

761-1_ST25.txt
SEQUENCE LISTING

<110> Scil Proteins GmbH

<120> HUMAN FUSION PROTEINS COMPRISING INTERFERONS AND HETERO-DIMERIC
MODIFIED UBIQUITIN PROTEINS

<130> 761-1

<160> 73

<170> PatentIn version 3.5

<210> 1

<211> 76

<212> PRT

<213> Homo sapiens

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Met Gln Ile Phe Val Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

Lys Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys
35 40 45

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gln Lys Glu
50 55 60

Ser Thr Leu His Leu Val Leu Arg Leu Arg Gly Gly
65 70 75

<210> 2

<211> 91

<212> PRT

<213> Homo sapiens

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

Ser Ile Gly Leu Arg Trp Thr Pro Leu Asn Ser Ser Thr Ile Ile Gly
20 25 30

Tyr Arg Ile Thr Val Val Ala Ala Gly Glu Gly Ile Pro Ile Phe Glu
35 40 45

Asp Phe Val Asp Ser Ser Val Gly Tyr Tyr Thr Val Thr Gly Leu Glu
50 55 60

Pro Gly Ile Asp Tyr Asp Ile Ser Val Ile Thr Leu Ile Asn Gly Gly
65 70 75 80

Glu Ser Ala Pro Thr Thr Leu Thr Gln Gln Thr

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Gly Ile Gly
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Ser Gly Gly Gly Gly
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Ser Gly Gly Gly Gly Ile Gly
1 5

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Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ile Gly
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<400> 7

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

<210> 8
<211> 165
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<213> Homo sapiens

<400> 8

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
1 5 10 15

Leu Leu Ala Gln Met Arg Lys Ile Ser Leu Phe Ser Cys Leu Lys Asp
20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
35 40 45

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
50 55 60

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
65 70 75 80

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
85 90 95

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
100 105 110

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
115 120 125

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
130 135 140

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
145 150 155 160

Leu Arg Ser Lys Glu
165

<210> 9
<211> 188
<212> PRT
<213> Homo sapiens

<400> 9

Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Val Gly Cys Asp Leu Pro Gln Thr His Ser Leu

Gly Ser Arg Arg Thr Leu Met Leu Leu Ala Gln Met Arg Lys Ile Ser
 35 40 45

Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu
 50 55 60

Glu Phe Gly Asn Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His
 65 70 75 80

Glu Met Ile Gln Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser
 85 90 95

Ala Ala Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr
 100 105 110

Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val
 115 120 125

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

Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro
 145 150 155 160

Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu
 165 170 175

Ser Thr Asn Leu Gln Glu Ser Leu Arg Ser Lys Glu
 180 185

<210> 10
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 <212> PRT
 <213> Homo sapiens

<400> 10

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
 1 5 10 15

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
 20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
 35 40 45

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
 50 55 60

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
 65 70 75 80

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Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
85 90 95

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
100 105 110

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
115 120 125

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
130 135 140

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
145 150 155 160

Leu Arg Ser Lys Glu
165

<210> 11
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<213> Homo sapiens
<400> 11

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
1 5 10 15

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
20 25 30

Arg Arg Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
35 40 45

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
50 55 60

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
65 70 75 80

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
85 90 95

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
100 105 110

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
115 120 125

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
130 135 140

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Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
145 150 155 160

Leu Arg Ser Lys Glu
165

<210> 12
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<212> PRT
<213> Homo sapiens
<400> 12

Met Ala Leu Pro Phe Ala Leu Leu Met Ala Leu Val Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Leu Asp Cys Asp Leu Pro Gln Thr His Ser Leu
20 25 30

Gly His Arg Arg Thr Met Met Leu Leu Ala Gln Met Arg Arg Ile Ser
35 40 45

Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Arg Phe Pro Gln Glu
50 55 60

Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Glu Ala Ile Ser Val Leu
65 70 75 80

