9

<400> 65

```
Thr Pro Val Val Arg Lys Gly Arg Cys Ser Cys Ile Ser Thr Asn Gln
 1               5                  10                  15
Gly Thr Ile His Leu Gln Ser Leu Lys Asp Leu Lys Gln Phe Ala Pro
            20                  25                  30
Ser Pro Ser Cys Glu Lys Ile Glu Ile Ile Ala Thr Leu Lys Asn Gly
        35                  40                  45
Val Gln Thr Cys Leu Asn Pro Asp Ser Ala Asp Val Lys Glu Leu Ile
    50                  55                  60
Lys Lys Trp Glu Lys Gln Val Ser Gln Lys Lys Lys Gln Lys Asn Gly
65                  70                  75                  80
Lys Lys His Gln Lys Lys Lys Val Leu Lys Val Arg Lys Ser Gln Arg
                85                  90                  95
Ser Arg Gln Lys Lys Thr Thr
            100
```

<210> 66
<211> 77
<212> PRT
<213> Homo sapiens

<220>
<223> CXCL10

<400> 66
Val Pro Leu Ser Arg Thr Val Arg Cys Thr Cys Ile Ser Ile Ser Asn
 1   5   10   15
Gln Pro Val Asn Pro Arg Ser Leu Glu Lys Leu Glu Ile Ile Pro Ala
            20   25   30
Ser Gln Phe Cys Pro Arg Val Glu Ile Ile Ala Thr Met Lys Lys Lys
        35   40   45
Gly Glu Lys Arg Cys Leu Asn Pro Glu Ser Lys Ala Ile Lys Asn Leu
    50   55   60
Leu Lys Ala Val Ser Lys Glu Arg Ser Lys Arg Ser Pro
65   70   75

<210> 67
<211> 77
<212> PRT
<213> Homo sapiens

<220>
<223> CCL19

<400> 67
Gly Thr Asn Asp Ala Glu Asp Cys Cys Leu Ser Val Thr Gln Lys Pro
 1   5   10   15
Ile Pro Gly Tyr Ile Val Arg Asn Phe His Tyr Leu Leu Ile Lys Asp
            20   25   30
Gly Cys Arg Val Pro Ala Val Val Phe Thr Thr Leu Arg Gly Arg Gln
        35   40   45
Leu Cys Ala Pro Pro Asp Gln Pro Trp Val Glu Arg Ile Ile Gln Arg
    50   55   60
Leu Gln Arg Thr Ser Ala Lys Met Lys Arg Arg Ser Ser
65   70   75

<210> 68
<211> 111
<212> PRT
<213> Homo sapiens

<220>
<223> CCL21

<400> 68
Ser Asp Gly Gly Ala Gln Asp Cys Cys Leu Lys Tyr Ser Gln Arg Lys
 1   5   10   15
Ile Pro Ala Lys Val Val Arg Ser Tyr Arg Lys Gln Glu Pro Ser Leu
            20   25   30
Gly Cys Ser Ile Pro Ala Ile Leu Phe Leu Pro Arg Lys Arg Ser Gln
        35   40   45
Ala Glu Leu Cys Ala Asp Pro Lys Glu Leu Trp Val Gln Gln Leu Met
    50   55   60
Gln His Leu Asp Lys Thr Pro Ser Pro Gln Lys Pro Ala Gln Gly Cys

65 70 75 80
Arg Lys Asp Arg Gly Ala Ser Lys Thr Gly Lys Lys Gly Lys Gly Ser
85 90 95
Lys Gly Cys Lys Arg Thr Glu Arg Ser Gln Thr Pro Lys Gly Pro
100 105 110

<210> 69
<211> 127
<212> PRT
<213> Homo sapiens

<220>
<223> CCL25

<400> 69
Gln Gly Val Phe Glu Asp Cys Cys Leu Ala Tyr His Tyr Pro Ile Gly
1 5 10 15
Trp Ala Val Leu Arg Arg Ala Trp Thr Tyr Arg Ile Gln Glu Val Ser
20 25 30
Gly Ser Cys Asn Leu Pro Ala Ala Ile Phe Tyr Leu Pro Lys Arg His
35 40 45
Arg Lys Val Cys Gly Asn Pro Lys Ser Arg Glu Val Gln Arg Ala Met
50 55 60
Lys Leu Leu Asp Ala Arg Asn Lys Val Phe Ala Lys Leu His His Asn
65 70 75 80
Thr Gln Thr Phe Gln Ala Gly Pro His Ala Val Lys Lys Leu Ser Ser
85 90 95
Gly Asn Ser Lys Leu Ser Ser Ser Lys Phe Ser Asn Pro Ile Ser Ser
100 105 110
Ser Lys Arg Asn Val Ser Leu Leu Ile Ser Ala Asn Ser Gly Leu
115 120 125

<210> 70
<211> 4
<212> PRT
<213> Homo sapiens

<220>
<223> Linker peptide

<400> 70
Gly Gly Gly Ser
1

<210> 71
<211> 1145
<212> PRT
<213> Homo sapiens

<220>
<223> LFA-1alpha

<400> 71

```
Tyr Asn Leu Asp Val Arg Gly Ala Arg Ser Phe Ser Pro Pro Arg Ala
 1               5                  10                  15
Gly Arg His Phe Gly Tyr Arg Val Leu Gln Val Gly Asn Gly Val Ile
            20                  25                  30
Val Gly Ala Pro Gly Glu Gly Asn Ser Thr Gly Ser Leu Tyr Gln Cys
        35                  40                  45
Gln Ser Gly Thr Gly His Cys Leu Pro Val Thr Leu Arg Gly Ser Asn
    50                  55                  60
Tyr Thr Ser Lys Tyr Leu Gly Met Thr Leu Ala Thr Asp Pro Thr Asp
65                  70                  75                  80
Gly Ser Ile Leu Ala Cys Asp Pro Gly Leu Ser Arg Thr Cys Asp Gln
                85                  90                  95
Asn Thr Tyr Leu Ser Gly Leu Cys Tyr Leu Phe Arg Gln Asn Leu Gln
            100                 105                 110
Gly Pro Met Leu Gln Gly Arg Pro Gly Phe Gln Glu Cys Ile Lys Gly
        115                 120                 125
Asn Val Asp Leu Val Phe Leu Phe Asp Gly Ser Met Ser Leu Gln Pro
    130                 135                 140
Asp Glu Phe Gln Lys Ile Leu Asp Phe Met Lys Asp Val Met Lys Lys
145                 150                 155                 160
Leu Ser Asn Thr Ser Tyr Gln Phe Ala Ala Val Gln Phe Ser Thr Ser
                165                 170                 175
Tyr Lys Thr Glu Phe Asp Phe Ser Asp Tyr Val Lys Arg Lys Asp Pro
            180                 185                 190
Asp Ala Leu Leu Lys His Val Lys His Met Leu Leu Leu Thr Asn Thr
        195                 200                 205
Phe Gly Ala Ile Asn Tyr Val Ala Thr Glu Val Phe Arg Glu Glu Leu
    210                 215                 220
Gly Ala Arg Pro Asp Ala Thr Lys Val Leu Ile Ile Ile Thr Asp Gly
225                 230                 235                 240
Glu Ala Thr Asp Ser Gly Asn Ile Asp Ala Ala Lys Asp Ile Ile Arg
                245                 250                 255
Tyr Ile Ile Gly Ile Gly Lys His Phe Gln Thr Lys Glu Ser Gln Glu
            260                 265                 270
Thr Leu His Lys Phe Ala Ser Lys Pro Ala Ser Glu Phe Val Lys Ile
        275                 280                 285
Leu Asp Thr Phe Glu Lys Leu Lys Asp Leu Phe Thr Glu Leu Gln Lys
    290                 295                 300
Lys Ile Tyr Val Ile Glu Gly Thr Ser Lys Gln Asp Leu Thr Ser Phe
305                 310                 315                 320
Asn Met Glu Leu Ser Ser Ser Gly Ile Ser Ala Asp Leu Ser Arg Gly
                325                 330                 335
His Ala Val Val Gly Ala Val Gly Ala Lys Asp Trp Ala Gly Gly Phe
            340                 345                 350
Leu Asp Leu Lys Ala Asp Leu Gln Asp Asp Thr Phe Ile Gly Asn Glu
        355                 360                 365
Pro Leu Thr Pro Glu Val Arg Ala Gly Tyr Leu Gly Tyr Thr Val Thr
```

```
    370                 375                 380
Trp Leu Pro Ser Arg Gln Lys Thr Ser Leu Leu Ala Ser Gly Ala Pro
385                 390                 395                 400
Arg Tyr Gln His Met Gly Arg Val Leu Leu Phe Gln Glu Pro Gln Gly
                405                 410                 415
Gly Gly His Trp Ser Gln Val Gln Thr Ile His Gly Thr Gln Ile Gly
            420                 425                 430
Ser Tyr Phe Gly Gly Glu Leu Cys Gly Val Asp Val Asp Gln Asp Gly
        435                 440                 445
Glu Thr Glu Leu Leu Leu Ile Gly Ala Pro Leu Phe Tyr Gly Glu Gln
    450                 455                 460
Arg Gly Gly Arg Val Phe Ile Tyr Gln Arg Arg Gln Leu Gly Phe Glu
465                 470                 475                 480
Glu Val Ser Glu Leu Gln Gly Asp Pro Gly Tyr Pro Leu Gly Arg Phe
                485                 490                 495
Gly Glu Ala Ile Thr Ala Leu Thr Asp Ile Asn Gly Asp Gly Leu Val
            500                 505                 510
Asp Val Ala Val Gly Ala Pro Leu Glu Glu Gln Gly Ala Val Tyr Ile
        515                 520                 525
Phe Asn Gly Arg His Gly Gly Leu Ser Pro Gln Pro Ser Gln Arg Ile
    530                 535                 540
Glu Gly Thr Gln Val Leu Ser Gly Ile Gln Trp Phe Gly Arg Ser Ile
545                 550                 555                 560
His Gly Val Lys Asp Leu Glu Gly Asp Gly Leu Ala Asp Val Ala Val
                565                 570                 575
Gly Ala Glu Ser Gln Met Ile Val Leu Ser Ser Arg Pro Val Val Asp
            580                 585                 590
Met Val Thr Leu Met Ser Phe Ser Pro Ala Glu Ile Pro Val His Glu
        595                 600                 605
Val Glu Cys Ser Tyr Ser Thr Ser Asn Lys Met Lys Glu Gly Val Asn
    610                 615                 620
Ile Thr Ile Cys Phe Gln Ile Lys Ser Leu Ile Pro Gln Phe Gln Gly
625                 630                 635                 640
Arg Leu Val Ala Asn Leu Thr Tyr Thr Leu Gln Leu Asp Gly His Arg
                645                 650                 655
Thr Arg Arg Arg Gly Leu Phe Pro Gly Gly Arg His Glu Leu Arg Arg
            660                 665                 670
Asn Ile Ala Val Thr Thr Ser Met Ser Cys Thr Asp Phe Ser Phe His
        675                 680                 685
Phe Pro Val Cys Val Gln Asp Leu Ile Ser Pro Ile Asn Val Ser Leu
    690                 695                 700
Asn Phe Ser Leu Trp Glu Glu Glu Gly Thr Pro Arg Asp Gln Arg Ala
705                 710                 715                 720
Gln Gly Lys Asp Ile Pro Pro Ile Leu Arg Pro Ser Leu His Ser Glu
                725                 730                 735
Thr Trp Glu Ile Pro Phe Glu Lys Asn Cys Gly Glu Asp Lys Lys Cys
            740                 745                 750
Glu Ala Asn Leu Arg Val Ser Phe Ser Pro Ala Arg Ser Arg Ala Leu
        755                 760                 765
Arg Leu Thr Ala Phe Ala Ser Leu Ser Val Glu Leu Ser Leu Ser Asn
    770                 775                 780
Leu Glu Glu Asp Ala Tyr Trp Val Gln Leu Asp Leu His Phe Pro Pro
```

