

# SEQUENCE LISTING

<110> Genmab A/S

<120> METHOD FOR PRODUCING A CONTROLLED MIXTURE OF TWO OR MORE  
DIFFERENT ANTIBODIES

<130> P/0132-WO-PCT

<160> 64

<170> PatentIn version 3.5

<210> 1

<211> 122

<212> PRT

<213> Homo Sapiens

<400> 1

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Lys | Ile | Ser | Cys | Lys | Ala | Ser | Gly | Tyr | Ser | Phe | His | Phe | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Ile | Gly | Trp | Val | Arg | Gln | Met | Pro | Gly | Lys | Gly | Leu | Glu | Trp | Met |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Ile | Tyr | Pro | Gly | Asp | Ser | Asp | Thr | Arg | Tyr | Arg | Pro | Ser | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Gln | Val | Thr | Ile | Ser | Ala | Asp | Lys | Ser | Ile | Ser | Thr | Ala | Tyr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Trp | Thr | Ser | Leu | Lys | Ala | Ser | Asp | Thr | Ala | Ile | Tyr | Tyr | Cys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Gln | Arg | Gly | Asp | Tyr | Tyr | Tyr | Phe | Tyr | Gly | Met | Asp | Val | Trp |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gln | Gly | Thr | Thr | Val | Thr | Val | Ser | Ser |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

115

120

<210> 2  
 <211> 122  
 <212> PRT  
 <213> Homo Sapiens

<400> 2

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

Ser Leu Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe His Phe Tyr  
 20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met  
 35 40 45

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

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr  
 65 70 75 80

Leu Gln Trp Thr Ser Leu Lys Ala Glu Asp Thr Ala Ile Tyr Tyr Cys  
 85 90 95

Ala Arg Gln Arg Gly Asp Tyr Tyr Tyr Phe Tyr Gly Met Asp Val Trp  
 100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
 115 120

<210> 3  
 <211> 122  
 <212> PRT  
 <213> Homo Sapiens

<400> 3

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

Ser Leu Lys Ile Ser Cys Ala Ala Ser Gly Tyr Ser Phe His Phe Tyr  
 20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met  
 35 40 45

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

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr  
 65 70 75 80

Leu Gln Trp Thr Ser Leu Lys Ala Glu Asp Thr Ala Ile Tyr Tyr Cys  
 85 90 95

Ala Arg Gln Arg Gly Asp Tyr Tyr Tyr Phe Tyr Gly Met Asp Val Trp  
 100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
 115 120

<210> 4  
 <211> 122  
 <212> PRT  
 <213> Homo Sapiens

<400> 4

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

Ser Leu Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe His Phe Tyr  
 20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met  
 35 40 45

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

Gln Gly Arg Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr  
65 70 75 80

Leu Gln Trp Thr Ser Leu Lys Ala Ser Asp Thr Ala Ile Tyr Tyr Cys  
85 90 95

Ala Arg Gln Arg Gly Asp Tyr Tyr Tyr Phe Tyr Gly Met Asp Val Trp  
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

<210> 5  
<211> 122  
<212> PRT  
<213> Homo Sapiens

<400> 5

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

Ser Leu Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe His Phe Tyr  
20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met  
35 40 45

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

Gln Gly Arg Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr  
65 70 75 80

Leu Gln Trp Thr Ser Leu Lys Ala Ser Asp Thr Ala Ile Tyr Tyr Cys  
85 90 95

Ala Arg Gln Arg Gly Asp Tyr Tyr Tyr Phe Tyr Gly Met Asp Val Trp  
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

<210> 6  
<211> 122  
<212> PRT  
<213> Homo Sapiens

<400> 6

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

Ser Leu Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe His Phe Tyr  
20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met  
35 40 45

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

Gln Gly Arg Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr  
65 70 75 80

Leu Gln Trp Thr Arg Leu Lys Ala Ser Asp Thr Ala Ile Tyr Tyr Cys  
85 90 95

Ala Arg Gln Arg Gly Asp Tyr Tyr Tyr Phe Tyr Gly Met Asp Val Trp  
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

<210> 7  
 <211> 122  
 <212> PRT  
 <213> Homo Sapiens

<400> 7

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

Ser Leu Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe His Phe Tyr  
 20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met  
 35 40 45

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

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser Thr Ala Tyr  
 65 70 75 80

Leu Gln Trp Thr Ser Leu Lys Ala Ser Asp Thr Ala Ile Tyr Tyr Cys  
 85 90 95

Ala Arg Gln Arg Gly Asp Tyr Tyr Tyr Phe Tyr Gly Met Asp Val Trp  
 100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
 115 120

