

10295W002-Sequence  
SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> ANTI-MUC16 ANTIBODIES, ANTIBODY-DRUG CONJUGATES, AND BISPECIFIC ANTIGEN-BINDING MOLECULES THAT BIND MUC16 AND CD3, AND USES THEREOF

<130> 10295W002

<150> US 62/399,249  
<151> 2016-09-23

<150> US 62/558,711  
<151> 2017-09-14

<160> 1962

<170> PatentIn version 3.5

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gcggactctg tgaagggccg attcaccatc tccagagaca ccgccaagaa ttccctatat 240  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asn Asp Tyr  
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Ala Met His Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45  
Ser Gly Ile Asp Trp Asn Gly Gly Ser Ile Asp Tyr Ala Asp Ser Val  
50 55 60

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

Leu Gln Met Asn Ser Leu Lys Val Glu Asp Thr Ala Leu Tyr Tyr Cys  
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Ala Lys Asp Ile Gly His Trp Asn Tyr Ile Gly Gly Met Asp Val Trp  
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asn Ile Tyr  
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Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Phe Leu Ile

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35

40

45

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

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys  
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Ala Ala Ser

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 ccagggaagg gcctggagtg gatttcctac attagtggta ggggtagtac catattctac 180  
 gcagactctg tgaagggccg aatcaccatc tccagggaca acgccaagaa ctactgttt 240  
 ctgcaaatga acagcctgag agccgaggac acggccgtgt atttttgtgt gaaagatcgg 300  
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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Tyr  
 20 25 30

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

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

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

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

Val Lys Asp Arg Gly Gly Tyr Ser Pro Tyr Trp Gly Gln Gly Thr Leu  
100 105 110

Val Thr Val Ser Ser  
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Gly Phe Thr Phe Ser Asn Tyr Tyr  
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Ile Ser Gly Arg Gly Ser Thr Ile  
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Val Lys Asp Arg Gly Gly Tyr Ser Pro Tyr  
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gggaaagccc ctaagctcct gatctatact gcatccagtt tgcagagtgg ggtcccatca 180  
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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly

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1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Thr Tyr  
20 25 30

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

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

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

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

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys  
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Gln Ser Ile Ser Thr Tyr  
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Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
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gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cgcgctgtat 240

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp His  
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 Ser Tyr His Gly Ser Asn Lys His Tyr Ala Asp Ser Val  
50 55 60

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

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

Ala Lys Asp Gly Tyr Asp Phe Trp Asn Gly Tyr Ser Leu Phe Asp Tyr  
100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
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Gly Phe Thr Phe Ser Asp His Gly  
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Ile Ser Tyr His Gly Ser Asn Lys  
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asn Tyr  
20 25 30

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

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

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

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

Ile Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys  
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Gln Ser Ile Ser Asn Tyr  
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Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
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ccaggcaagg ggctggagtg ggtggcagtt atatcatatc atggaactga taaacagtat 180  
ggagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cgcgctgtat 240  
ctgcaaatga acagcctgag acctgaggac acggctatgt attactgtgc gaaagacggc 300  
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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp His  
 20 25 30

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

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

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

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

Ala Lys Asp Gly Tyr Asp Phe Trp Asn Ala Tyr Ser Leu Phe Asp Tyr  
 100 105 110

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

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Gly Phe Thr Phe Ser Asp His Ala

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Ile Ser Tyr His Gly Thr Asp Lys  
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Ala Lys Asp Gly Tyr Asp Phe Trp Asn Ala Tyr Ser Leu Phe Asp Tyr  
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 aggttcagtg gcagtggatc tgggacagat ttactctca ccatcagcag tctgcaacct 240  
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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asn Tyr  
 20 25 30

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

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

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

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

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys  
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Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
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ccaggaagg ggttgagtg ggtctcaggt atgagtggaa gtggtactta cccatattac 180  
gcagactctg tgaagggccg gttcaccatc tccagagaca attccaagaa tatgttgtat 240  
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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
1 5 10 15

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

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

Ser Gly Met Ser Gly Ser Gly Thr Tyr Pro Tyr Tyr Ala Asp Ser Val  
50 55 60

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

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

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

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser  
115 120

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10295w002-Sequence

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<400> 68

Gly Phe Thr Phe Ser Asn Tyr Ala  
 1 5

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24

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<220>  
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<400> 70