785 790 795 800
Gly Leu Ser Phe Arg Lys Val Glu Met Leu Lys Pro His Ser Gln Ile
805 810 815
Pro Val Ser Cys Glu Glu Leu Pro Glu Glu Ser Arg Leu Leu Ser Arg
820 825 830
Ala Leu Ser Cys Asn Val Ser Ser Pro Ile Phe Lys Ala Gly His Ser
835 840 845
Val Ala Leu Gln Met Met Phe Asn Thr Leu Val Asn Ser Ser Trp Gly
850 855 860
Asp Ser Val Glu Leu His Ala Asn Val Thr Cys Asn Asn Glu Asp Ser
865 870 875 880
Asp Leu Leu Glu Asp Asn Ser Ala Thr Thr Ile Ile Pro Ile Leu Tyr
885 890 895
Pro Ile Asn Ile Leu Ile Gln Asp Gln Glu Asp Ser Thr Leu Tyr Val
900 905 910
Ser Phe Thr Pro Lys Gly Pro Lys Ile His Gln Val Lys His Met Tyr
915 920 925
Gln Val Arg Ile Gln Pro Ser Ile His Asp His Asn Ile Pro Thr Leu
930 935 940
Glu Ala Val Val Gly Val Pro Gln Pro Pro Ser Glu Gly Pro Ile Thr
945 950 955 960
His Gln Trp Ser Val Gln Met Glu Pro Pro Val Pro Cys His Tyr Glu
965 970 975
Asp Leu Glu Arg Leu Pro Asp Ala Ala Glu Pro Cys Leu Pro Gly Ala
980 985 990
Leu Phe Arg Cys Pro Val Val Phe Arg Gln Glu Ile Leu Val Gln Val
995 1000 1005
Ile Gly Thr Leu Glu Leu Val Gly Glu Ile Glu Ala Ser Ser Met Phe
1010 1015 1020
Ser Leu Cys Ser Ser Leu Ser Ile Ser Phe Asn Ser Ser Lys His Phe
1025 1030 1035 1040
His Leu Tyr Gly Ser Asn Ala Ser Leu Ala Gln Val Val Met Lys Val
1045 1050 1055
Asp Val Val Tyr Glu Lys Gln Met Leu Tyr Leu Tyr Val Leu Ser Gly
1060 1065 1070
Ile Gly Gly Leu Leu Leu Leu Leu Leu Ile Phe Ile Val Leu Tyr Lys
1075 1080 1085
Val Gly Phe Phe Lys Arg Asn Leu Lys Glu Lys Met Glu Ala Gly Arg
1090 1095 1100
Gly Val Pro Asn Gly Ile Pro Ala Glu Asp Ser Glu Gln Leu Ala Ser
1105 1110 1115 1120
Gly Gln Glu Ala Gly Asp Pro Gly Cys Leu Lys Pro Leu His Glu Lys
1125 1130 1135
Asp Ser Glu Ser Gly Gly Gly Lys Asp
1140 1145

<210> 72
<211> 747
<212> PRT
<213> Homo sapiens

<220>
<223> LFA-1beta

<400> 72

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Gln Glu Cys Thr Lys Phe Lys Val Ser Ser Cys Arg Glu Cys Ile Glu
 1               5                  10                  15
Ser Gly Pro Gly Cys Thr Trp Cys Gln Lys Leu Asn Phe Thr Gly Pro
            20                  25                  30
Gly Asp Pro Asp Ser Ile Arg Cys Asp Thr Arg Pro Gln Leu Leu Met
        35                  40                  45
Arg Gly Cys Ala Ala Asp Asp Ile Met Asp Pro Thr Ser Leu Ala Glu
    50                  55                  60
Thr Gln Glu Asp His Asn Gly Gly Gln Lys Gln Leu Ser Pro Gln Lys
65                  70                  75                  80
Val Thr Leu Tyr Leu Arg Pro Gly Gln Ala Ala Ala Phe Asn Val Thr
                85                  90                  95
Phe Arg Arg Ala Lys Gly Tyr Pro Ile Asp Leu Tyr Tyr Leu Met Asp
            100                 105                 110
Leu Ser Tyr Ser Met Leu Asp Asp Leu Arg Asn Val Lys Lys Leu Gly
        115                 120                 125
Gly Asp Leu Leu Arg Ala Leu Asn Glu Ile Thr Glu Ser Gly Arg Ile
    130                 135                 140
Gly Phe Gly Ser Phe Val Asp Lys Thr Val Leu Pro Phe Val Asn Thr
145                 150                 155                 160
His Pro Asp Lys Leu Arg Asn Pro Cys Pro Asn Lys Glu Lys Glu Cys
                165                 170                 175
Gln Pro Pro Phe Ala Phe Arg His Val Leu Lys Leu Thr Asn Asn Ser
            180                 185                 190
Asn Gln Phe Gln Thr Glu Val Gly Lys Gln Leu Ile Ser Gly Asn Leu
        195                 200                 205
Asp Ala Pro Glu Gly Gly Leu Asp Ala Met Met Gln Val Ala Ala Cys
    210                 215                 220
Pro Glu Glu Ile Gly Trp Arg Asn Val Thr Arg Leu Leu Val Phe Ala
225                 230                 235                 240
Thr Asp Asp Gly Phe His Phe Ala Gly Asp Gly Lys Leu Gly Ala Ile
                245                 250                 255
Leu Thr Pro Asn Asp Gly Arg Cys His Leu Glu Asp Asn Leu Tyr Lys
            260                 265                 270
Arg Ser Asn Glu Phe Asp Tyr Pro Ser Val Gly Gln Leu Ala His Lys
        275                 280                 285
Leu Ala Glu Asn Asn Ile Gln Pro Ile Phe Ala Val Thr Ser Arg Met
    290                 295                 300
Val Lys Thr Tyr Glu Lys Leu Thr Glu Ile Ile Pro Lys Ser Ala Val
305                 310                 315                 320
Gly Glu Leu Ser Glu Asp Ser Ser Asn Val Val Gln Leu Ile Lys Asn
                325                 330                 335
Ala Tyr Asn Lys Leu Ser Ser Arg Val Phe Leu Asp His Asn Ala Leu
            340                 345                 350
Pro Asp Thr Leu Lys Val Thr Tyr Asp Ser Phe Cys Ser Asn Gly Val
        355                 360                 365
Thr His Arg Asn Gln Pro Arg Gly Asp Cys Asp Gly Val Gln Ile Asn
    370                 375                 380
```