<210> 8  
 <211> 122  
 <212> PRT  
 <213> Homo Sapiens

<400> 8

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu

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

<210> 9  
 <211> 107  
 <212> PRT  
 <213> Homo Sapiens

<400> 9

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ile | Val | Leu | Thr | Gln | Ser | Pro | Gly | Thr | Leu | Ser | Leu | Ser | Pro | Gly |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Glu | Arg | Ala | Thr | Leu | Ser | Cys | Arg | Ala | Ser | Gln | Ser | Val | Ser | Ser | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Tyr | Leu | Ala | Trp | Tyr | Gln | Gln | Lys | Pro | Gly | Gln | Val | Pro | Arg | Leu | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu  
65 70 75 80

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

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

<210> 10  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 10

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser  
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Val Pro Arg Leu Leu  
35 40 45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu  
65 70 75 80

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys

100

105

<210> 11  
 <211> 107  
 <212> PRT  
 <213> Homo Sapiens

<400> 11

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser  
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Asp Gln Val Pro Gln Leu Leu  
 35 40 45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu  
 65 70 75 80

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

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

<210> 12  
 <211> 107  
 <212> PRT  
 <213> Homo Sapiens

<400> 12

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser  
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Val Pro Arg Leu Leu  
35 40 45

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

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

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

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

<210> 13  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 13

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser  
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Val Pro Arg Leu Leu  
35 40 45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Leu Gln  
65 70 75 80

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

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

<210> 14  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 14

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser  
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Arg Leu Leu  
35 40 45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Leu Gln  
65 70 75 80

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

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

<210> 15  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 15

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser  
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Val Pro Arg Leu Leu  
35 40 45

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

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu  
65 70 75 80

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

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

<210> 16

<211> 124

<212> PRT

<213> Homo Sapiens

<400> 16

Glu Val Gln Leu Leu 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 Ser Ser Tyr  
20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Ser Gly Ser Gly Gly His Thr Tyr His Ala Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
65 70 75 80

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

Ala Lys Asp Arg Tyr Asp Ile Leu Thr Gly Tyr Tyr Asn Leu Leu Asp  
100 105 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 17  
<211> 124  
<212> PRT  
<213> Homo Sapiens

<400> 17

Glu Val Gln Leu Leu 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 Ser Ser Tyr  
20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Ser Gly Ser Gly Gly His Thr Tyr His Ala Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys

85

90

95

Ala Lys Asp Arg Tyr Asp Ile Leu Thr Gly Tyr Tyr Asn Leu Leu Asp  
 100 105 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
 115 120

<210> 18  
 <211> 124  
 <212> PRT  
 <213> Homo Sapiens

<400> 18

Glu Val Gln Leu Leu 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 Ser Ser Tyr  
 20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val  
 35 40 45

Ser Gly Ile Ser Gly Ser Gly Gly His Thr Tyr His Ala Asp Ser Val  
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80

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

Ala Lys Asp Arg Tyr Asp Ile Leu Thr Gly Tyr Tyr Asn Leu Leu Asp  
 100 105 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
 115 120

<210> 19  
 <211> 124  
 <212> PRT  
 <213> Homo Sapiens

<400> 19

Glu Val Gln Leu Leu Gln 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 Ser Ser Tyr  
 20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45

Ser Gly Ile Ser Gly Ser Gly Gly His Thr Tyr His Ala Asp Ser Val  
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr 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 Lys Asp Arg Tyr Asp Ile Leu Thr Gly Tyr Tyr Asn Leu Leu Asp  
 100 105 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
 115 120

<210> 20  
 <211> 124  
 <212> PRT  
 <213> Homo Sapiens

<400> 20

Glu Val Gln Leu Leu Gln 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 Ser Ser Tyr  
20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Ser Gly Ser Gly Gly His Thr Tyr His Ala Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

Ala Lys Asp Arg Tyr Asp Ile Leu Thr Gly Tyr Tyr Asn Leu Leu Asp  
100 105 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 21  
<211> 124  
<212> PRT  
<213> Homo Sapiens

<400> 21

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

Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Phe Thr Phe Ser Ser Tyr  
20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Ser Gly Ser Gly Gly His Thr Tyr His Ala Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

Ala Lys Asp Arg Tyr Asp Ile Leu Thr Gly Tyr Tyr Asn Leu Leu Asp  
100 105 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 22  
<211> 124  
<212> PRT  
<213> Homo Sapiens

<400> 22

Glu Val Gln Leu Leu 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 Ser Ser Tyr  
20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Ser Gly Ser Gly Gly His Thr Tyr His Ala Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr 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 Lys Asp Arg Tyr Asp Ile Leu Thr Gly Tyr Tyr Asn Leu Leu Asp  
100 105 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 23  
<211> 124  
<212> PRT  
<213> Homo Sapiens

<400> 23

Glu Val Gln Leu Leu 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 Ser Ser Tyr  
20 25 30

Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Ser Gly Ser Gly Gly His Thr Tyr His Ala Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr 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 Lys Asp Arg Tyr Asp Ile Leu Thr Gly Tyr Tyr Asn Leu Leu Asp  
100 105 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 24  
 <211> 107  
 <212> PRT  
 <213> Homo Sapiens

<400> 24

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 Gly Ile Ser Ser Trp  
 20 25 30

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

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

Thr Phe Gly Gly Gly Ala Lys Val Glu Ile Lys  
 100 105

<210> 25  
 <211> 107  
 <212> PRT  
 <213> Homo Sapiens

<400> 25

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 Gly Ile Ser Ser Trp  
 20 25 30

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

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly  
50 55 60

Ser Glu 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 Tyr Asn Ser Tyr Pro Leu  
85 90 95

Thr Phe Gly Gly Gly Ala Lys Val Glu Ile Lys  
100 105

<210> 26  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 26

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 Gly Ile Ser Ser Trp  
20 25 30

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

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Asp Arg Phe Ser Gly  
50 55 60

Ser Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro  
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Pro Leu

85

90

95

Thr Phe Gly Gly Gly Ala Lys Val Glu Ile Lys  
 100 105

<210> 27  
 <211> 107  
 <212> PRT  
 <213> Homo Sapiens

<400> 27

Ala Ile Gln Leu 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 Gly Ile Ser Ser Trp  
 20 25 30

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

Thr Phe Gly Gly Gly Ala Lys Val Glu Ile Lys  
 100 105

<210> 28  
 <211> 107  
 <212> PRT  
 <213> Homo Sapiens

<400> 28

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 Gly Ile Ser Ser Trp  
 20 25 30

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

Thr Phe Gly Gly Gly Ala Lys Val Glu Ile Lys  
 100 105

<210> 29  
 <211> 107  
 <212> PRT  
 <213> Homo Sapiens

<400> 29

Ala Ile Gln Leu 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 Gly Ile Ser Ser Trp  
 20 25 30

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

Thr Phe Gly Gly Gly Ala Lys Val Glu Ile Lys  
100 105

<210> 30  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 30

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 Gly Ile Ser Ser Trp  
20 25 30

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

Thr Phe Gly Gly Gly Ala Lys Val Glu Ile Lys  
100 105

<210> 31  
 <211> 125  
 <212> PRT  
 <213> Homo Sapiens

<400> 31

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr  
 20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45

Ala Val Ile Trp Asp Asp Gly Ser Tyr Lys Tyr Tyr Gly Asp Ser Val  
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80

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

Ala Arg Asp Gly Ile Thr Met Val Arg Gly Val Met Lys Asp Tyr Phe  
 100 105 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
 115 120 125

<210> 32  
 <211> 125  
 <212> PRT  
 <213> Homo Sapiens

<400> 32

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr  
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ala Val Ile Trp Asp Asp Gly Ser Tyr Lys Tyr Tyr Gly Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
65 70 75 80

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

Ala Arg Asp Gly Ile Thr Met Val Arg Gly Val Met Lys Asp Tyr Phe  
100 105 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120 125

<210> 33  
<211> 125  
<212> PRT  
<213> Homo Sapiens

<400> 33

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr  
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val  
35 40 45

Ala Val Ile Trp Asp Asp Gly Ser Tyr Lys Tyr Tyr Gly Asp Ser Val

50

55

60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80

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

Ala Arg Asp Gly Ile Thr Met Val Arg Gly Val Met Lys Asp Tyr Phe  
 100 105 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
 115 120 125

<210> 34  
 <211> 125  
 <212> PRT  
 <213> Homo Sapiens

<400> 34

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr  
 20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45

Ala Val Ile Trp Asp Asp Gly Ser Tyr Lys Tyr Tyr Gly Asp Ser Val  
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr 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 Asp Gly Ile Thr Met Val Arg Gly Val Met Lys Asp Tyr Phe  
100 105 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120 125

<210> 35  
<211> 125  
<212> PRT  
<213> Homo Sapiens

<400> 35

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr  
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ala Val Ile Trp Asp Asp Gly Ser Tyr Lys Tyr Tyr Gly Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

Ala Arg Asp Gly Ile Thr Met Val Arg Gly Val Met Lys Asp Tyr Phe  
100 105 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120 125

<210> 36

<211> 125  
 <212> PRT  
 <213> Homo Sapiens

<400> 36

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
 1 5 10 15

Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Phe Thr Phe Ser Thr Tyr  
 20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45

Ala Val Ile Trp Asp Asp Gly Ser Tyr Lys Tyr Tyr Gly Asp Ser Val  
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Gly Asp Thr Ala Val Tyr Tyr Cys  
 85 90 95