His Glu Val Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser
85 90 95

Ser Val Ala Trp Asp Glu Arg Leu Leu Asp Lys Leu Tyr Thr Glu Leu
100 105 110

Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Met Gln Glu Val Trp
115 120 125

Val Gly Gly Thr Pro Leu Met Asn Glu Asp Ser Ile Leu Ala Val Arg
130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
165 170 175

Ser Ser Arg Asn Leu Gln Glu Arg Leu Arg Arg Lys Glu
180 185

<210> 13
<211> 189
<212> PRT
<213> Homo sapiens

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<400> 13

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

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<210> 14
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 <213> Homo sapiens

<400> 14

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Met Ala Leu Ser Phe Ser Leu Leu Met Ala Val Leu Val Leu Ser Tyr
1      5      10
Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
20     25     30
Gly Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Gly Arg Ile Ser
35     40     45

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His Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Glu Glu
50 55 60

Glu Phe Asp Gly His Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
65 70 75 80

His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Glu Asp Ser
85 90 95

Ser Ala Ala Trp Glu Gln Ser Leu Leu Glu Lys Phe Ser Thr Glu Leu
100 105 110

Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Glu Val Gly
115 120 125

Val Glu Glu Thr Pro Leu Met Asn Glu Asp Ser Ile Leu Ala Val Arg
130 135 140

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Leu Ser
165 170 175

Phe Ser Thr Asn Leu Gln Lys Arg Leu Arg Arg Lys Asp
180 185

<210> 15
<211> 189
<212> PRT
<213> Homo sapiens

<400> 15

Met Ala Leu Pro Phe Val Leu Leu Met Ala Leu Val Val Leu Asn Cys
1 5 10 15

Lys Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
20 25 30

Ser Asn Arg Arg Thr Leu Met Ile Met Ala Gln Met Gly Arg Ile Ser
35 40 45

Pro Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu
50 55 60

Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu
65 70 75 80

His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser
85 90 95

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Ser Ala Thr Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu
100 105 110

Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Met Met Gln Glu Val Gly
115 120 125

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

Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Thr Glu Lys Lys Tyr Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
165 170 175

Leu Ser Ala Asn Leu Gln Glu Arg Leu Arg Arg Lys Glu
180 185

<210> 16
<211> 190
<212> PRT
<213> Mus musculus

<400> 16

Met Ala Arg Leu Cys Ala Phe Leu Val Met Leu Ile Val Met Ser Tyr
1 5 10 15

Trp Ser Ile Cys Ser Leu Gly Cys Asp Leu Pro His Thr Tyr Asn Leu
20 25 30

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

Phe Leu Ser Cys Leu Lys Asp Arg Gln Asp Phe Gly Phe Pro Leu Glu
50 55 60

Lys Val Asp Asn Gln Gln Ile Gln Lys Ala Gln Ala Ile Pro Val Leu
65 70 75 80

Arg Asp Leu Thr Gln Gln Thr Leu Asn Leu Phe Thr Ser Lys Ala Ser
85 90 95

Ser Ala Ala Trp Asn Ala Thr Leu Leu Asp Ser Phe Cys Asn Asp Leu
100 105 110

His Gln Gln Leu Asn Asp Leu Gln Thr Cys Leu Met Gln Gln Val Gly
115 120 125

Val Gln Glu Pro Pro Leu Thr Gln Glu Asp Ala Leu Leu Ala Val Arg
130 135 140

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Lys Tyr Phe His Arg Ile Thr Val Tyr Leu Arg Glu Lys Lys His Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Arg Ala Glu Val Trp Arg Ala Leu Ser
165 170 175