```
Val Pro Ile Thr Phe Gln Val Lys Val Thr Ala Thr Glu Cys Ile Gln
385                 390                 395                 400
Glu Gln Ser Phe Val Ile Arg Ala Leu Gly Phe Thr Asp Ile Val Thr
                405                 410                 415
Val Gln Val Leu Pro Gln Cys Glu Cys Arg Cys Arg Asp Gln Ser Arg
            420                 425                 430
Asp Arg Ser Leu Cys His Gly Lys Gly Phe Leu Glu Cys Gly Ile Cys
        435                 440                 445
Arg Cys Asp Thr Gly Tyr Ile Gly Lys Asn Cys Glu Cys Gln Thr Gln
    450                 455                 460
Gly Arg Ser Ser Gln Glu Leu Glu Gly Ser Cys Arg Lys Asp Asn Asn
465                 470                 475                 480
Ser Ile Ile Cys Ser Gly Leu Gly Asp Cys Val Cys Gly Gln Cys Leu
                485                 490                 495
Cys His Thr Ser Asp Val Pro Gly Lys Leu Ile Tyr Gly Gln Tyr Cys
            500                 505                 510
Glu Cys Asp Thr Ile Asn Cys Glu Arg Tyr Asn Gly Gln Val Cys Gly
        515                 520                 525
Gly Pro Gly Arg Gly Leu Cys Phe Cys Gly Lys Cys Arg Cys His Pro
    530                 535                 540
Gly Phe Glu Gly Ser Ala Cys Gln Cys Glu Arg Thr Thr Glu Gly Cys
545                 550                 555                 560
Leu Asn Pro Arg Arg Val Glu Cys Ser Gly Arg Gly Arg Cys Arg Cys
                565                 570                 575
Asn Val Cys Glu Cys His Ser Gly Tyr Gln Leu Pro Leu Cys Gln Glu
            580                 585                 590
Cys Pro Gly Cys Pro Ser Pro Cys Gly Lys Tyr Ile Ser Cys Ala Glu
        595                 600                 605
Cys Leu Lys Phe Glu Lys Gly Pro Phe Gly Lys Asn Cys Ser Ala Ala
    610                 615                 620
Cys Pro Gly Leu Gln Leu Ser Asn Asn Pro Val Lys Gly Arg Thr Cys
625                 630                 635                 640
Lys Glu Arg Asp Ser Glu Gly Cys Trp Val Ala Tyr Thr Leu Glu Gln
                645                 650                 655
Gln Asp Gly Met Asp Arg Tyr Leu Ile Tyr Val Asp Glu Ser Arg Glu
            660                 665                 670
Cys Val Ala Gly Pro Asn Ile Ala Ala Ile Val Gly Gly Thr Val Ala
        675                 680                 685
Gly Ile Val Leu Ile Gly Ile Leu Leu Leu Val Ile Trp Lys Ala Leu
    690                 695                 700
Ile His Leu Ser Asp Leu Arg Glu Tyr Arg Arg Phe Glu Lys Glu Lys
705                 710                 715                 720
Leu Lys Ser Gln Trp Asn Asn Asp Asn Pro Leu Phe Lys Ser Ala Thr
                725                 730                 735
Thr Thr Val Met Asn Pro Lys Phe Ala Glu Ser
            740                 745
```

<210> 73
<211> 344
<212> PRT
<213> Homo sapiens

<220>
<223> L-selectin

<400> 73
Asp Phe Leu Ala His His Gly Thr Asp Cys Trp Thr Tyr His Tyr Ser
 1   5   10   15
Glu Lys Pro Met Asn Trp Gln Arg Ala Arg Arg Phe Cys Arg Asp Asn
            20   25   30
Tyr Thr Asp Leu Val Ala Ile Gln Asn Lys Ala Glu Ile Glu Tyr Leu
        35   40   45
Glu Lys Thr Leu Pro Phe Ser Arg Ser Tyr Tyr Trp Ile Gly Ile Arg
    50   55   60
Lys Ile Gly Gly Ile Trp Thr Trp Val Gly Thr Asn Lys Ser Leu Thr
65   70   75   80
Glu Glu Ala Glu Asn Trp Gly Asp Gly Glu Pro Asn Asn Lys Lys Asn
                85   90   95
Lys Glu Asp Cys Val Glu Ile Tyr Ile Lys Arg Asn Lys Asp Ala Gly
            100   105   110
Lys Trp Asn Asp Asp Ala Cys His Lys Leu Lys Ala Ala Leu Cys Tyr
        115   120   125
Thr Ala Ser Cys Gln Pro Trp Ser Cys Ser Gly His Gly Glu Cys Val
    130   135   140
Glu Ile Ile Asn Asn Tyr Thr Cys Asn Cys Asp Val Gly Tyr Tyr Gly
145   150   155   160
Pro Gln Cys Gln Phe Val Ile Gln Cys Glu Pro Leu Glu Ala Pro Glu
                165   170   175
Leu Gly Thr Met Asp Cys Thr His Pro Leu Gly Asn Phe Ser Phe Ser
            180   185   190
Ser Gln Cys Ala Phe Ser Cys Ser Glu Gly Thr Asn Leu Thr Gly Ile
        195   200   205
Glu Glu Thr Thr Cys Gly Pro Phe Gly Asn Trp Ser Ser Pro Glu Pro
    210   215   220
Thr Cys Gln Val Ile Gln Cys Glu Pro Leu Ser Ala Pro Asp Leu Gly
225   230   235   240
Ile Met Asn Cys Ser His Pro Leu Ala Ser Phe Ser Phe Thr Ser Ala
                245   250   255
Cys Thr Phe Ile Cys Ser Glu Gly Thr Glu Leu Ile Gly Lys Lys Lys
            260   265   270
Thr Ile Cys Glu Ser Ser Gly Ile Trp Ser Asn Pro Ser Pro Ile Cys
        275   280   285
Gln Lys Leu Asp Lys Ser Phe Ser Met Ile Lys Glu Gly Asp Tyr Asn
    290   295   300
Pro Leu Phe Ile Pro Val Ala Val Met Val Thr Ala Phe Ser Gly Leu
305   310   315   320
Ala Phe Ile Ile Trp Leu Ala Arg Arg Leu Lys Lys Gly Lys Lys Ser
                325   330   335
Lys Arg Ser Met Asn Asp Pro Tyr
            340

<210> 74

<211> 715
<212> PRT
<213> Homo sapiens

<220>
<223> VCAM-1

<400> 74

```
Phe Lys Ile Glu Thr Thr Pro Glu Ser Arg Tyr Leu Ala Gln Ile Gly
 1               5                  10                  15
Asp Ser Val Ser Leu Thr Cys Ser Thr Thr Gly Cys Glu Ser Pro Phe
            20                  25                  30
Phe Ser Trp Arg Thr Gln Ile Asp Ser Pro Leu Asn Gly Lys Val Thr
        35                  40                  45
Asn Glu Gly Thr Thr Ser Thr Leu Thr Met Asn Pro Val Ser Phe Gly
    50                  55                  60
Asn Glu His Ser Tyr Leu Cys Thr Ala Thr Cys Glu Ser Arg Lys Leu
65                  70                  75                  80
Glu Lys Gly Ile Gln Val Glu Ile Tyr Ser Phe Pro Lys Asp Pro Glu
                85                  90                  95
Ile His Leu Ser Gly Pro Leu Glu Ala Gly Lys Pro Ile Thr Val Lys
            100                 105                 110
Cys Ser Val Ala Asp Val Tyr Pro Phe Asp Arg Leu Glu Ile Asp Leu
        115                 120                 125
Leu Lys Gly Asp His Leu Met Lys Ser Gln Glu Phe Leu Glu Asp Ala
    130                 135                 140
Asp Arg Lys Ser Leu Glu Thr Lys Ser Leu Glu Val Thr Phe Thr Pro
145                 150                 155                 160
Val Ile Glu Asp Ile Gly Lys Val Leu Val Cys Arg Ala Lys Leu His
                165                 170                 175
Ile Asp Glu Met Asp Ser Val Pro Thr Val Arg Gln Ala Val Lys Glu
            180                 185                 190
Leu Gln Val Tyr Ile Ser Pro Lys Asn Thr Val Ile Ser Val Asn Pro
        195                 200                 205
Ser Thr Lys Leu Gln Glu Gly Gly Ser Val Thr Met Thr Cys Ser Ser
    210                 215                 220
Glu Gly Leu Pro Ala Pro Glu Ile Phe Trp Ser Lys Lys Leu Asp Asn
225                 230                 235                 240
Gly Asn Leu Gln His Leu Ser Gly Asn Ala Thr Leu Thr Leu Ile Ala
                245                 250                 255
Met Arg Met Glu Asp Ser Gly Ile Tyr Val Cys Glu Gly Val Asn Leu
            260                 265                 270
Ile Gly Lys Asn Arg Lys Glu Val Glu Leu Ile Val Gln Glu Lys Pro
        275                 280                 285
Phe Thr Val Glu Ile Ser Pro Gly Pro Arg Ile Ala Ala Gln Ile Gly
    290                 295                 300
Asp Ser Val Met Leu Thr Cys Ser Val Met Gly Cys Glu Ser Pro Ser
305                 310                 315                 320
Phe Ser Trp Arg Thr Gln Ile Asp Ser Pro Leu Ser Gly Lys Val Arg
                325                 330                 335
Ser Glu Gly Thr Asn Ser Thr Leu Thr Leu Ser Pro Val Ser Phe Glu
            340                 345                 350
```