Ala Arg Asp Gly Ile Thr Met Val Arg Gly Val Met Lys Asp Tyr Phe  
 100 105 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
 115 120 125

<210> 37  
 <211> 125  
 <212> PRT  
 <213> Homo Sapiens

<400> 37

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr  
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ala Val Ile Trp Asp Asp Gly Ser Tyr Lys Tyr Tyr Gly Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr 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 Asp Gly Ile Thr Met Val Arg Gly Val Met Lys Asp Tyr Phe  
100 105 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120 125

<210> 38  
<211> 125  
<212> PRT  
<213> Homo Sapiens

<400> 38

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr  
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ala Val Ile Trp Asp Asp Gly Ser Tyr Lys Tyr Tyr Gly Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr 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 Asp Gly Ile Thr Met Val Arg Gly Val Met Lys Asp Tyr Phe  
100 105 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120 125

<210> 39  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 39

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 Asp Ile Ser Ser Ala  
20 25 30

Leu Val Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45

Tyr Asp Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60

Ser Glu 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 Phe Asn Ser Tyr Pro Leu  
85 90 95

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

<210> 40  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 40

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 Asp Ile Ser Ser Ala  
20 25 30

Leu Val Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45

Tyr Asp Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60

Ser Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro  
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Phe Asn Ser Tyr Pro Leu  
85 90 95

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

<210> 41  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 41

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 Asp Ile Ser Ser Ala  
20 25 30

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

Tyr Asp Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60

Ser Glu 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 Phe Asn Ser Tyr Pro Leu  
85 90 95

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

<210> 42  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 42

Ala Ile Gln Leu 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 Asp Ile Ser Ser Ala  
20 25 30

Leu Val Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45

Tyr Asp Ala Ser Ser Leu Glu 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 Phe Asn Ser Tyr Pro Leu

                      85                      90                      95

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

|       |              |
|-------|--------------|
| <210> | 43           |
| <211> | 107          |
| <212> | PRT          |
| <213> | Homo Sapiens |

<400> 43

Ala Ile Gln Leu 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 Asp Ile Ser Ser Ala  
20 25 30

Leu Val Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45

Tyr Asp Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Ser Leu Gln Pro  
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Phe Asn Ser Tyr Pro Leu  
85 90 95

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

|                       |     |
|-----------------------|-----|
| $\langle 210 \rangle$ | 44  |
| $\langle 211 \rangle$ | 107 |
| $\langle 212 \rangle$ | PRT |

<213> Homo Sapiens

<400> 44

Ala Ile Gln Leu 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 Asp Ile Ser Ser Ala  
20 25 30

Leu Val Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45

Tyr Asp 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 Lys Ile Ser Ser Leu Gln Pro  
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Phe Asn Ser Tyr Pro Leu  
85 90 95

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

<210> 45

<211> 107

<212> PRT

<213> Homo Sapiens

<400> 45

Ala Ile Gln Leu 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 Asp Ile Ser Ser Ala  
20 25 30

Leu Val Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45

Tyr Asp Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60

Ser Glu 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 Phe Asn Ser Tyr Pro Leu  
85 90 95

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

<210> 46  
<211> 330  
<212> PRT  
<213> Homo Sapiens

<400> 46

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys  
1 5 10 15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser  
35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
65 70 75 80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys  
85 90 95

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys  
100 105 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro  
115 120 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys  
130 135 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp  
145 150 155 160

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

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu  
180 185 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn  
195 200 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly  
210 215 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu  
225 230 235 240

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr  
245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn  
260 265 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe  
275 280 285

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn

290

295

300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr  
 305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 325 330

<210> 47  
 <211> 107  
 <212> PRT  
 <213> Homo Sapiens

<400> 47

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu  
 1 5 10 15

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe  
 20 25 30

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln  
 35 40 45

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser  
 50 55 60

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu  
 65 70 75 80

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser  
 85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys  
 100 105

<210> 48  
 <211> 105  
 <212> PRT

<213> Homo Sapiens

<400> 48

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

Glu Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe  
20 25 30

Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val  
35 40 45

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

Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser  
65 70 75 80

His Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu  
85 90 95

Lys Thr Val Ala Pro Thr Glu Cys Ser  
100 105

<210> 49

<211> 122

<212> PRT

<213> Homo Sapiens

<400> 49

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe His Asp Tyr  
20 25 30

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Thr Ile Ser Trp Asn Ser Gly Thr Ile Gly Tyr Ala 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 Leu Tyr Tyr Cys  
85 90 95

Ala Lys Asp Ile Gln Tyr Gly Asn Tyr Tyr Tyr Gly Met Asp Val Trp  
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

<210> 50  
<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 50

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr  
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile  
35 40 45

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

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro  
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Ile  
85 90 95