Ser Ser Val Asn Leu Leu Pro Arg Leu Ser Glu Glu Lys Glu
180 185 190

<210> 17
<211> 192
<212> PRT
<213> Rattus norvegicus

<400> 17

Met Ala Arg Leu Cys Ala Phe Leu Met Ser Leu Val Val Val Ser Tyr
1 5 10 15

Trp Ser Ala Cys Cys Leu Gly Cys Asp Leu Pro His Thr His Asn Leu
20 25 30

Arg Asn Lys Arg Val Phe Thr Leu Leu Ala Gln Met Arg Arg Leu Ser
35 40 45

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

Lys Val Asp Gly Gln Gln Ile Gln Lys Ala Gln Ala Ile Pro Val Leu
65 70 75 80

His Glu Leu Thr Gln Gln Ile Leu Ser Leu Phe Thr Ser Lys Glu Ser
85 90 95

Ser Thr Ala Trp Asp Ala Thr Leu Leu Asp Ser Phe Cys Asn Asp Leu
100 105 110

Gln Gln Gln Leu Ser Gly Leu Gln Ala Cys Leu Met Gln Gln Val Gly
115 120 125

Val Gln Glu Ser Pro Leu Thr Gln Glu Asp Ser Leu Leu Ala Val Arg
130 135 140

Glu Tyr Phe His Arg Ile Thr Val Tyr Leu Arg Glu Asn Lys His Ser
145 150 155 160

Pro Cys Ala Trp Glu Val Val Lys Ala Glu Val Trp Arg Ala Leu Ser
165 170 175

Ser Ser Ala Asn Leu Met Gly Arg Leu Arg Glu Glu Arg Asn Glu Ser
180 185 190

<210> 18

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<211> 93
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 <222> (44)..(44)
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<400> 18

Ser Cys Leu Lys Asp Arg Lys Asp Phe Gly Phe Pro Leu Glu Lys Val
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Asp Ala Gln Gln Ile Gln Lys Ala Gln Ala Ile Ser Ile Leu His Glu
 20 25 30

Leu Ser Gln Gln Val Leu Asn Ile Tyr Thr Ser Xaa Asp Ser Ser Ala
 35 40 45

Ala Trp Asp Ala Thr Leu Leu Asp Ser Phe Cys Asn Asp Leu Gln Gln
 50 55 60

Gln Leu Ser Gly Leu Gln Ala Cys Gln Met His Gln Val Gly Val Gln
 65 70 75 80

Glu Pro Pro Leu Ala Gln Glu Asp Ser Leu Leu Ala Val
 85 90

<210> 19
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 <213> Artificial Sequence

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 <223> 1041-D11, modified hetero-dimeric ubiquitin protein

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Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
 20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gln Arg Lys
 50 55 60

Phe Pro Leu His Leu Val Leu Arg Leu Arg Gly Gly Gly Ile Gly Met
 65 70 75 80

Arg Ile Phe Val Thr Thr Gln Thr Gly Lys Thr Ile Thr Leu Glu Val
 85 90 95

761-1_ST25.txt

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp Ser Asn Trp
130 135 140

Glu Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 20

<211> 155

<212> PRT

<213> Artificial Sequence

<220>

<223> 1255-B9, modified hetero-dimeric ubiquitin protein

<400> 20

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val His Thr Gln Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ala
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

761-1_ST25.txt

<210> 21
 <211> 155
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> 1255-B10, modified hetero-dimeric ubiquitin protein

<400> 21

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
 1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
 20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
 50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
 65 70 75 80

Gln Ile Phe Val Ala Thr Pro Thr Gly Lys Thr Ile Thr Leu Glu Val
 85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
 100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
 115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ser
 130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala
 145 150 155

<210> 22
 <211> 155
 <212> PRT
 <213> Artificial Sequence

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 <223> 1247-G11, modified hetero-dimeric ubiquitin protein

<400> 22

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
 1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
 20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Arg Thr His Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ser
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 23
<211> 155
<212> PRT
<213> Artificial Sequence

<220>
<223> 1255-G12, modified hetero-dimeric ubiquitin protein
<400> 23

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Tyr Thr Tyr Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