```
Asn Glu His Ser Tyr Leu Cys Thr Val Thr Cys Gly His Lys Lys Leu
        355                 360                 365
Glu Lys Gly Ile Gln Val Glu Leu Tyr Ser Phe Pro Arg Asp Pro Glu
    370                 375                 380
Ile Glu Met Ser Gly Gly Leu Val Asn Gly Ser Ser Val Thr Val Ser
385                 390                 395                 400
Cys Lys Val Pro Ser Val Tyr Pro Leu Asp Arg Leu Glu Ile Glu Leu
                405                 410                 415
Leu Lys Gly Glu Thr Ile Leu Glu Asn Ile Glu Phe Leu Glu Asp Thr
            420                 425                 430
Asp Met Lys Ser Leu Glu Asn Lys Ser Leu Glu Met Thr Phe Ile Pro
        435                 440                 445
Thr Ile Glu Asp Thr Gly Lys Ala Leu Val Cys Gln Ala Lys Leu His
    450                 455                 460
Ile Asp Asp Met Glu Phe Glu Pro Lys Gln Arg Gln Ser Thr Gln Thr
465                 470                 475                 480
Leu Tyr Val Asn Val Ala Pro Arg Asp Thr Thr Val Leu Val Ser Pro
                485                 490                 495
Ser Ser Ile Leu Glu Glu Gly Ser Ser Val Asn Met Thr Cys Leu Ser
            500                 505                 510
Gln Gly Phe Pro Ala Pro Lys Ile Leu Trp Ser Arg Gln Leu Pro Asn
        515                 520                 525
Gly Glu Leu Gln Pro Leu Ser Glu Asn Ala Thr Leu Thr Leu Ile Ser
    530                 535                 540
Thr Lys Met Glu Asp Ser Gly Val Tyr Leu Cys Glu Gly Ile Asn Gln
545                 550                 555                 560
Ala Gly Arg Ser Arg Lys Glu Val Glu Leu Ile Ile Gln Val Thr Pro
                565                 570                 575
Lys Asp Ile Lys Leu Thr Ala Phe Pro Ser Glu Ser Val Lys Glu Gly
            580                 585                 590
Asp Thr Val Ile Ile Ser Cys Thr Cys Gly Asn Val Pro Glu Thr Trp
        595                 600                 605
Ile Ile Leu Lys Lys Lys Ala Glu Thr Gly Asp Thr Val Leu Lys Ser
    610                 615                 620
Ile Asp Gly Ala Tyr Thr Ile Arg Lys Ala Gln Leu Lys Asp Ala Gly
625                 630                 635                 640
Val Tyr Glu Cys Glu Ser Lys Asn Lys Val Gly Ser Gln Leu Arg Ser
                645                 650                 655
Leu Thr Leu Asp Val Gln Gly Arg Glu Asn Asn Lys Asp Tyr Phe Ser
            660                 665                 670
Pro Glu Leu Leu Val Leu Tyr Phe Ala Ser Ser Leu Ile Ile Pro Ala
        675                 680                 685
Ile Gly Met Ile Ile Tyr Phe Ala Arg Lys Ala Asn Met Lys Gly Ser
    690                 695                 700
Tyr Ser Leu Val Glu Ala Gln Lys Ser Lys Val
705                 710                 715
```

<210> 75
<211> 999
<212> PRT
<213> Homo sapiens

<220>
<223> VLA-4

<400> 75
```
Tyr Asn Val Asp Thr Glu Ser Ala Leu Leu Tyr Gln Gly Pro His Asn
 1               5                  10                  15
Thr Leu Phe Gly Tyr Ser Val Val Leu His Ser His Gly Ala Asn Arg
            20                  25                  30
Trp Leu Leu Val Gly Ala Pro Thr Ala Asn Trp Leu Ala Asn Ala Ser
        35                  40                  45
Val Ile Asn Pro Gly Ala Ile Tyr Arg Cys Arg Ile Gly Lys Asn Pro
    50                  55                  60
Gly Gln Thr Cys Glu Gln Leu Gln Leu Gly Ser Pro Asn Gly Glu Pro
65                  70                  75                  80
Cys Gly Lys Thr Cys Leu Glu Glu Arg Asp Asn Gln Trp Leu Gly Val
                85                  90                  95
Thr Leu Ser Arg Gln Pro Gly Glu Asn Gly Ser Ile Val Thr Cys Gly
            100                 105                 110
His Arg Trp Lys Asn Ile Phe Tyr Ile Lys Asn Glu Asn Lys Leu Pro
        115                 120                 125
Thr Gly Gly Cys Tyr Gly Val Pro Pro Asp Leu Arg Thr Glu Leu Ser
    130                 135                 140
Lys Arg Ile Ala Pro Cys Tyr Gln Asp Tyr Val Lys Lys Phe Gly Glu
145                 150                 155                 160
Asn Phe Ala Ser Cys Gln Ala Gly Ile Ser Ser Phe Tyr Thr Lys Asp
                165                 170                 175
Leu Ile Val Met Gly Ala Pro Gly Ser Ser Tyr Trp Thr Gly Ser Leu
            180                 185                 190
Phe Val Tyr Asn Ile Thr Thr Asn Lys Tyr Lys Ala Phe Leu Asp Lys
        195                 200                 205
Gln Asn Gln Val Lys Phe Gly Ser Tyr Leu Gly Tyr Ser Val Gly Ala
    210                 215                 220
Gly His Phe Arg Ser Gln His Thr Thr Glu Val Val Gly Gly Ala Pro
225                 230                 235                 240
Gln His Glu Gln Ile Gly Lys Ala Tyr Ile Phe Ser Ile Asp Glu Lys
                245                 250                 255
Glu Leu Asn Ile Leu His Glu Met Lys Gly Lys Lys Leu Gly Ser Tyr
            260                 265                 270
Phe Gly Ala Ser Val Cys Ala Val Asp Leu Asn Ala Asp Gly Phe Ser
        275                 280                 285
Asp Leu Leu Val Gly Ala Pro Met Gln Ser Thr Ile Arg Glu Glu Gly
    290                 295                 300
Arg Val Phe Val Tyr Ile Asn Ser Gly Ser Gly Ala Val Met Asn Ala
305                 310                 315                 320
Met Glu Thr Asn Leu Val Gly Ser Asp Lys Tyr Ala Ala Arg Phe Gly
                325                 330                 335
Glu Ser Ile Val Asn Leu Gly Asp Ile Asp Asn Asp Gly Phe Glu Asp
            340                 345                 350
Val Ala Ile Gly Ala Pro Gln Glu Asp Asp Leu Gln Gly Ala Ile Tyr
        355                 360                 365
Ile Tyr Asn Gly Arg Ala Asp Gly Ile Ser Ser Thr Phe Ser Gln Arg
```

