SEQUENCE LISTING

<110> Janssen Pharmaceutica NV;
Linda Snyder;
Gordon Powers;

<120> Anti-VISTA Antibodies and Fragments

<130> 0148.1142-003

<140> PCT/IB2014/0002868
<141> 2014-12-22

<150> 61/920,695
<151> 2013-12-24

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<151> 2014-11-26

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

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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
            20   25   30
Gly Leu Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Asn Pro Tyr Thr Gly Glu Pro Thr Tyr Ala Asp Asp Phe
    50   55   60
Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser Val Ser Thr Ala Tyr
65   70   75   80
Leu Gln Ile Cys Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Glu Gly Tyr Gly Asn Tyr Ile Phe Pro Tyr Trp Gly Gln Gly
            100   105   110
Thr Leu Val Thr Val Ser Ser
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<400> 39
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr His Tyr
            20   25   30
Thr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Tyr Ile Ile Pro Ser Ser Gly Tyr Ser Glu Tyr Asn Gln Lys Phe
    50   55   60
Lys Asp Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65   70   75   80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Gly Ala Tyr Asp Asp Tyr Tyr Asp Tyr Tyr Ala Met Asp Tyr
            100   105   110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

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

100 105 110
Gly Gln Gly Thr Thr Val Thr Val Ser Ser
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<400> 41
Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
1 5 10 15
Gln Pro Ala Ser Ile Ser Cys Arg Ala Ser Glu Ser Val Asp Thr Tyr
20 25 30
Ala Asn Ser Leu Met His Trp Tyr Leu Gln Lys Pro Gly Gln Pro Pro
35 40 45
Gln Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50 55 60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65 70 75 80
Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Thr Asn
85 90 95
Glu Asp Pro Arg Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 42
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<213> Homo sapiens

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

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

100 105 110

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20 25 30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Ser Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Ala Tyr Asn Pro Ile
85 90 95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

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<213> Homo sapiens

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

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

        115   120   125
Phe Ser Ile Thr Met Arg Asn Leu Thr Leu Leu Asp Ser Gly Leu Tyr
    130   135   140
Cys Cys Leu Val Val Glu Ile Arg His His His Ser Glu His Arg Val
145   150   155   160
His Gly Ala Met Glu Leu Gln Val Gln Thr Gly Lys Asp Ala Pro Ser
                165   170   175
Asn Cys Val Val Tyr Pro Ser Ser Ser Gln Asp Ser Glu Asn Ile Thr
            180   185   190
Ala Ala Ala Leu Ala Thr Gly Ala Cys Ile Val Gly Ile Leu Cys Leu
        195   200   205
Pro Leu Ile Leu Leu Leu Val Tyr Lys Gln Arg Gln Ala Ala Ser Asn
    210   215   220
Arg Arg Ala Gln Glu Leu Val Arg Met Asp Ser Asn Ile Gln Gly Ile
225   230   235   240
Glu Asn Pro Gly Phe Glu Ala Ser Pro Pro Ala Gln Gly Ile Pro Glu
                245   250   255
Ala Lys Val Arg His Pro Leu Ser Tyr Val Ala Gln Arg Gln Pro Ser
            260   265   270
Glu Ser Gly Arg His Leu Leu Ser Glu Pro Ser Thr Pro Leu Ser Pro
        275   280   285
Pro Gly Pro Gly Asp Val Phe
    290   295

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<400> 47
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
            20   25   30
Gly Leu Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Trp Ile Asn Pro Tyr Thr Gly Glu Pro Thr Tyr Ala Asp Asp Phe
    50   55   60
Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser Val Ser Thr Ala Tyr
65   70   75   80
Leu Gln Ile Cys Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Glu Gly Tyr Gly Asn Tyr Ile Phe Pro Tyr Trp Gly Gln Gly
            100   105   110
Thr Leu Val Thr Val Ser Ser Ala 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 Asp Lys
    210   215   220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
225   230   235   240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                245   250   255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            260   265   270
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        275   280   285
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val

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Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305 310 315 320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
325 330 335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
340 345 350
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
355 360 365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
370 375 380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385 390 395 400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
405 410 415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
420 425 430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445
Lys