761-1_ST25.txt

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp Ser Gly Glu
130 135 140

Phe Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 24
<211> 155
<212> PRT
<213> Artificial Sequence

<220>
<223> 1247-F8, modified hetero-dimeric ubiquitin protein

<400> 24

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Leu Thr His Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp Asn Lys Asp
130 135 140

Trp Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 25
<211> 155
<212> PRT
<213> Artificial Sequence

761-1_ST25.txt

<220>

<223> 1237-B10, modified hetero-dimeric ubiquitin protein

<400> 25

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Arg Ile Gly Met
65 70 75 80

Gln Ile Phe Val His Thr Thr Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp His His Asp
130 135 140

Met Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 26

<211> 155

<212> PRT

<213> Artificial Sequence

<220>

<223> 1237-H4, modified hetero-dimeric ubiquitin protein

<400> 26

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

761-1_ST25.txt

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Ser Thr Tyr Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Ala Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp Pro Gly Asp
130 135 140

Met Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 27
<211> 155
<212> PRT
<213> Artificial Sequence

<220>
<223> 1239-B10, modified hetero-dimeric ubiquitin protein
<400> 27

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Asp Thr Pro Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Lys Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

761-1_ST25.txt

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Arg Leu Pro
130 135 140

Lys Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 28
<211> 155
<212> PRT
<213> Artificial Sequence

<220>
<223> 1246-H5, modified hetero-dimeric ubiquitin protein
<400> 28

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val His Thr Gln Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Tyr Gln Ala
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 29
<211> 155
<212> PRT
<213> Artificial Sequence

<220>
<223> 1247-G1, modified hetero-dimeric ubiquitin protein

761-1_ST25.txt

<400> 29

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

Lys Glu Gly Ile Pro Ser Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys
35 40 45

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Tyr Thr Asn Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp Gln His Asp
130 135 140

Phe Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 30

<211> 155

<212> PRT

<213> Artificial Sequence

<220>

<223> 1247-H2, modified hetero-dimeric ubiquitin protein

<400> 30

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

761-1_ST25.txt

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Asp Thr Pro Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp His His Asp
130 135 140

Phe Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 31
<211> 155
<212> PRT
<213> Artificial Sequence

<220>
<223> 1248-E1, modified hetero-dimeric ubiquitin protein
<400> 31

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val His Thr Glu Thr Gly Lys Thr Ile Thr Leu Gly Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Tyr Gln Val
130 135 140

761-1_ST25.txt

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 32
<211> 155
<212> PRT
<213> Artificial Sequence

<220>
<223> 1249-E5, modified hetero-dimeric ubiquitin protein

<400> 32

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Asp Thr Pro Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Glu Arg Thr Leu Ser Asp Tyr Asn Ile Asp Arg Leu Pro
130 135 140

Val Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 33
<211> 155
<212> PRT
<213> Artificial Sequence

<220>
<223> 1253-A11, modified hetero-dimeric ubiquitin protein

<400> 33

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

761-1_ST25.txt

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Ser Thr Ala Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ala
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 34
<211> 155
<212> PRT
<213> Artificial Sequence

<220>
<223> 1255-A8, modified hetero-dimeric ubiquitin protein

<400> 34

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

761-1_ST25.txt

Gln Ile Phe Val Leu Thr Asp Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ser
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

<210> 35
<211> 155
<212> PRT
<213> Artificial Sequence

<220>
<223> 1255-G3, modified hetero-dimeric ubiquitin protein

<400> 35

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Leu Thr Thr Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ser
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala
145 150 155

761-1_ST25.txt

<210> 36
 <211> 155
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> 1255-H3, modified hetero-dimeric ubiquitin protein
 <400> 36

Met Gln Ile Phe Val Gly Thr Gly Thr Gly Lys Thr Ile Thr Leu Glu
 1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
 20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
 50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
 65 70 75 80