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

<210> 51  
<211> 121  
<212> PRT  
<213> Homo Sapiens

<400> 51

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr  
20 25 30

Val Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Thr Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
65 70 75 80

Leu Gln Met Asn Ser Leu Ser Ala Glu Asp Thr Ala Met Tyr Tyr Cys  
85 90 95

Ala Arg Gly Gly Ile Thr Gly Thr Thr Gly Val Phe Asp Tyr Trp Gly  
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 52  
<211> 107

<212> PRT  
<213> Homo Sapiens

<400> 52

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 Gly Ile Ser Ser Trp  
20 25 30

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

Tyr Asp Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60

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

Glu Asp Phe Ala Ile Tyr Tyr Cys Gln Gln Tyr Lys Ser Tyr Pro Ile  
85 90 95

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

<210> 53  
<211> 115  
<212> PRT  
<213> Homo Sapiens

<400> 53

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

Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Thr Ser  
20 25 30

Gly Val Ser Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu

35

40

45

Gly Val Ile Trp Gly Asp Gly Ser Thr Asn Tyr His Ser Ala Leu Lys  
 50 55 60

Ser Arg Leu Ser Ile Lys Lys Asp His Ser Lys Ser Gln Val Phe Leu  
 65 70 75 80

Lys Leu Asn Ser Leu Gln Thr Asp Asp Thr Ala Thr Tyr Tyr Cys Ala  
 85 90 95

Lys Gly Gly Tyr Ser Leu Ala His Trp Gly Gln Gly Thr Leu Val Thr  
 100 105 110

Val Ser Ala  
 115

<210> 54  
 <211> 107  
 <212> PRT  
 <213> Homo Sapiens

<400> 54

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 Ala Ser Glu Asn Ile Arg Ser Asn  
 20 25 30

Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val  
 35 40 45

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

Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser  
 65 70 75 80

Glu Asp Phe Gly Thr Tyr Tyr Cys Gln His Tyr Trp Gly Thr Thr Trp  
85 90 95

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

<210> 55  
<211> 121  
<212> PRT  
<213> Homo Sapiens

<400> 55

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

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe Ser Ser  
20 25 30

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met  
35 40 45

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

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Arg Thr Ala Tyr  
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys  
85 90 95

Ala Arg His Val Thr Met Ile Trp Gly Val Ile Ile Asp Phe Trp Gly  
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 56

<211> 107  
<212> PRT  
<213> Homo Sapiens

<400> 56

Ala Ile Gln Leu 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 Gly Ile Ser Ser Ala  
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45

Tyr Asp Ala Ser Ser Leu Glu 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 Phe Asn Ser Tyr Pro Tyr  
85 90 95

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

<210> 57  
<211> 121  
<212> PRT  
<213> Homo Sapiens

<400> 57

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Arg Pro Ser Gln  
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Thr Phe Thr Asp Phe  
20 25 30

Tyr Met Asn Trp Val Arg Gln Pro Pro Gly Arg Gly Leu Glu Trp Ile  
35 40 45

Gly Phe Ile Arg Asp Lys Ala Lys Gly Tyr Thr Thr Glu Tyr Asn Pro  
50 55 60

Ser Val Lys Gly Arg Val Thr Met Leu Val Asp Thr Ser Lys Asn Gln  
65 70 75 80

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

Tyr Cys Ala Arg Glu Gly His Thr Ala Ala Pro Phe Asp Tyr Trp Gly  
100 105 110

Gln Gly Ser Leu Val Thr Val Ser Ser  
115 120

<210> 58  
<211> 107  
<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 Lys Ala Ser Gln Asn Ile Asp Lys Tyr  
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45

Tyr Asn Thr Asn Asn Leu Gln Thr Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Leu Gln His Ile Ser Arg Pro Arg  
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
100 105

<210> 59  
<211> 117  
<212> PRT  
<213> Homo Sapiens

<400> 59

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

Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Leu Ser Gly Tyr  
20 25 30

Phe Trp Thr Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile  
35 40 45

Gly Glu Ser Asn Tyr Ala Gly Ser Thr Arg Tyr Asn Pro Ser Leu Lys  
50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Gln Asn Gln Phe Ser Leu  
65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala  
85 90 95

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

Val Thr Val Ser Ser  
115

<210> 60  
 <211> 109  
 <212> PRT  
 <213> Homo Sapiens

<400> 60

Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln  
 1 5 10 15

Thr Ala Arg Ile Thr Cys Ser Gly Asp Ala Leu Pro Lys Gln Tyr Ala  
 20 25 30

Tyr Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr  
 35 40 45

Lys Asp Asn Glu Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser  
 50 55 60

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

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Ala Asp Ser Ser Gly Ser Ser  
 85 90 95

Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly  
 100 105

<210> 61  
 <211> 329  
 <212> PRT  
 <213> Homo Sapiens

<400> 61

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys  
 1 5 10 15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser  
35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
65 70 75 80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys  
85 90 95

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys  
100 105 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro  
115 120 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys  
130 135 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp  
145 150 155 160

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

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu  
180 185 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn  
195 200 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly  
210 215 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu  
 225 230 235 240

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr  
 245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn  
 260 265 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe  
 275 280 285

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn  
 290 295 300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr  
 305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly  
 325

<210> 62  
 <211> 251  
 <212> PRT  
 <213> Staphylococcus aureus

<400> 62

Ala Ala Gln His Asp Glu Ala Gln Gln Asn Ala Phe Tyr Gln Val Leu  
 1 5 10 15

Asn Met Pro Asn Leu Asn Ala Asp Gln Arg Asn Gly Phe Ile Gln Ser  
 20 25 30

Leu Lys Asp Asp Pro Ser Gln Ser Ala Asn Val Leu Gly Glu Ala Lys  
 35 40 45

Lys Leu Asn Glu Ser Gln Ala Pro Lys Ala Asp Asn Asn Phe Asn Lys  
 50 55 60

Glu Gln Gln Asn Ala Phe Tyr Glu Ile Leu Asn Met Pro Asn Leu Asn  
65 70 75 80

Glu Glu Gln Arg Asn Gly Phe Ile Gln Ser Leu Lys Asp Asp Pro Ser  
85 90 95

Gln Ser Ala Asn Leu Leu Ser Glu Ala Lys Lys Leu Asn Glu Ser Gln  
100 105 110

Ala Pro Lys Ala Asp Asn Lys Phe Asn Lys Glu Gln Gln Asn Ala Phe  
115 120 125

Glu Ile Leu His Leu Pro Asn Leu Asn Glu Glu Gln Arg Asn Gly Phe  
130 135 140

Ile Gln Ser Leu Lys Asp Asp Pro Ser Gln Ser Ala Asn Leu Leu Ala  
145 150 155 160

Glu Ala Lys Lys Leu Asn Asp Ala Gln Ala Pro Lys Ala Asp Asn Lys  
165 170 175

Phe Asn Lys Glu Gln Gln Asn Ala Phe Tyr Glu Ile Leu His Leu Pro  
180 185 190

Asn Leu Thr Glu Glu Gln Arg Asn Gly Phe Ile Gln Ser Leu Lys Asp  
195 200 205

Asp Pro Ser Val Ser Lys Glu Ile Leu Ala Glu Ala Lys Lys Leu Asn  
210 215 220

Asp Ala Gln Ala Pro Lys Glu Glu Asp Asn Asn Lys Pro Gly Lys Glu  
225 230 235 240

Asp Gly Asn Lys Pro Gly Lys Glu Asp Gly Asn  
245 250

<210> 63  
 <211> 384  
 <212> PRT  
 <213> Streptococcus sp. group

<400> 63

Val Asp Ser Pro Ile Glu Asp Thr Pro Ile Ile Arg Asn Gly Gly Glu  
 1 5 10 15

Leu Thr Asn Leu Leu Gly Asn Ser Glu Thr Thr Leu Ala Leu Arg Asn  
 20 25 30

Glu Glu Ser Ala Thr Ala Asp Leu Thr Ala Ala Ala Val Ala Asp Thr  
 35 40 45

Val Ala Ala Ala Ala Ala Glu Asn Ala Gly Ala Ala Ala Trp Glu Ala  
 50 55 60

Ala Ala Ala Ala Asp Ala Leu Ala Lys Ala Lys Ala Asp Ala Leu Lys  
 65 70 75 80

Glu Phe Asn Lys Tyr Gly Val Ser Asp Tyr Tyr Lys Asn Leu Ile Asn  
 85 90 95

Asn Ala Lys Thr Val Glu Gly Ile Lys Asp Leu Gln Ala Gln Val Val  
 100 105 110

Glu Ser Ala Lys Lys Ala Arg Ile Ser Glu Ala Thr Asp Gly Leu Ser  
 115 120 125

Asp Phe Leu Lys Ser Gln Thr Pro Ala Glu Asp Thr Val Lys Ser Ile  
 130 135 140

Glu Leu Ala Glu Ala Lys Val Leu Ala Asn Arg Glu Leu Asp Lys Tyr  
 145 150 155 160