```
    370                 375                 380
Ile Glu Gly Leu Gln Ile Ser Lys Ser Leu Ser Met Phe Gly Gln Ser
385                 390                 395                 400
Ile Ser Gly Gln Ile Asp Ala Asp Asn Asn Gly Tyr Val Asp Val Ala
                405                 410                 415
Val Gly Ala Phe Arg Ser Asp Ser Ala Val Leu Leu Arg Thr Arg Pro
            420                 425                 430
Val Val Ile Val Asp Ala Ser Leu Ser His Pro Glu Ser Val Asn Arg
        435                 440                 445
Thr Lys Phe Asp Cys Val Glu Asn Gly Trp Pro Ser Val Cys Ile Asp
    450                 455                 460
Leu Thr Leu Cys Phe Ser Tyr Lys Gly Lys Glu Val Pro Gly Tyr Ile
465                 470                 475                 480
Val Leu Phe Tyr Asn Met Ser Leu Asp Val Asn Arg Lys Ala Glu Ser
                485                 490                 495
Pro Pro Arg Phe Tyr Phe Ser Ser Asn Gly Thr Ser Asp Val Ile Thr
            500                 505                 510
Gly Ser Ile Gln Val Ser Ser Arg Glu Ala Asn Cys Arg Thr His Gln
        515                 520                 525
Ala Phe Met Arg Lys Asp Val Arg Asp Ile Leu Thr Pro Ile Gln Ile
    530                 535                 540
Glu Ala Ala Tyr His Leu Gly Pro His Val Ile Ser Lys Arg Ser Thr
545                 550                 555                 560
Glu Glu Phe Pro Pro Leu Gln Pro Ile Leu Gln Gln Lys Lys Glu Lys
                565                 570                 575
Asp Ile Met Lys Lys Thr Ile Asn Phe Ala Arg Phe Cys Ala His Glu
            580                 585                 590
Asn Cys Ser Ala Asp Leu Gln Val Ser Ala Lys Ile Gly Phe Leu Lys
        595                 600                 605
Pro His Glu Asn Lys Thr Tyr Leu Ala Val Gly Ser Met Lys Thr Leu
    610                 615                 620
Met Leu Asn Val Ser Leu Phe Asn Ala Gly Asp Asp Ala Tyr Glu Thr
625                 630                 635                 640
Thr Leu His Val Lys Leu Pro Val Gly Leu Tyr Phe Ile Lys Ile Leu
                645                 650                 655
Glu Leu Glu Glu Lys Gln Ile Asn Cys Glu Val Thr Asp Asn Ser Gly
            660                 665                 670
Val Val Gln Leu Asp Cys Ser Ile Gly Tyr Ile Tyr Val Asp His Leu
        675                 680                 685
Ser Arg Ile Asp Ile Ser Phe Leu Leu Asp Val Ser Ser Leu Ser Arg
    690                 695                 700
Ala Glu Glu Asp Leu Ser Ile Thr Val His Ala Thr Cys Glu Asn Glu
705                 710                 715                 720
Glu Glu Met Asp Asn Leu Lys His Ser Arg Val Thr Val Ala Ile Pro
                725                 730                 735
Leu Lys Tyr Glu Val Lys Leu Thr Val His Gly Phe Val Asn Pro Thr
            740                 745                 750
Ser Phe Val Tyr Gly Ser Asn Asp Glu Asn Glu Pro Glu Thr Cys Met
        755                 760                 765
Val Glu Lys Met Asn Leu Thr Phe His Val Ile Asn Thr Gly Asn Ser
    770                 775                 780
Met Ala Pro Asn Val Ser Val Glu Ile Met Val Pro Asn Ser Phe Ser
```

785 790 795 800
Pro Gln Thr Asp Lys Leu Phe Asn Ile Leu Asp Val Gln Thr Thr Thr
805 810 815
Gly Glu Cys His Phe Glu Asn Tyr Gln Arg Val Cys Ala Leu Glu Gln
820 825 830
Gln Lys Ser Ala Met Gln Thr Leu Lys Gly Ile Val Arg Phe Leu Ser
835 840 845
Lys Thr Asp Lys Arg Leu Leu Tyr Cys Ile Lys Ala Asp Pro His Cys
850 855 860
Leu Asn Phe Leu Cys Asn Phe Gly Lys Met Glu Ser Gly Lys Glu Ala
865 870 875 880
Ser Val His Ile Gln Leu Glu Gly Arg Pro Ser Ile Leu Glu Met Asp
885 890 895
Glu Thr Ser Ala Leu Lys Phe Glu Ile Arg Ala Thr Gly Phe Pro Glu
900 905 910
Pro Asn Pro Arg Val Ile Glu Leu Asn Lys Asp Glu Asn Val Ala His
915 920 925
Val Leu Leu Glu Gly Leu His His Gln Arg Pro Lys Arg Tyr Phe Thr
930 935 940
Ile Val Ile Ile Ser Ser Ser Leu Leu Leu Gly Leu Ile Val Leu Leu
945 950 955 960
Leu Ile Ser Tyr Val Met Trp Lys Ala Gly Phe Phe Lys Arg Gln Tyr
965 970 975
Lys Ser Ile Leu Gln Glu Glu Asn Arg Arg Asp Ser Trp Ser Tyr Ile
980 985 990
Asn Ser Lys Ser Asn Asp Asp
995

<210> 76
<211> 1065
<212> PRT
<213> Homo sapiens

<220>
<223> LFA-1alpha Extracellular domain (ECD)

<400> 76
Tyr Asn Leu Asp Val Arg Gly Ala Arg Ser Phe Ser Pro Pro Arg Ala
1 5 10 15
Gly Arg His Phe Gly Tyr Arg Val Leu Gln Val Gly Asn Gly Val Ile
20 25 30
Val Gly Ala Pro Gly Glu Gly Asn Ser Thr Gly Ser Leu Tyr Gln Cys
35 40 45
Gln Ser Gly Thr Gly His Cys Leu Pro Val Thr Leu Arg Gly Ser Asn
50 55 60
Tyr Thr Ser Lys Tyr Leu Gly Met Thr Leu Ala Thr Asp Pro Thr Asp
65 70 75 80
Gly Ser Ile Leu Ala Cys Asp Pro Gly Leu Ser Arg Thr Cys Asp Gln
85 90 95
Asn Thr Tyr Leu Ser Gly Leu Cys Tyr Leu Phe Arg Gln Asn Leu Gln
100 105 110

```
Gly Pro Met Leu Gln Gly Arg Pro Gly Phe Gln Glu Cys Ile Lys Gly
        115                 120                 125
Asn Val Asp Leu Val Phe Leu Phe Asp Gly Ser Met Ser Leu Gln Pro
    130                 135                 140
Asp Glu Phe Gln Lys Ile Leu Asp Phe Met Lys Asp Val Met Lys Lys
145                 150                 155                 160
Leu Ser Asn Thr Ser Tyr Gln Phe Ala Ala Val Gln Phe Ser Thr Ser
                165                 170                 175
Tyr Lys Thr Glu Phe Asp Phe Ser Asp Tyr Val Lys Arg Lys Asp Pro
            180                 185                 190
Asp Ala Leu Leu Lys His Val Lys His Met Leu Leu Leu Thr Asn Thr
        195                 200                 205
Phe Gly Ala Ile Asn Tyr Val Ala Thr Glu Val Phe Arg Glu Glu Leu
    210                 215                 220
Gly Ala Arg Pro Asp Ala Thr Lys Val Leu Ile Ile Ile Thr Asp Gly
225                 230                 235                 240
Glu Ala Thr Asp Ser Gly Asn Ile Asp Ala Ala Lys Asp Ile Ile Arg
                245                 250                 255
Tyr Ile Ile Gly Ile Gly Lys His Phe Gln Thr Lys Glu Ser Gln Glu
            260                 265                 270
Thr Leu His Lys Phe Ala Ser Lys Pro Ala Ser Glu Phe Val Lys Ile
        275                 280                 285
Leu Asp Thr Phe Glu Lys Leu Lys Asp Leu Phe Thr Glu Leu Gln Lys
    290                 295                 300
Lys Ile Tyr Val Ile Glu Gly Thr Ser Lys Gln Asp Leu Thr Ser Phe
305                 310                 315                 320
Asn Met Glu Leu Ser Ser Ser Gly Ile Ser Ala Asp Leu Ser Arg Gly
                325                 330                 335
His Ala Val Val Gly Ala Val Gly Ala Lys Asp Trp Ala Gly Gly Phe
            340                 345                 350
Leu Asp Leu Lys Ala Asp Leu Gln Asp Asp Thr Phe Ile Gly Asn Glu
        355                 360                 365
Pro Leu Thr Pro Glu Val Arg Ala Gly Tyr Leu Gly Tyr Thr Val Thr
    370                 375                 380
Trp Leu Pro Ser Arg Gln Lys Thr Ser Leu Leu Ala Ser Gly Ala Pro
385                 390                 395                 400
Arg Tyr Gln His Met Gly Arg Val Leu Leu Phe Gln Glu Pro Gln Gly
                405                 410                 415
Gly Gly His Trp Ser Gln Val Gln Thr Ile His Gly Thr Gln Ile Gly
            420                 425                 430
Ser Tyr Phe Gly Gly Glu Leu Cys Gly Val Asp Val Asp Gln Asp Gly
        435                 440                 445
Glu Thr Glu Leu Leu Leu Ile Gly Ala Pro Leu Phe Tyr Gly Glu Gln
    450                 455                 460
Arg Gly Gly Arg Val Phe Ile Tyr Gln Arg Arg Gln Leu Gly Phe Glu
465                 470                 475                 480
Glu Val Ser Glu Leu Gln Gly Asp Pro Gly Tyr Pro Leu Gly Arg Phe
                485                 490                 495
Gly Glu Ala Ile Thr Ala Leu Thr Asp Ile Asn Gly Asp Gly Leu Val
            500                 505                 510
Asp Val Ala Val Gly Ala Pro Leu Glu Glu Gln Gly Ala Val Tyr Ile
        515                 520                 525
```