Gln Ile Phe Val His Thr Trp Thr Glu Lys Thr Ile Thr Leu Glu Val
 85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
 100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
 115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Tyr Gln Ala
 130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala
 145 150 155

<210> 37
 <211> 326
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> fusion protein IFN-1041-D11
 <400> 37

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
 1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
 20 25 30

761-1_ST25.txt

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

761-1_ST25.txt

Thr Leu Ser Asp Tyr Asn Ile Trp Ser Asn Trp Glu Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 38
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1255-B9

<400> 38

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

761-1_ST25.txt

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val His
245 250 255

Thr Gln Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ala Pro Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 39
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1255-B10

<400> 39

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

761-1_ST25.txt

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val Ala
245 250 255

Thr Pro Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ser Pro Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 40

<211> 326

<212> PRT

<213> Artificial Sequence

<220>

<223> fusion protein IFN-1247-G11

<400> 40

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
 1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
 20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
 35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
 50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
 65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
 85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
 100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
 115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
 130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
 145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
 165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
 180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
 195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
 210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
 225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val Arg
 245 250 255

761-1_ST25.txt

Thr His Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ser Pro Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 41
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1255-G12

<400> 41

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

761-1_ST25.txt

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Met Thr Ile Trp Val
165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val Tyr
245 250 255

Thr Tyr Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Trp Ser Gly Glu Phe Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 42

<211> 326

<212> PRT

<213> Artificial Sequence

<220>

<223> fusion protein IFN-1247-F8

<400> 42

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

761-1_ST25.txt

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

Leu Arg Leu Arg Ala Ala
325

<210> 43
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1237-B10

<400> 43

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
210 215 220

761-1_ST25.txt

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
225 230 235 240

Val Leu Arg Leu Arg Ala Ala Arg Ile Gly Met Gln Ile Phe Val His
245 250 255

Thr Thr Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Trp His His Asp Met Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 44
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1237-H4

<400> 44

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

761-1_ST25.txt

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Met Thr Ile Trp Val
165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val Ser
245 250 255

Thr Tyr Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Ala Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Trp Pro Gly Asp Met Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 45
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1239-B10

<400> 45

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

761-1_ST25.txt

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Met Thr Ile Trp Val
165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val Asp
245 250 255

Thr Pro Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Lys Gly Ile Pro Pro
275 280 285

761-1_ST25.txt

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Gly Arg Leu Pro Lys Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 46
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1246-H5

<400> 46

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
165 170 175

761-1_ST25.txt

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val His
245 250 255

Thr Gln Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Gly Tyr Gln Ala Pro Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 47
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1247-G1

<400> 47

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

761-1_ST25.txt

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
 85 90 95
 Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
 100 105 110
 Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
 115 120 125
 Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
 130 135 140
 Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
 145 150 155 160
 Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
 165 170 175
 His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
 180 185 190
 Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
 195 200 205
 Ser Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
 210 215 220
 Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
 225 230 235 240
 Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val Tyr
 245 250 255
 Thr Asn Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
 260 265 270
 Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
 275 280 285
 Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
 290 295 300
 Thr Leu Ser Asp Tyr Asn Ile Trp Gln His Asp Phe Leu His Leu Val
 305 310 315 320
 Leu Arg Leu Arg Ala Ala
 325

<210> 48
 <211> 326

761-1_ST25.txt

<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1247-H2

<400> 48

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
225 230 235 240

761-1_ST25.txt

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val Asp
245 250 255

Thr Pro Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Trp His His Asp Phe Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 49
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1248-E1
<400> 49

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

761-1_ST25.txt

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val His
245 250 255

Thr Glu Thr Gly Lys Thr Ile Thr Leu Gly Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Gly Tyr Gln Val Pro Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 50
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1249-E5

<400> 50

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

761-1_ST25.txt

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

761-1_ST25.txt

Thr Leu Ser Asp Tyr Asn Ile Asp Arg Leu Pro Val Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 51
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1253-A11