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Gln Pro Ala Ser Ile Ser Cys Arg Ala Ser Glu Ser Val Asp Thr Tyr
20 25 30
Ala Asn Ser Leu Met His Trp Tyr Leu Gln Lys Pro Gly Gln Pro Pro
35 40 45
Gln Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50 55 60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65 70 75 80
Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Thr Asn
85 90 95
Glu Asp Pro Arg Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105 110
Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
115 120 125
Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
130 135 140
Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145 150 155 160
Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
165 170 175
Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
180 185 190
His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
195 200 205
Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
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        35                  40                  45
Gly Tyr Ile Ile Pro Ser Ser Gly Tyr Ser Glu Tyr Asn Gln Lys Phe
    50                  55                  60
Lys Asp Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65                  70                  75                  80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Gly Ala Tyr Asp Asp Tyr Tyr Asp Tyr Tyr Ala Met Asp Tyr
            100                 105                 110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
        115                 120                 125
Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly
    130                 135                 140
Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145                 150                 155                 160
Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
                165                 170                 175
Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
            180                 185                 190
Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
        195                 200                 205
Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys
    210                 215                 220
Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
225                 230                 235                 240
Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
                245                 250                 255
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
            260                 265                 270
Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
        275                 280                 285
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
    290                 295                 300
Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
305                 310                 315                 320
Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
                325                 330                 335
Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
            340                 345                 350
Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
        355                 360                 365
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
    370                 375                 380
Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
385                 390                 395                 400
Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
                405                 410                 415
Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
            420                 425                 430
Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
        435                 440                 445
Leu Ser Pro Gly Lys
    450


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


<210> 51
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<213> Homo sapiens

<400> 51
Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
            20                  25                  30
Gly Met Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
Gly Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ala Asp Asp Phe
    50                  55                  60
Lys Gly Arg Phe Val Phe Ser Leu Asp Thr Ser Val Ser Thr Ala Tyr
65                  70                  75                  80
Leu Gln Ile Cys Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Asp Tyr Tyr Gly Ile Tyr Val Ser Ala Tyr Trp Gly Gln Gly
            100                 105                 110
Thr Leu Val Thr Val Ser Ser Ala 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 Asp Lys
    210                 215                 220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
225                 230                 235                 240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                245                 250                 255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            260                 265                 270
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        275                 280                 285
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
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290 295 300
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305 310 315 320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
325 330 335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
340 345 350
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
355 360 365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
370 375 380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385 390 395 400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
405 410 415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
420 425 430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445
Lys

<210> 52
<211> 218
<212> PRT
<213> Homo sapiens

<400> 52
Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
1 5 10 15
Gln Pro Ala Ser Ile Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
20 25 30
Ala Asn Ser Phe Met His Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro
35 40 45
Gln Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50 55 60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65 70 75 80
Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser His
85 90 95
Glu Asp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105 110
Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
115 120 125
Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
130 135 140
Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145 150 155 160
Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
165 170 175
Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
180 185 190
His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
195 200 205
Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 53
<211> 452
<212> PRT
<213> Homo sapiens

<400> 53
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asn Tyr

```
            20                  25                  30
Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Ser Ile Ile Ser Gly Gly Ser Tyr Thr Tyr Tyr Pro Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Ile Tyr Asp His Asp Gly Asp Tyr Tyr Ala Met Asp Tyr Trp
            100                 105                 110
Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
        115                 120                 125
Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr
    130                 135                 140
Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
145                 150                 155                 160
Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
                165                 170                 175
Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
            180                 185                 190
Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
        195                 200                 205
His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser
    210                 215                 220
Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
225                 230                 235                 240
Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
                245                 250                 255
Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
            260                 265                 270
His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
        275                 280                 285
Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
    290                 295                 300
Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
305                 310                 315                 320
Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
                325                 330                 335
Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
            340                 345                 350
Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
        355                 360                 365
Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
    370                 375                 380
Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
385                 390                 395                 400
Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
                405                 410                 415
Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
            420                 425                 430
Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
        435                 440                 445
Ser Pro Gly Lys
    450


<210> 54
<211> 219
<212> PRT
<213> Homo sapiens

<400> 54
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1               5                  10                  15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Ile Val His Ser
            20                  25                  30
Asn Gly Asn Thr Tyr Leu Glu Trp Tyr Leu Gln Lys Pro Gly Gln Ser
```

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


<210> 55
<211> 450
<212> PRT
<213> Homo sapiens

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

290 295 300
Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320
Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
325 330 335
Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350
Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
355 360 365
Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380
Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400
Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
405 410 415
Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430
Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
435 440 445
Gly Lys
450