```
Phe Asn Gly Arg His Gly Gly Leu Ser Pro Gln Pro Ser Gln Arg Ile
    530                 535                 540
Glu Gly Thr Gln Val Leu Ser Gly Ile Gln Trp Phe Gly Arg Ser Ile
545                 550                 555                 560
His Gly Val Lys Asp Leu Glu Gly Asp Gly Leu Ala Asp Val Ala Val
                565                 570                 575
Gly Ala Glu Ser Gln Met Ile Val Leu Ser Ser Arg Pro Val Val Asp
            580                 585                 590
Met Val Thr Leu Met Ser Phe Ser Pro Ala Glu Ile Pro Val His Glu
        595                 600                 605
Val Glu Cys Ser Tyr Ser Thr Ser Asn Lys Met Lys Glu Gly Val Asn
    610                 615                 620
Ile Thr Ile Cys Phe Gln Ile Lys Ser Leu Ile Pro Gln Phe Gln Gly
625                 630                 635                 640
Arg Leu Val Ala Asn Leu Thr Tyr Thr Leu Gln Leu Asp Gly His Arg
                645                 650                 655
Thr Arg Arg Arg Gly Leu Phe Pro Gly Gly Arg His Glu Leu Arg Arg
            660                 665                 670
Asn Ile Ala Val Thr Thr Ser Met Ser Cys Thr Asp Phe Ser Phe His
        675                 680                 685
Phe Pro Val Cys Val Gln Asp Leu Ile Ser Pro Ile Asn Val Ser Leu
    690                 695                 700
Asn Phe Ser Leu Trp Glu Glu Glu Gly Thr Pro Arg Asp Gln Arg Ala
705                 710                 715                 720
Gln Gly Lys Asp Ile Pro Pro Ile Leu Arg Pro Ser Leu His Ser Glu
                725                 730                 735
Thr Trp Glu Ile Pro Phe Glu Lys Asn Cys Gly Glu Asp Lys Lys Cys
            740                 745                 750
Glu Ala Asn Leu Arg Val Ser Phe Ser Pro Ala Arg Ser Arg Ala Leu
        755                 760                 765
Arg Leu Thr Ala Phe Ala Ser Leu Ser Val Glu Leu Ser Leu Ser Asn
    770                 775                 780
Leu Glu Glu Asp Ala Tyr Trp Val Gln Leu Asp Leu His Phe Pro Pro
785                 790                 795                 800
Gly Leu Ser Phe Arg Lys Val Glu Met Leu Lys Pro His Ser Gln Ile
                805                 810                 815
Pro Val Ser Cys Glu Glu Leu Pro Glu Glu Ser Arg Leu Leu Ser Arg
            820                 825                 830
Ala Leu Ser Cys Asn Val Ser Ser Pro Ile Phe Lys Ala Gly His Ser
        835                 840                 845
Val Ala Leu Gln Met Met Phe Asn Thr Leu Val Asn Ser Ser Trp Gly
    850                 855                 860
Asp Ser Val Glu Leu His Ala Asn Val Thr Cys Asn Asn Glu Asp Ser
865                 870                 875                 880
Asp Leu Leu Glu Asp Asn Ser Ala Thr Thr Ile Ile Pro Ile Leu Tyr
                885                 890                 895
Pro Ile Asn Ile Leu Ile Gln Asp Gln Glu Asp Ser Thr Leu Tyr Val
            900                 905                 910
Ser Phe Thr Pro Lys Gly Pro Lys Ile His Gln Val Lys His Met Tyr
        915                 920                 925
Gln Val Arg Ile Gln Pro Ser Ile His Asp His Asn Ile Pro Thr Leu
    930                 935                 940
```

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Glu Ala Val Val Gly Val Pro Gln Pro Pro Ser Glu Gly Pro Ile Thr
945                 950                 955                 960
His Gln Trp Ser Val Gln Met Glu Pro Pro Val Pro Cys His Tyr Glu
                965                 970                 975
Asp Leu Glu Arg Leu Pro Asp Ala Ala Glu Pro Cys Leu Pro Gly Ala
            980                 985                 990
Leu Phe Arg Cys Pro Val Val Phe Arg Gln Glu Ile Leu Val Gln Val
        995                 1000                1005
Ile Gly Thr Leu Glu Leu Val Gly Glu Ile Glu Ala Ser Ser Met Phe
    1010                1015                1020
Ser Leu Cys Ser Ser Leu Ser Ile Ser Phe Asn Ser Ser Lys His Phe
1025                1030                1035                1040
His Leu Tyr Gly Ser Asn Ala Ser Leu Ala Gln Val Val Met Lys Val
                1045                1050                1055
Asp Val Val Tyr Glu Lys Gln Met Leu
            1060                1065


<210> 77
<211> 678
<212> PRT
<213> Homo sapiens

<220>
<223> LFA-1beta Extracellular Domain (ECD)

<400> 77
Gln Glu Cys Thr Lys Phe Lys Val Ser Ser Cys Arg Glu Cys Ile Glu
 1               5                  10                  15
Ser Gly Pro Gly Cys Thr Trp Cys Gln Lys Leu Asn Phe Thr Gly Pro
            20                  25                  30
Gly Asp Pro Asp Ser Ile Arg Cys Asp Thr Arg Pro Gln Leu Leu Met
        35                  40                  45
Arg Gly Cys Ala Ala Asp Asp Ile Met Asp Pro Thr Ser Leu Ala Glu
    50                  55                  60
Thr Gln Glu Asp His Asn Gly Gly Gln Lys Gln Leu Ser Pro Gln Lys
65                  70                  75                  80
Val Thr Leu Tyr Leu Arg Pro Gly Gln Ala Ala Ala Phe Asn Val Thr
                85                  90                  95
Phe Arg Arg Ala Lys Gly Tyr Pro Ile Asp Leu Tyr Tyr Leu Met Asp
            100                 105                 110
Leu Ser Tyr Ser Met Leu Asp Asp Leu Arg Asn Val Lys Lys Leu Gly
        115                 120                 125
Gly Asp Leu Leu Arg Ala Leu Asn Glu Ile Thr Glu Ser Gly Arg Ile
    130                 135                 140
Gly Phe Gly Ser Phe Val Asp Lys Thr Val Leu Pro Phe Val Asn Thr
145                 150                 155                 160
His Pro Asp Lys Leu Arg Asn Pro Cys Pro Asn Lys Glu Lys Glu Cys
                165                 170                 175
Gln Pro Pro Phe Ala Phe Arg His Val Leu Lys Leu Thr Asn Asn Ser
            180                 185                 190
Asn Gln Phe Gln Thr Glu Val Gly Lys Gln Leu Ile Ser Gly Asn Leu
```

```
        195                 200                 205
Asp Ala Pro Glu Gly Gly Leu Asp Ala Met Met Gln Val Ala Ala Cys
    210                 215                 220
Pro Glu Glu Ile Gly Trp Arg Asn Val Thr Arg Leu Leu Val Phe Ala
225                 230                 235                 240
Thr Asp Asp Gly Phe His Phe Ala Gly Asp Gly Lys Leu Gly Ala Ile
                245                 250                 255
Leu Thr Pro Asn Asp Gly Arg Cys His Leu Glu Asp Asn Leu Tyr Lys
            260                 265                 270
Arg Ser Asn Glu Phe Asp Tyr Pro Ser Val Gly Gln Leu Ala His Lys
        275                 280                 285
Leu Ala Glu Asn Asn Ile Gln Pro Ile Phe Ala Val Thr Ser Arg Met
    290                 295                 300
Val Lys Thr Tyr Glu Lys Leu Thr Glu Ile Ile Pro Lys Ser Ala Val
305                 310                 315                 320
Gly Glu Leu Ser Glu Asp Ser Ser Asn Val Val Gln Leu Ile Lys Asn
                325                 330                 335
Ala Tyr Asn Lys Leu Ser Ser Arg Val Phe Leu Asp His Asn Ala Leu
            340                 345                 350
Pro Asp Thr Leu Lys Val Thr Tyr Asp Ser Phe Cys Ser Asn Gly Val
        355                 360                 365
Thr His Arg Asn Gln Pro Arg Gly Asp Cys Asp Gly Val Gln Ile Asn
    370                 375                 380
Val Pro Ile Thr Phe Gln Val Lys Val Thr Ala Thr Glu Cys Ile Gln
385                 390                 395                 400
Glu Gln Ser Phe Val Ile Arg Ala Leu Gly Phe Thr Asp Ile Val Thr
                405                 410                 415
Val Gln Val Leu Pro Gln Cys Glu Cys Arg Cys Arg Asp Gln Ser Arg
            420                 425                 430
Asp Arg Ser Leu Cys His Gly Lys Gly Phe Leu Glu Cys Gly Ile Cys
        435                 440                 445
Arg Cys Asp Thr Gly Tyr Ile Gly Lys Asn Cys Glu Cys Gln Thr Gln
    450                 455                 460
Gly Arg Ser Ser Gln Glu Leu Glu Gly Ser Cys Arg Lys Asp Asn Asn
465                 470                 475                 480
Ser Ile Ile Cys Ser Gly Leu Gly Asp Cys Val Cys Gly Gln Cys Leu
                485                 490                 495
Cys His Thr Ser Asp Val Pro Gly Lys Leu Ile Tyr Gly Gln Tyr Cys
            500                 505                 510
Glu Cys Asp Thr Ile Asn Cys Glu Arg Tyr Asn Gly Gln Val Cys Gly
        515                 520                 525
Gly Pro Gly Arg Gly Leu Cys Phe Cys Gly Lys Cys Arg Cys His Pro
    530                 535                 540
Gly Phe Glu Gly Ser Ala Cys Gln Cys Glu Arg Thr Thr Glu Gly Cys
545                 550                 555                 560
Leu Asn Pro Arg Arg Val Glu Cys Ser Gly Arg Gly Arg Cys Arg Cys
                565                 570                 575
Asn Val Cys Glu Cys His Ser Gly Tyr Gln Leu Pro Leu Cys Gln Glu
            580                 585                 590
Cys Pro Gly Cys Pro Ser Pro Cys Gly Lys Tyr Ile Ser Cys Ala Glu
        595                 600                 605
Cys Leu Lys Phe Glu Lys Gly Pro Phe Gly Lys Asn Cys Ser Ala Ala
```

```
    610                 615                 620
Cys Pro Gly Leu Gln Leu Ser Asn Asn Pro Val Lys Gly Arg Thr Cys
625                 630                 635                 640
Lys Glu Arg Asp Ser Glu Gly Cys Trp Val Ala Tyr Thr Leu Glu Gln
                645                 650                 655
Gln Asp Gly Met Asp Arg Tyr Leu Ile Tyr Val Asp Glu Ser Arg Glu
            660                 665                 670
Cys Val Ala Gly Pro Asn
        675
```