<400> 51

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

761-1_ST25.txt

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
 210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
 225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val Ser
 245 250 255

Thr Ala Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
 260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
 275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
 290 295 300

Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ala Pro Leu His Leu Val
 305 310 315 320

Leu Arg Leu Arg Ala Ala
 325

<210> 52
 <211> 326
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> fusion protein IFN-1255-A8

<400> 52

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
 1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
 20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
 35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
 50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
 65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
 85 90 95

761-1_ST25.txt

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val Leu
245 250 255

Thr Asp Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
260 265 270

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ser Pro Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 53

<211> 326

<212> PRT

<213> Artificial Sequence

<220>

<223> fusion protein IFN-1255-G3

761-1_ST25.txt

<400> 53

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
 1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
 20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
 35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
 50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
 65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
 85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
 100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
 115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
 130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
 145 150 155 160

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Thr Ile Trp Val
 165 170 175

His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
 180 185 190

Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
 195 200 205

Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
 210 215 220

Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
 225 230 235 240

Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val Leu
 245 250 255

Thr Thr Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
 260 265 270

761-1_ST25.txt

Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
275 280 285

Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
290 295 300

Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ser Pro Leu His Leu Val
305 310 315 320

Leu Arg Leu Arg Ala Ala
325

<210> 54
<211> 326
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein IFN-1255-H3

<400> 54

Met Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
1 5 10 15

Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
20 25 30

Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
35 40 45

Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
65 70 75 80

Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
85 90 95

Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
100 105 110

Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
115 120 125

Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
145 150 155 160

761-1_ST25.txt

Ser Leu Arg Ser Lys Glu Ser Gly Gly Gly Gly Met Gln Ile Phe Val
 165 170 175
 Gly Thr Gly Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp
 180 185 190
 Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro
 195 200 205
 Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly
 210 215 220
 Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys Leu Ser Leu His Leu
 225 230 235 240
 Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met Gln Ile Phe Val His
 245 250 255
 Thr Trp Thr Glu Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
 260 265 270
 Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro
 275 280 285
 Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln Leu Glu Asp Gly Arg
 290 295 300
 Thr Leu Ser Asp Tyr Asn Ile Gly Tyr Gln Ala Pro Leu His Leu Val
 305 310 315 320
 Leu Arg Leu Arg Ala Ala
 325

<210> 55

<211> 325

<212> PRT

<213> Artificial Sequence

<220>

<223> fusion protein 1041-D11-IFN

<400> 55

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

761-1_ST25.txt

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

761-1_ST25.txt

<210> 56
 <211> 325
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> fusion protein 1255-B9-IFN

<400> 56

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
 1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
 20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
 50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
 65 70 75 80

Gln Ile Phe Val His Thr Gln Thr Gly Lys Thr Ile Thr Leu Glu Val
 85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
 100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
 115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ala
 130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
 145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
 165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
 180 185 190

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
 195 200 205

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
 210 215 220

761-1_ST25.txt

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 57
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1255-B10-IFN

<400> 57

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Ala Thr Pro Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

761-1_ST25.txt

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ser
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
180 185 190

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
195 200 205

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
210 215 220

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 58
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1247-G11-IFN

<400> 58

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

761-1_ST25.txt

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

761-1_ST25.txt

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 59
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1255-G12-IFN

<400> 59

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Tyr Thr Tyr Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp Ser Gly Glu
130 135 140

Phe Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
180 185 190

761-1_ST25.txt

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
195 200 205

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
210 215 220

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 60
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1247-F8-IFN
<400> 60

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

761-1_ST25.txt

Gln Ile Phe Val Leu Thr His Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp Asn Lys Asp
130 135 140

Trp Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
180 185 190

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
195 200 205

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
210 215 220

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 61
<211> 325
<212> PRT
<213> Artificial Sequence