Met Ser Gly Ser Gly Thr Tyr Pro  
 1 5

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 gcgaaagacg ggggtggatac agctatgatt cttgatactt ttgatctc

48

<210> 72  
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<220>  
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<400> 72

Ala Lys Asp Gly Val Asp Thr Ala Met Ile Leu Asp Thr Phe Asp Leu  
 1 5 10 15

<210> 73  
 <211> 324  
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## 10295w002-Sequence

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&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 73

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60

atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120

gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180

aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240

gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300

caagggacca agctggagat caaa 324

&lt;210&gt; 74

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 74

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

&lt;210&gt; 75

&lt;211&gt; 18

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 75

cagagcatta gcagctat

18

10295w002-Sequence

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<400> 76

Gln Ser Ile Ser Ser Tyr  
 1 5

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<400> 77  
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9

<210> 78  
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<400> 78

Ala Ala Ser  
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30

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Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
 1 5 10

<210> 81

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ccagggaagg ggctggagtg ggtttcatac gttacttttt ttaatagtgc catatactac 180  
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctcactgtat 240  
ctgcaaatac acagcctgag agccgaggac acggccgtat attactgtgc gagagaaaga 300  
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<400> 82  
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1 5 10 15  
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asp Tyr  
20 25 30  
Ser Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45  
Ser Tyr Val Thr Phe Phe Asn Ser Ala Ile Tyr 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 Val Tyr Tyr Cys  
85 90 95  
Ala Arg Glu Arg Glu Pro Ile Val Gly Gly Phe Asp Tyr Trp Gly Gln  
100 105 110  
Gly Thr Leu Val Thr Val Ser Ser  
115 120

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10295w002-Sequence

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<210> 84  
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<400> 84

Gly Phe Thr Phe Arg Asp Tyr Ser  
 1 5

<210> 85  
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<400> 85  
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<210> 86  
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<220>  
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<400> 86

Val Thr Phe Phe Asn Ser Ala Ile  
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<210> 87  
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<210> 88  
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<400> 88

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Ala Arg Glu Arg Glu Pro Ile Val Gly Gly Phe Asp Tyr  
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atcacttgcc gggcaagtca gagcattaac agctatttaa attggtatca gcagaaacca 120  
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaagggtg ggtcccatca 180  
aggttcagtg gcggtggatc tgggacagat ttactctca ccatcaccag tctgcaacct 240  
gaagattttg caactttcta ctgtcaacag agttacagtt ctctccgat caccttcggc 300  
caaggacac gactggagat taaa 324

<210> 90  
<211> 108  
<212> PRT  
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<220>  
<223> Synthetic

<400> 90

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asn Ser Tyr  
20 25 30

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

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

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

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

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

<210> 91  
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<213> Artificial Sequence

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<400> 91

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18

<210> 92

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 92

Gln Ser Ile Asn Ser Tyr  
1 5

<210> 93

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 93

gctgcatcc

9

<210> 94

<211> 3

<212> PRT

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<223> Synthetic

<400> 94

Ala Ala Ser  
1

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<211> 30

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<400> 95

caacagagtt acagttctcc tccgatcacc

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<211> 10

<212> PRT

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<223> Synthetic

# 10295w002-Sequence

<400> 96

Gln Gln Ser Tyr Ser Ser Pro Pro Ile Thr  
1 5 10

<210> 97

<211> 387

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 97

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ccaggggaagg ggctggagtg ggtaggtttc attagaagta gagcttatgg tgggacaaca 180  
gaatacgccg cgtctgtgaa aggcagattc accatctcaa gagatgattc caaaagcatc 240  
gcctatctgc aaatggacag cctgaaaacc gaggacacag ccgtgtatta ttgtactagc 300  
gggggatatg atagtagtct tcattactac tattactacc acggtatgga cgtctggggc 360  
cgagggacca cggtcacctg ctcctca 387

<210> 98

<211> 129

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 98

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

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

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

Gly Phe Ile Arg Ser Arg Ala Tyr Gly Gly Thr Thr Glu Tyr Ala Ala  
50 55 60

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

Ala Tyr Leu Gln Met Asp Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr  
85 90 95

Tyr Cys Thr Ser Gly Gly Tyr Asp Ser Ser Leu His Tyr Tyr Tyr Tyr  
100 105 110

# 10295w002-Sequence

Tyr His Gly Met Asp Val Trp Gly Arg Gly Thr Thr Val Thr Val Ser  
115 120 125

Ser

<210> 99  
<211> 24  
<212> DNA  
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<400> 99  
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24