Gly Val Ser Asp Tyr His Lys Asn Leu Ile Asn Asn Ala Lys Thr Val

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|            |            |            |            | 165        |            |            |            | 170        |            |            |            | 175        |            |            |            |
| Glu        | Gly        | Val        | Lys<br>180 | Glu        | Leu        | Ile        | Asp        | Glu<br>185 | Ile        | Leu        | Ala        | Ala        | Leu<br>190 | Pro        | Lys        |
| Thr        | Asp        | Thr<br>195 | Tyr        | Lys        | Leu        | Ile        | Leu<br>200 | Asn        | Gly        | Lys        | Thr        | Leu<br>205 | Lys        | Gly        | Glu        |
| Thr        | Thr<br>210 | Thr        | Glu        | Ala        | Val        | Asp<br>215 | Ala        | Ala        | Thr        | Ala        | Glu<br>220 | Lys        | Val        | Phe        | Lys        |
| Gln<br>225 | Tyr        | Ala        | Asn        | Asp        | Asn<br>230 | Gly        | Val        | Asp        | Gly        | Glu<br>235 | Trp        | Thr        | Tyr        | Asp        | Asp<br>240 |
| Ala        | Thr        | Lys        | Thr        | Phe<br>245 | Thr        | Val        | Thr        | Glu        | Lys<br>250 | Pro        | Glu        | Val        | Ile        | Asp<br>255 | Ala        |
| Ser        | Glu        | Leu        | Thr<br>260 | Pro        | Ala        | Val        | Thr        | Thr<br>265 | Tyr        | Lys        | Leu        | Val        | Ile<br>270 | Asn        | Gly        |
| Lys        | Thr<br>275 | Leu        | Lys        | Gly        | Glu        | Thr        | Thr<br>280 | Thr        | Lys        | Ala        | Val        | Asp<br>285 | Ala        | Glu        | Thr        |
| Ala<br>290 | Glu        | Lys        | Ala        | Phe        | Lys        | Gln<br>295 | Tyr        | Ala        | Asn        | Asp        | Asn<br>300 | Gly        | Val        | Asp        | Gly        |
| Val<br>305 | Trp        | Thr        | Tyr        | Asp        | Asp<br>310 | Ala        | Thr        | Lys        | Thr        | Phe<br>315 | Thr        | Val        | Thr        | Glu        | Met<br>320 |
| Val        | Thr        | Glu        | Val        | Pro<br>325 | Gly        | Asp        | Ala        | Pro        | Thr<br>330 | Glu        | Pro        | Glu        | Lys        | Pro<br>335 | Glu        |
| Ala        | Ser        | Ile        | Pro<br>340 | Leu        | Val        | Pro        | Leu        | Thr<br>345 | Pro        | Ala        | Thr        | Pro        | Ile<br>350 | Ala        | Lys        |
| Asp        | Asp        | Ala<br>355 | Lys        | Lys        | Asp        | Asp        | Thr<br>360 | Lys        | Lys        | Glu        | Asp        | Pro<br>365 | Glu        | Ala        | Lys        |

Lys Asp Asp Ala Lys Lys Ala Glu Thr Leu Pro Thr Thr Gly Glu Gly  
 370 375 380

<210> 64  
 <211> 938  
 <212> PRT  
 <213> Finegoldia magna

<400> 64

Ala Glu Glu Asp Asn Thr Asp Asn Asn Leu Ser Met Asp Glu Ile Ser  
 1 5 10 15

Asp Ala Tyr Phe Asp Tyr His Gly Asp Val Ser Asp Ser Val Asp Pro  
 20 25 30

Val Glu Glu Glu Ile Asp Glu Ala Leu Ala Lys Ala Leu Ala Glu Ala  
 35 40 45

Lys Glu Thr Ala Lys Lys His Ile Asp Ser Leu Asn His Leu Ser Glu  
 50 55 60

Thr Ala Lys Lys Leu Ala Lys Asn Asp Ile Asp Ser Ala Thr Thr Ile  
 65 70 75 80

Asn Ala Ile Asn Asp Ile Val Ala Arg Ala Asp Val Met Glu Arg Lys  
 85 90 95

Thr Ala Glu Lys Glu Glu Ala Glu Lys Leu Ala Ala Ala Lys Glu Thr  
 100 105 110

Ala Lys Lys His Ile Asp Glu Leu Lys His Leu Ala Asp Lys Thr Lys  
 115 120 125

Glu Leu Ala Lys Arg Asp Ile Asp Ser Ala Thr Thr Ile Asn Ala Ile  
 130 135 140

Asn Asp Ile Val Ala Arg Ala Asp Val Met Glu Arg Lys Thr Ala Glu  
 145 150 155 160

Lys Glu Glu Ala Glu Lys Leu Ala Ala Ala Lys Glu Thr Ala Lys Lys  
 165 170 175

His Ile Asp Glu Leu Lys His Leu Ala Asp Lys Thr Lys Glu Leu Ala  
 180 185 190

Lys Arg Asp Ile Asp Ser Ala Thr Thr Ile Asp Ala Ile Asn Asp Ile  
 195 200 205

Val Ala Arg Ala Asp Val Met Glu Arg Lys Leu Ser Glu Lys Glu Thr  
 210 215 220

Pro Glu Pro Glu Glu Glu Val Thr Ile Lys Ala Asn Leu Ile Phe Ala  
 225 230 235 240