761-1_ST25.txt

<220>

<223> fusion protein 1237-B10-IFN

<400> 61

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Arg Ile Gly Met
65 70 75 80

Gln Ile Phe Val His Thr Thr Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp His His Asp
130 135 140

Met Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
180 185 190

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
195 200 205

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
210 215 220

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

761-1_ST25.txt

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 62
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1237-H4-IFN

<400> 62

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Ser Thr Tyr Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Ala Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp Pro Gly Asp
130 135 140

761-1_ST25.txt

Met Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
180 185 190

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
195 200 205

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
210 215 220

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 63
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1239-B10-IFN

<400> 63

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

761-1_ST25.txt

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

761-1_ST25.txt

Leu Arg Ser Lys Glu
325

<210> 64
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1246-H5-IFN

<400> 64

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val His Thr Gln Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Tyr Gln Ala
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
180 185 190

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
195 200 205

761-1_ST25.txt

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
210 215 220

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 65
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1247-G1-IFN

<400> 65

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

Lys Glu Gly Ile Pro Ser Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys
35 40 45

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Tyr Thr Asn Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

761-1_ST25.txt

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Trp Gln His Asp
130 135 140

Phe Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
180 185 190

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
195 200 205

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
210 215 220

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 66
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1247-H2-IFN

<400> 66

761-1_ST25.txt

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

761-1_ST25.txt

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 67

<211> 325

<212> PRT

<213> Artificial Sequence

<220>

<223> fusion protein 1248-E1-IFN

<400> 67

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val His Thr Glu Thr Gly Lys Thr Ile Thr Leu Gly Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Tyr Gln Val
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
165 170 175

761-1_ST25.txt

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
180 185 190
Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
195 200 205
Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
210 215 220
Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240
Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255
Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270
Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285
Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300
Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320
Leu Arg Ser Lys Glu
325

<210> 68
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1249-E5-IFN

<400> 68

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

761-1_ST25.txt

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

761-1_ST25.txt

<210> 69
 <211> 325
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> fusion protein 1253-A11-IFN

<400> 69

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
 1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
 20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
 50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
 65 70 75 80

Gln Ile Phe Val Ser Thr Ala Thr Gly Lys Thr Ile Thr Leu Glu Val
 85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
 100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
 115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ala
 130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
 145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
 165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
 180 185 190

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
 195 200 205

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
 210 215 220

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
 225 230 235 240

761-1_ST25.txt

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 70
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1255-A8-IFN

<400> 70

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val Leu Thr Asp Thr Gly Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

761-1_ST25.txt

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Trp Gln Ser
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
180 185 190

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
195 200 205

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
210 215 220

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 71
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1255-G3-IFN

<400> 71

Met Thr Ile Trp Val His Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

761-1_ST25.txt

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

761-1_ST25.txt

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 72
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein 1255-H3-IFN

<400> 72

Met Gln Ile Phe Val Gly Thr Gly Thr Gly Lys Thr Ile Thr Leu Glu
1 5 10 15

Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp
20 25 30

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

Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Asn Phe Lys
50 55 60

Leu Ser Leu His Leu Val Leu Arg Leu Arg Ala Ala Gly Ile Gly Met
65 70 75 80

Gln Ile Phe Val His Thr Trp Thr Glu Lys Thr Ile Thr Leu Glu Val
85 90 95

Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys
100 105 110

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Trp Ala Gly Lys Gln
115 120 125

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gly Tyr Gln Ala
130 135 140

Pro Leu His Leu Val Leu Arg Leu Arg Ala Ala Ser Gly Gly Gly Gly
145 150 155 160

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
165 170 175

Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
180 185 190

761-1_ST25.txt

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
195 200 205

Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
210 215 220

Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
225 230 235 240

Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
245 250 255

Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys
260 265 270

Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
275 280 285

Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
290 295 300

Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser
305 310 315 320

Leu Arg Ser Lys Glu
325

<210> 73
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> linker sequence RIG

<400> 73

Arg Ile Gly
1