<210> 56
<211> 214
<212> PRT
<213> Homo sapiens

<400> 56
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asp Thr Arg
20 25 30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Ser Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Ala Tyr Asn Pro Ile
85 90 95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110
Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125
Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140
Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160
Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175
Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190
Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205
Phe Asn Arg Gly Glu Cys
210

<210> 57
<211> 450
<212> PRT
<213> Homo sapiens

<400> 57
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr

```
            20                  25                  30
Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35                  40                  45
Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
    50                  55                  60
Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Ser Ser Tyr Gly Trp Ser Tyr Glu Phe Asp Tyr Trp Gly Gln
            100                 105                 110
Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
        115                 120                 125
Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
    130                 135                 140
Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145                 150                 155                 160
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165                 170                 175
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180                 185                 190
Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
        195                 200                 205
Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
    210                 215                 220
Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
225                 230                 235                 240
Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255
Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270
Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285
Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290                 295                 300
Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320
Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
                325                 330                 335
Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            340                 345                 350
Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
        355                 360                 365
Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380
Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400
Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415
Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430
Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445
Gly Lys
    450


<210> 58
<211> 214
<212> PRT
<213> Homo sapiens

<400> 58
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1               5                  10                  15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asn Thr Asn
            20                  25                  30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
```

        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Arg Asp Thr Pro Ile
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
            100   105   110
Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
        115   120   125
Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
    130   135   140
Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145   150   155   160
Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
                165   170   175
Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
            180   185   190
Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
        195   200   205
Phe Asn Arg Gly Glu Cys
    210

<210> 59
<211> 446
<212> PRT
<213> Homo sapiens

<400> 59
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
 1   5   10   15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
            20   25   30
Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
        35   40   45
Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
    50   55   60
Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65   70   75   80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Ser Ser Tyr Gly Trp Ser Tyr Glu Phe Asp Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
        115   120   125
Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala
    130   135   140
Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145   150   155   160
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
                165   170   175
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
            180   185   190
Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys
        195   200   205
Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys Val
    210   215   220
Glu Cys Pro Pro Cys Pro Ala Pro Pro Ala Ala Ser Ser Val Phe
225   230   235   240
Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
                245   250   255
Glu Val Thr Cys Val Val Val Asp Val Ser Ala Glu Asp Pro Glu Val
            260   265   270
Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
        275   280   285
Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val

290 295 300
Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
305 310 315 320
Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335
Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
340 345 350
Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
355 360 365
Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
370 375 380
Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp
385 390 395 400
Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
405 410 415
Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430
Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 60
<211> 449
<212> PRT
<213> Homo sapiens

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

```
                325                 330                 335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            340                 345                 350
Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
        355                 360                 365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    370                 375                 380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385                 390                 395                 400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                405                 410                 415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            420                 425                 430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        435                 440                 445
Lys
```

<210> 61
<211> 450
<212> PRT
<213> Homo sapiens

<400> 61

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

```
            340                 345                 350
Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
        355                 360                 365
Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380
Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400
Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
                405                 410                 415
Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430
Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445
Gly Lys
    450


<210> 62
<211> 9
<212> PRT
<213> Homo sapiens

<400> 62
Asn Leu Thr Leu Leu Asp Ser Gly Leu
 1               5


<210> 63
<211> 11
<212> PRT
<213> Homo sapiens

<400> 63
Val Gln Thr Gly Lys Asp Ala Pro Ser Asn Cys
 1               5                   10


<210> 64
<211> 13
<212> PRT
<213> Homo sapiens

<400> 64
Leu Leu Gly Pro Val Asp Lys Gly His Asp Val Thr Phe
 1               5                   10


<210> 65
<211> 12
<212> PRT
<213> Homo sapiens

<400> 65
Arg Arg Pro Ile Arg Asp Leu Thr Phe Gln Asp Leu
 1               5                   10


<210> 66
<211> 309
<212> PRT
<213> Mus musculus

<400> 66
Met Gly Val Pro Ala Val Pro Glu Ala Ser Ser Pro Arg Trp Gly Thr
 1               5                   10                  15
Leu Leu Leu Ala Ile Phe Leu Ala Ala Ser Arg Gly Leu Val Ala Ala
            20                  25                  30
Phe Lys Val Thr Thr Pro Tyr Ser Leu Tyr Val Cys Pro Glu Gly Gln
```