Asp Gly Ser Thr Gln Asn Ala Glu Phe Lys Gly Thr Phe Ala Lys Ala  
 245 250 255

Val Ser Asp Ala Tyr Ala Tyr Ala Asp Ala Leu Lys Lys Asp Asn Gly  
 260 265 270

Glu Tyr Thr Val Asp Val Ala Asp Lys Gly Leu Thr Leu Asn Ile Lys  
 275 280 285

Phe Ala Gly Lys Lys Glu Lys Pro Glu Glu Pro Lys Glu Glu Val Thr  
 290 295 300

Ile Lys Val Asn Leu Ile Phe Ala Asp Gly Lys Thr Gln Thr Ala Glu  
 305 310 315 320

Phe Lys Gly Thr Phe Glu Glu Ala Thr Ala Lys Ala Tyr Ala Tyr Ala  
 325 330 335

Asp Leu Leu Ala Lys Glu Asn Gly Glu Tyr Thr Ala Asp Leu Glu Asp



Thr Ser Asp Leu Tyr Phe Ser Leu Ile Asn Lys Ala Lys Thr Val Glu  
545 550 555 560

Gly Val Glu Ala Leu Lys Asn Glu Ile Leu Lys Ala His Ala Gly Glu  
565 570 575

Glu Thr Pro Glu Leu Lys Asp Gly Tyr Ala Thr Tyr Glu Glu Ala Glu  
580 585 590

Ala Ala Ala Lys Glu Ala Leu Lys Asn Asp Asp Val Asn Asn Ala Tyr  
595 600 605

Glu Ile Val Gln Gly Ala Asp Gly Arg Tyr Tyr Tyr Val Leu Lys Ile  
610 615 620

Glu Val Ala Asp Glu Glu Glu Pro Gly Glu Asp Thr Pro Glu Val Gln  
625 630 635 640

Glu Gly Tyr Ala Thr Tyr Glu Glu Ala Glu Ala Ala Ala Lys Glu Ala  
645 650 655

Leu Lys Glu Asp Lys Val Asn Asn Ala Tyr Glu Val Val Gln Gly Ala  
660 665 670

Asp Gly Arg Tyr Tyr Tyr Val Leu Lys Ile Glu Asp Lys Glu Asp Glu  
675 680 685

Gln Pro Gly Glu Glu Pro Gly Glu Asn Pro Gly Ile Thr Ile Asp Glu  
690 695 700

Trp Leu Leu Lys Asn Ala Lys Glu Asp Ala Ile Lys Glu Leu Lys Glu  
705 710 715 720

Ala Gly Ile Ser Ser Asp Ile Tyr Phe Asp Ala Ile Asn Lys Ala Lys  
725 730 735

Thr Val Glu Gly Val Glu Ala Leu Lys Asn Glu Ile Leu Lys Ala His  
740 745 750

Ala Glu Lys Pro Gly Glu Asn Pro Gly Ile Thr Ile Asp Glu Trp Leu  
755 760 765

Leu Lys Asn Ala Lys Glu Ala Ala Ile Lys Glu Leu Lys Glu Ala Gly  
770 775 780

Ile Thr Ala Glu Tyr Leu Phe Asn Leu Ile Asn Lys Ala Lys Thr Val  
785 790 795 800

Glu Gly Val Glu Ser Leu Lys Asn Glu Ile Leu Lys Ala His Ala Glu  
805 810 815

Lys Pro Gly Glu Asn Pro Gly Ile Thr Ile Asp Glu Trp Leu Leu Lys  
820 825 830

Asn Ala Lys Glu Asp Ala Ile Lys Glu Leu Lys Glu Ala Gly Ile Thr  
835 840 845

Ser Asp Ile Tyr Phe Asp Ala Ile Asn Lys Ala Lys Thr Ile Glu Gly  
850 855 860

Val Glu Ala Leu Lys Asn Glu Ile Leu Lys Ala His Lys Lys Asp Glu  
865 870 875 880

Glu Pro Gly Lys Lys Pro Gly Glu Asp Lys Lys Pro Glu Asp Lys Lys  
885 890 895

Pro Gly Glu Asp Lys Lys Pro Glu Asp Lys Lys Pro Gly Asp Lys Lys  
900 905 910

Pro Glu Asp Lys Lys Pro Gly Lys Thr Asp Lys Asp Ser Pro Asn Lys  
915 920 925

Lys Lys Lys Ala Lys Leu Pro Lys Ala Gly  
930 935