<210> 78
<211> 294
<212> PRT
<213> Homo sapiens

<220>
<223> L-selectin Extracellular Domain (ECD)

<400> 78

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

Leu Ile Gly Lys Lys Lys Thr Ile Cys Glu Ser Ser Gly Ile Trp Ser
            260   265   270
Asn Pro Ser Pro Ile Cys Gln Lys Leu Asp Lys Ser Phe Ser Met Ile
        275   280   285
Lys Glu Gly Asp Tyr Asn
    290

<210> 79
<211> 674
<212> PRT
<213> Homo sapiens

<220>
<223> VCAM-1 Extracellular Domain (ECD)

<400> 79
Phe Lys Ile Glu Thr Thr Pro Glu Ser Arg Tyr Leu Ala Gln Ile Gly
 1   5   10   15
Asp Ser Val Ser Leu Thr Cys Ser Thr Thr Gly Cys Glu Ser Pro Phe
            20   25   30
Phe Ser Trp Arg Thr Gln Ile Asp Ser Pro Leu Asn Gly Lys Val Thr
        35   40   45
Asn Glu Gly Thr Thr Ser Thr Leu Thr Met Asn Pro Val Ser Phe Gly
    50   55   60
Asn Glu His Ser Tyr Leu Cys Thr Ala Thr Cys Glu Ser Arg Lys Leu
65   70   75   80
Glu Lys Gly Ile Gln Val Glu Ile Tyr Ser Phe Pro Lys Asp Pro Glu
                85   90   95
Ile His Leu Ser Gly Pro Leu Glu Ala Gly Lys Pro Ile Thr Val Lys
            100   105   110
Cys Ser Val Ala Asp Val Tyr Pro Phe Asp Arg Leu Glu Ile Asp Leu
        115   120   125
Leu Lys Gly Asp His Leu Met Lys Ser Gln Glu Phe Leu Glu Asp Ala
    130   135   140
Asp Arg Lys Ser Leu Glu Thr Lys Ser Leu Glu Val Thr Phe Thr Pro
145   150   155   160
Val Ile Glu Asp Ile Gly Lys Val Leu Val Cys Arg Ala Lys Leu His
                165   170   175
Ile Asp Glu Met Asp Ser Val Pro Thr Val Arg Gln Ala Val Lys Glu
            180   185   190
Leu Gln Val Tyr Ile Ser Pro Lys Asn Thr Val Ile Ser Val Asn Pro
        195   200   205
Ser Thr Lys Leu Gln Glu Gly Gly Ser Val Thr Met Thr Cys Ser Ser
    210   215   220
Glu Gly Leu Pro Ala Pro Glu Ile Phe Trp Ser Lys Lys Leu Asp Asn
225   230   235   240
Gly Asn Leu Gln His Leu Ser Gly Asn Ala Thr Leu Thr Leu Ile Ala
                245   250   255
Met Arg Met Glu Asp Ser Gly Ile Tyr Val Cys Glu Gly Val Asn Leu
            260   265   270
Ile Gly Lys Asn Arg Lys Glu Val Glu Leu Ile Val Gln Glu Lys Pro

```
        275                 280                 285
Phe Thr Val Glu Ile Ser Pro Gly Pro Arg Ile Ala Ala Gln Ile Gly
    290                 295                 300
Asp Ser Val Met Leu Thr Cys Ser Val Met Gly Cys Glu Ser Pro Ser
305                 310                 315                 320
Phe Ser Trp Arg Thr Gln Ile Asp Ser Pro Leu Ser Gly Lys Val Arg
                325                 330                 335
Ser Glu Gly Thr Asn Ser Thr Leu Thr Leu Ser Pro Val Ser Phe Glu
            340                 345                 350
Asn Glu His Ser Tyr Leu Cys Thr Val Thr Cys Gly His Lys Lys Leu
        355                 360                 365
Glu Lys Gly Ile Gln Val Glu Leu Tyr Ser Phe Pro Arg Asp Pro Glu
    370                 375                 380
Ile Glu Met Ser Gly Gly Leu Val Asn Gly Ser Ser Val Thr Val Ser
385                 390                 395                 400
Cys Lys Val Pro Ser Val Tyr Pro Leu Asp Arg Leu Glu Ile Glu Leu
                405                 410                 415
Leu Lys Gly Glu Thr Ile Leu Glu Asn Ile Glu Phe Leu Glu Asp Thr
            420                 425                 430
Asp Met Lys Ser Leu Glu Asn Lys Ser Leu Glu Met Thr Phe Ile Pro
        435                 440                 445
Thr Ile Glu Asp Thr Gly Lys Ala Leu Val Cys Gln Ala Lys Leu His
    450                 455                 460
Ile Asp Asp Met Glu Phe Glu Pro Lys Gln Arg Gln Ser Thr Gln Thr
465                 470                 475                 480
Leu Tyr Val Asn Val Ala Pro Arg Asp Thr Thr Val Leu Val Ser Pro
                485                 490                 495
Ser Ser Ile Leu Glu Glu Gly Ser Ser Val Asn Met Thr Cys Leu Ser
            500                 505                 510
Gln Gly Phe Pro Ala Pro Lys Ile Leu Trp Ser Arg Gln Leu Pro Asn
        515                 520                 525
Gly Glu Leu Gln Pro Leu Ser Glu Asn Ala Thr Leu Thr Leu Ile Ser
    530                 535                 540
Thr Lys Met Glu Asp Ser Gly Val Tyr Leu Cys Glu Gly Ile Asn Gln
545                 550                 555                 560
Ala Gly Arg Ser Arg Lys Glu Val Glu Leu Ile Ile Gln Val Thr Pro
                565                 570                 575
Lys Asp Ile Lys Leu Thr Ala Phe Pro Ser Glu Ser Val Lys Glu Gly
            580                 585                 590
Asp Thr Val Ile Ile Ser Cys Thr Cys Gly Asn Val Pro Glu Thr Trp
        595                 600                 605
Ile Ile Leu Lys Lys Lys Ala Glu Thr Gly Asp Thr Val Leu Lys Ser
    610                 615                 620
Ile Asp Gly Ala Tyr Thr Ile Arg Lys Ala Gln Leu Lys Asp Ala Gly
625                 630                 635                 640
Val Tyr Glu Cys Glu Ser Lys Asn Lys Val Gly Ser Gln Leu Arg Ser
                645                 650                 655
Leu Thr Leu Asp Val Gln Gly Arg Glu Asn Asn Lys Asp Tyr Phe Ser
            660                 665                 670
Pro Glu
```

<210> 80
<211> 943
<212> PRT
<213> Homo sapiens

<220>
<223> VLA-4 Extracellular Domain (ECD)