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

<210> 67
<211> 311
<212> PRT
<213> Homo sapiens

<400> 67
Met Gly Val Pro Thr Ala Leu Glu Ala Gly Ser Trp Arg Trp Gly Ser
 1   5   10   15
Leu Leu Phe Ala Leu Phe Leu Ala Ala Ser Leu Gly Pro Val Ala Ala
            20   25   30
Phe Lys Val Ala Thr Pro Tyr Ser Leu Tyr Val Cys Pro Glu Gly Gln
        35   40   45
Asn Val Thr Leu Thr Cys Arg Leu Leu Gly Pro Val Asp Lys Gly His
    50   55   60
Asp Val Thr Phe Tyr Lys Thr Trp Tyr Arg Ser Ser Arg Gly Glu Val
65   70   75   80
Gln Thr Cys Ser Glu Arg Arg Pro Ile Arg Asn Leu Thr Phe Gln Asp
                85   90   95
Leu His Leu His His Gly Gly His Gln Ala Ala Asn Thr Ser His Asp
            100   105   110
Leu Ala Gln Arg His Gly Leu Glu Ser Ala Ser Asp His His Gly Asn
        115   120   125
Phe Ser Ile Thr Met Arg Asn Leu Thr Leu Leu Asp Ser Gly Leu Tyr
    130   135   140
Cys Cys Leu Val Val Glu Ile Arg His His His Ser Glu His Arg Val
145   150   155   160
His Gly Ala Met Glu Leu Gln Val Gln Thr Gly Lys Asp Ala Pro Ser
                165   170   175
Asn Cys Val Val Tyr Pro Ser Ser Ser Gln Asp Ser Glu Asn Ile Thr
            180   185   190
Ala Ala Ala Leu Ala Thr Gly Ala Cys Ile Val Gly Ile Leu Cys Leu

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        195                 200                 205
Pro Leu Ile Leu Leu Leu Val Tyr Lys Gln Arg Gln Ala Ala Ser Asn
    210                 215                 220
Arg Arg Ala Gln Glu Leu Val Arg Met Asp Ser Asn Ile Gln Gly Ile
225                 230                 235                 240
Glu Asn Pro Gly Phe Glu Ala Ser Pro Pro Ala Gln Gly Ile Pro Glu
                245                 250                 255
Ala Lys Val Arg His Pro Leu Ser Tyr Val Ala Gln Arg Gln Pro Ser
            260                 265                 270
Glu Ser Gly Arg His Leu Leu Ser Glu Pro Ser Thr Pro Leu Ser Pro
        275                 280                 285
Pro Gly Pro Gly Asp Val Phe Phe Pro Ser Leu Asp Pro Val Pro Asp
    290                 295                 300
Ser Pro Asn Phe Glu Val Ile
305                 310


<210> 68
<211> 312
<212> PRT
<213> Macropus rufus

<400> 68
Met Asn Val Pro Thr Ser Val Leu Glu Ser Gly Gly Arg Arg Trp Gly
 1               5                  10                  15
Pro Leu Leu Leu Ala Phe Phe Leu Ala Ala Ser Arg Gly Leu Val Ala
            20                  25                  30
Ala Phe Lys Val Ala Thr Pro Tyr Ser Leu Tyr Val Cys Pro Glu Gly
        35                  40                  45
Glu Asn Ile Thr Leu Ala Cys Gln Leu Leu Gly Pro Val Pro Lys Gly
    50                  55                  60
His Asp Val Ser Phe Tyr Lys Thr Trp Phe Arg Ser Ser Arg Gly Glu
65                  70                  75                  80
Val Gln Val Cys Ser Glu His Arg Pro Ile Arg Asn Val Thr Leu Gln
                85                  90                  95
Asn Leu His Pro Tyr His Gly Gly His Gln Ala Ser Asn Thr Ser His
            100                 105                 110
Asn Leu Leu Gln Ser His Gly Leu Glu Thr Ala Ser Asp His His Gly
        115                 120                 125
Asn Phe Ser Ile Thr Met Arg Asn Leu Thr Val Gln Asp Gly Gly Leu
    130                 135                 140
Tyr Cys Cys Leu Val Val Glu Met Arg His Arg His Ser Glu His Arg
145                 150                 155                 160
Val His Ala Ala Asn Glu Leu Gln Val Gln Lys Gly Lys Asp Ala Pro
                165                 170                 175
Ser Lys Cys Ile Thr Tyr Pro Ser Ser Pro Glu Glu Ser Asp Asn Ile
            180                 185                 190
Thr Ala Ala Ala Leu Ala Thr Gly Ala Cys Ile Val Gly Ile Leu Cys
        195                 200                 205
Leu Pro Leu Ile Leu Leu Leu Val Tyr Lys Gln Arg Gln Val Ala Ser
    210                 215                 220
His Arg Arg Ala Gln Glu Leu Val Arg Met Asp Ser Ser Pro Gln Gly
225                 230                 235                 240
Ile Glu Asn Pro Gly Phe Glu Ala Pro Pro Ser Ser Gln Gly Leu Pro
                245                 250                 255
Glu Ala Lys Val Arg Pro Pro Leu Ser Tyr Met Ala Gln Arg Gln Pro
            260                 265                 270
Ser Glu Ser Gly Arg His Leu Leu Ser Glu Pro Asn Thr Pro Leu Ser
        275                 280                 285
Pro Pro Gly Pro Gly Asp Val Phe Phe Pro Ser Leu Asp Pro Val Pro
    290                 295                 300
Asp Ser Pro Asn Ser Glu Phe Asn
305                 310