<210> 100  
<211> 8  
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<220>  
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<400> 100

Gly Phe Ala Phe Gly Asp His Thr  
1 5

<210> 101  
<211> 30  
<212> DNA  
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<220>  
<223> Synthetic

<400> 101  
attagaagta gagcttatgg tgggacaaca

30

<210> 102  
<211> 10  
<212> PRT  
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<220>  
<223> Synthetic

<400> 102

Ile Arg Ser Arg Ala Tyr Gly Gly Thr Thr  
1 5 10

<210> 103  
<211> 60  
<212> DNA  
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<220>  
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# 10295w002-Sequence

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<210> 104  
<211> 20  
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<400> 104  
Thr Ser Gly Gly Tyr Asp Ser Ser Leu His Tyr Tyr Tyr Tyr Tyr His  
1 5 10 15

Gly Met Asp Val  
20

<210> 105  
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<220>  
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<400> 105  
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga gagagccacc 60  
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cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180  
gacaggttca gtggcagtggt gtctgggaca gacttcactc tcaccatcag cagactggag 240  
cctgaagatt ttgcagtgtg ttactgtcag cagtatggta gttcaccttg gacgttcggc 300  
caagggacca aggtggaaat caaa 324

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<220>  
<223> Synthetic

<400> 106  
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 Ile Thr Ser Ser  
20 25 30

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

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser  
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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 Pro  
85 90 95

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

<210> 107  
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21

<210> 108  
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<220>  
<223> Synthetic

<400> 108

Gln Ser Ile Thr Ser Ser Tyr  
1 5

<210> 109  
<211> 9  
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<220>  
<223> Synthetic

<400> 109  
ggtgcatcc

9

<210> 110  
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<400> 110

Gly Ala Ser  
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<210> 111

10295w002-Sequence

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<400> 111  
cagcagtatg gtagttcacc ttggacg

27

<210> 112  
<211> 9  
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<400> 112

Gln Gln Tyr Gly Ser Ser Pro Trp Thr  
1 5

<210> 113  
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<212> DNA  
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tcctgtacag gttctggact cacctttggt gattatggta tgagctgggt ccgccaggct 120  
ccaggaaagg ggctggagtg ggtaggtttc attagaagta aaggttatgg tgggacaaca 180  
gaatacgccg cgtctgtgaa aggcagattc accatctcaa gagatgattc caaaagcacc 240  
gcctatctgc aaatgaacag cctgaaaacc gaggacacag ccgtgtatta ttgtactagt 300  
gggggatatg atagtagtgt tcattactac tactactatt acgctatgga cgtctggggc 360  
caagggacca cggtcacctg ctcctca 387

<210> 114  
<211> 129  
<212> PRT  
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<220>  
<223> Synthetic

<400> 114

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

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

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

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35

40

45

Gly Phe Ile Arg Ser Lys Gly Tyr Gly Gly Thr Thr Glu Tyr Ala Ala  
50 55 60

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

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

Tyr Cys Thr Ser Gly Gly Tyr Asp Ser Ser Val His Tyr Tyr Tyr Tyr  
100 105 110

Tyr Tyr Ala Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser  
115 120 125

Ser

<210> 115  
<211> 24  
<212> DNA  
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<220>  
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<400> 115  
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<210> 116  
<211> 8  
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<220>  
<223> Synthetic

<400> 116

Gly Leu Thr Phe Gly Asp Tyr Gly  
1 5

<210> 117  
<211> 30  
<212> DNA  
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<220>  
<223> Synthetic

<400> 117  
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30

<210> 118  
<211> 10  
<212> PRT

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 118

Ile Arg Ser Lys Gly Tyr Gly Gly Thr Thr  
 1 5 10

&lt;210&gt; 119

&lt;211&gt; 60

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 119

actagtgggg gatatgatag tagtgttcat tactactact actattacgc tatggacgtc 60

&lt;210&gt; 120

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 120

Thr Ser Gly Gly Tyr Asp Ser Ser Val His Tyr Tyr Tyr Tyr Tyr Tyr  
 1 5 10 15

Ala Met Asp Val  
 20

&lt;210&gt; 121

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 121

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ctctcctgca gggccagtca gactgttagc agcagctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgtg ttactgtcag cagtatggta gctcaccttg gacgttcggc 300

caagggacca aggtggaaat caaa 324

&lt;210&gt; 122

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence



10295w002-Sequence

<220>

<223> Synthetic

<400> 122

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 Thr Val Ser Ser Ser  
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala 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 Pro  
85 90 95