<400> 80
Asn Val Asp Thr Glu Ser Ala Leu Leu Tyr Gln Gly Pro His Asn Thr
 1   5   10   15
Leu Phe Gly Tyr Ser Val Val Leu His Ser His Gly Ala Asn Arg Trp
            20   25   30
Leu Leu Val Gly Ala Pro Thr Ala Asn Trp Leu Ala Asn Ala Ser Val
        35   40   45
Ile Asn Pro Gly Ala Ile Tyr Arg Cys Arg Ile Gly Lys Asn Pro Gly
    50   55   60
Gln Thr Cys Glu Gln Leu Gln Leu Gly Ser Pro Asn Gly Glu Pro Cys
65   70   75   80
Gly Lys Thr Cys Leu Glu Glu Arg Asp Asn Gln Trp Leu Gly Val Thr
                85   90   95
Leu Ser Arg Gln Pro Gly Glu Asn Gly Ser Ile Val Thr Cys Gly His
            100   105   110
Arg Trp Lys Asn Ile Phe Tyr Ile Lys Asn Glu Asn Lys Leu Pro Thr
        115   120   125
Gly Gly Cys Tyr Gly Val Pro Pro Asp Leu Arg Thr Glu Leu Ser Lys
    130   135   140
Arg Ile Ala Pro Cys Tyr Gln Asp Tyr Val Lys Lys Phe Gly Glu Asn
145   150   155   160
Phe Ala Ser Cys Gln Ala Gly Ile Ser Ser Phe Tyr Thr Lys Asp Leu
                165   170   175
Ile Val Met Gly Ala Pro Gly Ser Ser Tyr Trp Thr Gly Ser Leu Phe
            180   185   190
Val Tyr Asn Ile Thr Thr Asn Lys Tyr Lys Ala Phe Leu Asp Lys Gln
        195   200   205
Asn Gln Val Lys Phe Gly Ser Tyr Leu Gly Tyr Ser Val Gly Ala Gly
    210   215   220
His Phe Arg Ser Gln His Thr Thr Glu Val Val Gly Gly Ala Pro Gln
225   230   235   240
His Glu Gln Ile Gly Lys Ala Tyr Ile Phe Ser Ile Asp Glu Lys Glu
                245   250   255
Leu Asn Ile Leu His Glu Met Lys Gly Lys Lys Leu Gly Ser Tyr Phe
            260   265   270
Gly Ala Ser Val Cys Ala Val Asp Leu Asn Ala Asp Gly Phe Ser Asp
        275   280   285
Leu Leu Val Gly Ala Pro Met Gln Ser Thr Ile Arg Glu Glu Gly Arg
    290   295   300
Val Phe Val Tyr Ile Asn Ser Gly Ser Gly Ala Val Met Asn Ala Met
305   310   315   320
Glu Thr Asn Leu Val Gly Ser Asp Lys Tyr Ala Ala Arg Phe Gly Glu
                325   330   335

```
Ser Ile Val Asn Leu Gly Asp Ile Asp Asn Asp Gly Phe Glu Asp Val
            340                 345                 350
Ala Ile Gly Ala Pro Gln Glu Asp Asp Leu Gln Gly Ala Ile Tyr Ile
        355                 360                 365
Tyr Asn Gly Arg Ala Asp Gly Ile Ser Ser Thr Phe Ser Gln Arg Ile
    370                 375                 380
Glu Gly Leu Gln Ile Ser Lys Ser Leu Ser Met Phe Gly Gln Ser Ile
385                 390                 395                 400
Ser Gly Gln Ile Asp Ala Asp Asn Asn Gly Tyr Val Asp Val Ala Val
                405                 410                 415
Gly Ala Phe Arg Ser Asp Ser Ala Val Leu Leu Arg Thr Arg Pro Val
            420                 425                 430
Val Ile Val Asp Ala Ser Leu Ser His Pro Glu Ser Val Asn Arg Thr
        435                 440                 445
Lys Phe Asp Cys Val Glu Asn Gly Trp Pro Ser Val Cys Ile Asp Leu
    450                 455                 460
Thr Leu Cys Phe Ser Tyr Lys Gly Lys Glu Val Pro Gly Tyr Ile Val
465                 470                 475                 480
Leu Phe Tyr Asn Met Ser Leu Asp Val Asn Arg Lys Ala Glu Ser Pro
                485                 490                 495
Pro Arg Phe Tyr Phe Ser Ser Asn Gly Thr Ser Asp Val Ile Thr Gly
            500                 505                 510
Ser Ile Gln Val Ser Ser Arg Glu Ala Asn Cys Arg Thr His Gln Ala
        515                 520                 525
Phe Met Arg Lys Asp Val Arg Asp Ile Leu Thr Pro Ile Gln Ile Glu
    530                 535                 540
Ala Ala Tyr His Leu Gly Pro His Val Ile Ser Lys Arg Ser Thr Glu
545                 550                 555                 560
Glu Phe Pro Pro Leu Gln Pro Ile Leu Gln Gln Lys Lys Glu Lys Asp
                565                 570                 575
Ile Met Lys Lys Thr Ile Asn Phe Ala Arg Phe Cys Ala His Glu Asn
            580                 585                 590
Cys Ser Ala Asp Leu Gln Val Ser Ala Lys Ile Gly Phe Leu Lys Pro
        595                 600                 605
His Glu Asn Lys Thr Tyr Leu Ala Val Gly Ser Met Lys Thr Leu Met
    610                 615                 620
Leu Asn Val Ser Leu Phe Asn Ala Gly Asp Asp Ala Tyr Glu Thr Thr
625                 630                 635                 640
Leu His Val Lys Leu Pro Val Gly Leu Tyr Phe Ile Lys Ile Leu Glu
                645                 650                 655
Leu Glu Glu Lys Gln Ile Asn Cys Glu Val Thr Asp Asn Ser Gly Val
            660                 665                 670
Val Gln Leu Asp Cys Ser Ile Gly Tyr Ile Tyr Val Asp His Leu Ser
        675                 680                 685
Arg Ile Asp Ile Ser Phe Leu Leu Asp Val Ser Ser Leu Ser Arg Ala
    690                 695                 700
Glu Glu Asp Leu Ser Ile Thr Val His Ala Thr Cys Glu Asn Glu Glu
705                 710                 715                 720
Glu Met Asp Asn Leu Lys His Ser Arg Val Thr Val Ala Ile Pro Leu
                725                 730                 735
Lys Tyr Glu Val Lys Leu Thr Val His Gly Phe Val Asn Pro Thr Ser
            740                 745                 750
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Phe Val Tyr Gly Ser Asn Asp Glu Asn Glu Pro Glu Thr Cys Met Val
        755                 760                 765
Glu Lys Met Asn Leu Thr Phe His Val Ile Asn Thr Gly Asn Ser Met
    770                 775                 780
Ala Pro Asn Val Ser Val Glu Ile Met Val Pro Asn Ser Phe Ser Pro
785                 790                 795                 800
Gln Thr Asp Lys Leu Phe Asn Ile Leu Asp Val Gln Thr Thr Thr Gly
                805                 810                 815
Glu Cys His Phe Glu Asn Tyr Gln Arg Val Cys Ala Leu Glu Gln Gln
            820                 825                 830
Lys Ser Ala Met Gln Thr Leu Lys Gly Ile Val Arg Phe Leu Ser Lys
        835                 840                 845
Thr Asp Lys Arg Leu Leu Tyr Cys Ile Lys Ala Asp Pro His Cys Leu
    850                 855                 860
Asn Phe Leu Cys Asn Phe Gly Lys Met Glu Ser Gly Lys Glu Ala Ser
865                 870                 875                 880
Val His Ile Gln Leu Glu Gly Arg Pro Ser Ile Leu Glu Met Asp Glu
                885                 890                 895
Thr Ser Ala Leu Lys Phe Glu Ile Arg Ala Thr Gly Phe Pro Glu Pro
            900                 905                 910
Asn Pro Arg Val Ile Glu Leu Asn Lys Asp Glu Asn Val Ala His Val
        915                 920                 925
Leu Leu Glu Gly Leu His His Gln Arg Pro Lys Arg Tyr Phe Thr
    930                 935                 940


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<220>
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Asn Lys Met Gln Glu Asp Pro Ala Ser Lys Cys His Cys Ser Ala Asn
            20                  25                  30
Val Thr Ser Cys Leu Cys Leu Gly Ile Pro Ser Asp Asn Cys Thr Arg
        35                  40                  45
Pro Cys Phe Ser Glu Arg Leu Ser Gln Met Thr Asn Thr Thr Met Gln
    50                  55                  60
Thr Arg Tyr Pro Leu Ile Phe Ser Arg Val Lys Lys Ser Val Glu Val
65                  70                  75                  80
Leu Lys Asn Asn Lys Cys Pro Tyr Phe Ser Cys Glu Gln Pro Cys Asn
                85                  90                  95
Gln Thr Thr Ala Gly Asn Ala Leu Thr Phe Leu Lys Ser Leu Leu Glu
            100                 105                 110
Ile Phe Gln Lys Glu Lys Met Arg Gly Met Arg Gly Lys Ile
        115                 120                 125
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