<210> 69
<211> 310
<212> PRT
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<213> Delphinus delphis

<400> 69
Met Gly Val Pro Pro Val Pro Glu Ala Gly Ser Trp Arg Arg Gly Pro
 1   5   10   15
Val Leu Leu Ala Phe Phe Leu Ala Ala Ser Arg Gly Leu Val Ala Ala
            20   25   30
Phe Lys Val Ala Thr Pro Tyr Ser Leu Tyr Val Cys Pro Glu Gly Gln
        35   40   45
Asn Val Thr Leu Thr Cys Arg Leu Leu Gly Pro Leu Ala Lys Gly His
    50   55   60
Asp Val Thr Phe Tyr Lys Thr Trp Tyr Arg Ser Ser Arg Gly Glu Val
65   70   75   80
Gln Ala Cys Ser Glu Arg Arg Pro Ile Arg Asn Leu Thr Phe Gln Asp
                85   90   95
Leu His Leu His His Gly Gly His Gln Ala Asn Ser Ser Gln Asp Leu
            100   105   110
Ala Gln Arg His Gly Leu Glu Ser Ala Ser Asp His His Gly Asn Phe
        115   120   125
Thr Ile Thr Met Arg Asn Leu Thr Leu Leu Asp Gly Gly Leu Tyr Cys
    130   135   140
Cys Leu Val Val Glu Ile Arg His Arg His Ser Glu Gln Arg Leu Tyr
145   150   155   160
Gly Ala Met Glu Leu Gln Val Gln Arg Gly Glu Glu Ala Pro Ser Lys
                165   170   175
Cys Thr Val Tyr Pro Pro Ser Ser Lys Glu Ser Glu Ser Ile Thr Ala
            180   185   190
Ala Ala Leu Ala Thr Ser Ala Cys Ile Val Gly Ile Leu Cys Leu Pro
        195   200   205
Leu Ile Leu Ile Leu Val Trp Lys Gln Arg Gln Val Ala Ser Asn Arg
    210   215   220
Arg Ala Gln Glu Leu Val Arg Met Asp Ser Asn Thr Gln Gly Ile Glu
225   230   235   240
Asn Pro Gly Phe Glu Thr Ser Pro Pro Ser His Gly Met Pro Glu Thr
                245   250   255
Lys Pro Arg Gln Pro Leu Thr Tyr Met Ala Arg Arg Gln Pro Ser Glu
            260   265   270
Ser Gly Arg His Leu Leu Ser Glu Pro Asn Thr Pro Leu Ser Pro Pro
        275   280   285
Gly Pro Gly Asp Val Phe Phe Pro Ser Leu Asp Pro Val Pro Asp Ser
    290   295   300
Pro Asn Ser Glu Ala Ile
305   310

<210> 70
<211> 288
<212> PRT
<213> Gallus gallus

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

130 135 140
Phe Val Glu Leu Gln Ile Gln Arg Gly Arg Gly Ser Leu Gln Asn Cys
145 150 155 160
Thr Phe His Thr Ala Thr Ser Lys Asp Ile Thr Ala Ala Ala Leu Ala
165 170 175
Thr Gly Ala Cys Ile Val Gly Ile Leu Cys Leu Pro Leu Ile Leu Leu
180 185 190
Leu Ile Tyr Lys Gln Arg Gln Ala Val Ser His Arg Arg Ala His Glu
195 200 205
Leu Val Arg Met Glu Ser Ser Ala Gln Gly Ile Glu Asn Pro Val Phe
210 215 220
Glu Ala Leu Pro Ala Gly Ser Thr Glu Gln Arg Pro Arg Pro Gln Leu
225 230 235 240
Ser Tyr Leu Gly Gly Arg Gln Leu Ser Glu Ser Gly Arg His Leu Leu
245 250 255
Ser Glu Pro Asn Thr Pro Leu Ser Pro Pro Ala Pro Gly Glu Cys Phe
260 265 270
Phe Pro Thr Leu Asp Pro Val Pro Asp Ser Pro Asn Ser Leu Lys Ala
275 280 285

<210> 71
<211> 261
<212> PRT
<213> Xenopus laevis

<400> 71
Asp Ala Ile Thr Ala Phe Ser Val Ser Ala Leu Tyr Ser His Ile Thr
1 5 10 15
Cys Pro Glu Gly Gln Asn Val Asn Leu Thr Cys Thr Val Ser Gly His
20 25 30
Val Ala Asp Lys His Asp Val Leu Phe Ser Leu Trp His Phe Ser Lys
35 40 45
Asp Lys Asn Ser Asn Cys Leu Glu Arg Arg His Ile Gln Asn Thr Thr
50 55 60
Glu Arg Asp His Leu His Lys Glu His Leu Ser His Ser Met Met His
65 70 75 80
Asn Gly Ala Phe Gln Ile Thr Leu Thr Asn Val Ser Gln Gln Asp Ser
85 90 95
Gly Gly Tyr Cys Cys Tyr Val Ile Glu Ala Ser Lys Lys His His Thr
100 105 110
Arg His Tyr Ser Tyr Ile Glu Phe Gln Val Lys Thr Asp Asp Leu Asn
115 120 125
Leu Tyr Thr Cys Met Phe His Ser Pro Thr Glu Gly Asp Asn Ser Ser
130 135 140
Thr Ala Ala Ala Leu Ala Ile Val Ser Cys Val Ile Gly Ile Leu Cys
145 150 155 160
Met Pro Leu Ile Leu Phe Leu Val Tyr Lys Gln Arg Arg Ala Ile Ser
165 170 175
His Arg Arg Ser Tyr His Phe Val Phe Ile Asp Phe Ser Glu Ala Gln
180 185 190
Gly Ile Glu Asn Pro Val Phe Asp Asp Pro Pro Pro Ala Asn Val Val
195 200 205
Glu Gln Arg Pro Arg Leu Ala Phe Met Ala Ser Arg Gln Gln Ser Glu
210 215 220
Ser Asp Arg His Leu Leu Ser Glu Pro Asn Thr Pro Leu Ser Pro Ser
225 230 235 240
Cys Pro Asn Glu Cys Phe Phe Pro Ser Leu Pro Val Pro Asp Ser Pro
245 250 255
Asp Pro Gly Asn Val
260

<210> 72
<211> 315
<212> PRT
<213> Taeniopygia guttata

<400> 72
Gly His Pro Ala Thr Met Gly Thr Ala Ser Pro Arg Pro Gly Leu Leu
 1   5   10   15
Leu Ala Ala Leu Cys Leu Leu Ala Ser His Gly Gly Ala Asp Ala Phe
            20   25   30
Leu Ile Ser Thr Pro Tyr Ser Leu Cys Val Cys Pro Glu Gly Gln Asn
        35   40   45
Val Thr Leu Ser Cys Arg Ile Ser Gly Ala Leu Ala Glu Arg His Asp
    50   55   60
Leu Leu Tyr Lys Thr Trp Tyr Phe Ser Ser Thr Gly Asp Gln Ser Cys
65   70   75   80
Ser Asp Lys Arg His Ile Arg Asn Val Thr Asp Lys Glu Leu Arg His
                85   90   95
Asp Leu Gly Arg His His Glu Leu Pro Gly Asn Ala Ser Gln Lys Pro
            100   105   110
Pro Phe Gly Trp Gln Ser Gly His His Gly Val Glu Leu Val Leu Asp
        115   120   125
His His Gly Ala Phe His Leu Val Val Met Asn Leu Thr Leu Gln Asp
    130   135   140
Ser Gly Asn Tyr Cys Cys Tyr Ala Val Glu Val Arg Arg Glu Gly His
145   150   155   160
Ser Lys Pro His Thr Val Gln Ala Ala His Gly Phe Val Glu Leu Gln
                165   170   175
Ile Gln Arg Gly Glu Pro Cys Ser His Ala Arg Ala Gln Ser Gln Arg
            180   185   190
Ala Ala Asp Asp Ile Thr Ala Ala Val Leu Ala Thr Gly Ala Cys Ile
        195   200   205
Val Gly Ile Leu Cys Leu Pro Leu Ile Leu Leu Leu Ile Tyr Lys Gln
    210   215   220
Arg Gln Ala Ala Ser Ser Arg Arg Ala His Glu Leu Val Arg Met Asp
225   230   235   240
Ser Gly Ala Gln Gly Ile Glu Asn Pro Val Phe Glu Ala Val Pro Ser
                245   250   255
Ala Gly Ala Glu Pro Arg Pro Arg Ala Gln Leu Ser Tyr Val Ala Ser
            260   265   270
Arg Leu Pro Ser Glu Ser Gly Arg His Leu Leu Ser Glu Pro Ser Thr
        275   280   285
Pro Leu Ser Pro Pro Gly Pro Gly Asp Cys Phe Phe Pro Thr Leu Asp
    290   295   300
Pro Val Pro Asp Ser Pro Asn Ser Leu Lys Ala
305   310   315

<210> 73
<211> 275
<212> PRT
<213> Danio rerio

<400> 73
Met Asp Val Phe Arg Ala Val Leu Leu Cys Phe His Val Phe Thr Ala
 1   5   10   15
Ile Gln Ala Ser Gly Asp His His Ser Leu Arg Val Ser Val Pro His
            20   25   30
Arg Thr Tyr Glu Cys Pro Glu Gly Ala Asp Val Ile Leu Lys Cys Val
        35   40   45
Pro Ser Gly Thr Lys Ala Tyr Pro Gln Asp Thr Phe Trp Thr Thr Trp
    50   55   60
Leu Tyr Thr Pro Arg Ser Gln Asp His Cys Gln Lys Gly Ala His Pro
65   70   75   80
Arg Lys Ala Asn His Thr Asn Arg Ser Leu Gly Val Val Tyr Ser Ser
                85   90   95
Gly Asp Lys Val Phe Ser Val Ser Leu Lys Asn Val Lys His Thr Asp
            100   105   110
Gln Gly Lys Tyr Cys Cys Trp Leu Leu Asp Leu His Gly Arg His Lys
        115   120   125
Glu Gln Glu Ala His Asp Phe Met Tyr Leu Ser Val Met Pro Thr Pro
    130   135   140
Lys Asp Ala His Asn Gly Ser Leu Lys Cys Leu Glu Tyr Ser His Thr

145 150 155 160
Ala Ser Asp Asp Ser Val Ala Glu Gly Leu Ala Ile Ala Ala Cys Val
165 170 175
Ala Phe Val Leu Cys Leu Pro Leu Ile Leu Met Leu Val Tyr Arg Gln
180 185 190
Arg Gln Thr Val Glu Arg His Arg Arg Ala His Glu Leu Val Arg Met
195 200 205
Asp Ser Glu Ala Gln Gly His Glu Asn Pro Val Phe Leu Gly Asp Ser
210 215 220
Pro Glu Pro Lys Met Arg Thr Val Ser Gln Ile Met Met Arg Gln Pro
225 230 235 240
Ser Glu Thr Gly His His Leu Leu Ser Glu Pro Gly Thr Pro Phe Ser
245 250 255
Pro Asn Ile Gln Gly Glu Leu Phe Phe Ser Ala Gln Gly Leu Pro Glu
260 265 270
Ser Asn Ile
275

<210> 74
<211> 293
<212> PRT
<213> Fugu rubripes

<400> 74
Leu Glu Lys Phe Thr Ser Ala His His Thr Lys Gln Thr Leu Glu Lys
1 5 10 15
Gly Leu Asn Leu Leu Cys Leu Thr Lys Ser Asn Ala His His Gly His
20 25 30
Pro Ala Met Ser Val Ser Ala Ser His Leu Tyr Tyr Thr Cys Pro Glu
35 40 45
Gly Ala Asn Ala Thr Leu Val Cys Asn Gln Arg Gly Gly Ala Leu His
50 55 60
Pro Asn Asp Ser Leu Trp Arg Leu Trp Phe Phe Thr Pro His Lys Asp
65 70 75 80
Gln His Cys Thr Lys His Gly Pro Arg Asn Val Thr Phe Lys His Ser
85 90 95
Lys Leu Ser Ser Gly Leu His Phe Gly Ala Thr Gln Glu Asn Phe Trp
100 105 110
Val Gln Leu Gln Asn Val Thr His Ala Asp Gln Gly Arg Tyr Cys Cys
115 120 125
Ala Ala Leu Glu Ile Glu Ser Ile His His Glu Ala Val Gln Arg Thr
130 135 140
His Ser His Met Phe Leu Asn Ile Ile Pro Arg Gly Thr Gly Ser Pro
145 150 155 160
Asn Cys Thr Val Ser Ala Pro Ser Ala Pro Glu Gly Asn Ala Thr Leu
165 170 175
Cys Thr Val Pro Val Ala Leu Ala Met Gly Ala Cys Ile Leu Ala Leu
180 185 190
Leu Ser Leu Pro Leu Ile Leu Leu Leu Val Tyr Arg Gln Arg Gln Ser
195 200 205
Ala Gln Ser Arg Arg Arg Ala Gln Glu Leu Val Arg Met Asp Ser Glu
210 215 220
Ala His Gly His Glu Asn Pro Val Phe Leu Gly Gly Ser Pro Gln Ile
225 230 235 240
Lys Asn Arg Thr Val Ser Gln Ile Met Ala Arg Gln Ser Ser Glu Thr
245 250 255
Gly Arg His Leu Leu Ser Glu Pro Gly Thr Pro Leu Ser Pro Pro Ala
260 265 270
His Gly Asp Val Phe Phe Pro Ala Glu Asp Thr Ile Phe Glu Thr Pro
275 280 285
Glu Leu Arg Gln Val
290

<210> 75
<211> 168
<212> PRT

<213> Homo sapiens

<400> 75

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

<210> 76
<211> 9
<212> PRT
<213> Homo sapiens

<400> 76

```
Ile Arg His His His Ser Glu His Arg
 1               5
```

<210> 77
<211> 169
<212> PRT
<213> Homo sapiens

<400> 77

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

<210> 78

<211> 241
<212> PRT
<213> Homo sapiens

<400> 78
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asp Thr Arg
            20   25   30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Ser Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Ala Tyr Asn Pro Ile
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
            100   105   110
Pro Ser Val Phe Ile Phe Pro Pro Gln Gln Val Gln Leu Val Gln Ser
        115   120   125
Gly Ala Glu Val Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys
    130   135   140
Ala Ser Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val Arg Gln
145   150   155   160
Ala Pro Gly Gln Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe
                165   170   175
Gly Thr Ala Asn Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr
            180   185   190
Ala Asp Glu Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg
        195   200   205
Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Ser Tyr Gly Trp
    210   215   220
Ser Tyr Glu Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
225   230   235   240
Ser

<210> 79
<211> 169
<212> PRT
<213> Homo sapiens

<400> 79
Ala Phe Lys Val Ala Thr Pro Tyr Ser Leu Tyr Val Cys Pro Glu Gly
 1   5   10   15
Gln Asn Val Thr Leu Thr Cys Arg Leu Leu Gly Pro Val Asp Lys Gly
            20   25   30
His Asp Val Thr Phe Tyr Lys Thr Trp Tyr Arg Ser Ser Arg Gly Glu
        35   40   45
Val Gln Thr Cys Ser Glu Arg Arg Pro Ile Arg Gln Leu Thr Phe Gln
    50   55   60
Asp Leu His Leu His His Gly Gly His Gln Ala Ala Gln Thr Ser His
65   70   75   80
Asp Leu Ala Gln Arg His Gly Leu Glu Ser Ala Ser Asp His His Gly
                85   90   95
Asn Phe Ser Ile Thr Met Arg Asn Leu Thr Leu Leu Asp Ser Gly Leu
            100   105   110
Tyr Cys Cys Leu Val Val Glu Ile Arg His His His Ser Glu His Arg
        115   120   125
Val His Gly Ala Met Glu Leu Gln Val Gln Thr Gly Lys Asp Ala Pro
    130   135   140
Ser Asn Cys Val Val Tyr Pro Ser Ser Ser Gln Glu Ser Glu Gln Ile
145   150   155   160
Thr Ala Ala His His His His His His
                165