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

<210> 123

<211> 21

<212> DNA

<213> Artificial Sequence

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<223> Synthetic

<400> 123

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21

<210> 124

<211> 7

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<223> Synthetic

<400> 124

Gln Thr Val Ser Ser Ser Tyr  
1 5

<210> 125

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 125

ggtgcatcc

<210> 126  
 <211> 3  
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<220>  
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&lt;400&gt; 126

Gly Ala Ser  
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<210> 127  
 <211> 27  
 <212> DNA  
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<400> 127  
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27

<210> 128  
 <211> 9  
 <212> PRT  
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<220>  
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&lt;400&gt; 128

Gln Gln Tyr Gly Ser Ser Pro Trp Thr  
 1 5

<210> 129  
 <211> 363  
 <212> DNA  
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 ccaggcaagg gactagagtg ggtggcagtt atatcagatg atggaagttt taaattctat 180  
 gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240  
 cttcaaatga acagcctgag agttgaggac tcggctgttt atcactgtgc gaaatggcaa 300  
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&lt;210&gt; 130

10295w002-Sequence

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<400> 130

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 Val Ala Ser Gly Phe Thr Phe Ser Asn Tyr  
20 25 30

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

Ala Val Ile Ser Asp Asp Gly Ser Phe Lys Phe 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 Arg Val Glu Asp Ser Ala Val Tyr His Cys  
85 90 95

Ala Lys Trp Gln His Asn Trp Asn Asp Gly Gly Phe Asp Tyr Trp Gly  
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 131  
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<212> DNA  
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<220>  
<223> Synthetic

<400> 131

ggattcacct tcagtaatta tggc

24

<210> 132  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 132

Gly Phe Thr Phe Ser Asn Tyr Gly  
1 5

<210> 133

10295w002-Sequence

<211> 24  
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<220>  
<223> Synthetic

<400> 133  
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24

<210> 134  
<211> 8  
<212> PRT  
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<220>  
<223> Synthetic

<400> 134

Ile Ser Asp Asp Gly Ser Phe Lys  
1 5

<210> 135  
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<212> DNA  
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<220>  
<223> Synthetic

<400> 135  
gcgaaatggc aacacaactg gaacgacggg ggatttgact ac

42

<210> 136  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 136

Ala Lys Trp Gln His Asn Trp Asn Asp Gly Gly Phe Asp Tyr  
1 5 10

<210> 137  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 137  
gaaattgtgt tgacacagtc tccagacacc ctgtctttgt ctccagggga aagagccacc

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ctctcctgca gggccagtca gagtcttagc agcaactact tagcctggta ccggcagaaa

120

cctggccagg ctcccaggct cctcatctat ggtatatcca gcagggccac tggcatccca

180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag

240

10295w002-Sequence

cctgaagatt ttgcagtgtg ttactgtcag cagtatggta gttcaccttg gacgttcggc 300  
caagggacca aggtggaaat caaa 324

<210> 138  
<211> 108  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 138

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

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

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

Ile Tyr Gly Ile 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 Pro  
85 90 95

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

<210> 139  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 139

cagagtctta gcagcaacta c 21

<210> 140  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 140

Gln Ser Leu Ser Ser Asn Tyr  
1 5

# 10295w002-Sequence

<210> 141  
<211> 9  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 141  
ggtatatcc

9

<210> 142  
<211> 3  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 142

Gly Ile Ser  
1

<210> 143  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 143  
cagcagtatg gtagttcacc ttggacg

27

<210> 144  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 144

Gln Gln Tyr Gly Ser Ser Pro Trp Thr  
1 5

<210> 145  
<211> 339  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 145  
gaggtgcagc tgggtggagtc tggggggagcc ttggtccagc cggggggggtc cctgagactc

60

tcctgtgcag cctctggatt caccttcagt agctatgcta tgcactgggt ccgccaggct

120

ccagggaagg gtctggaatt tgtttcaact attagttata atgggggtac cacatactat

180

10295W002-Sequence

gcagactctg tgaagggcag attcaccgtc tccagagaca attccaaaaa cacggtgttt 240  
 cttcgcattg gcagcctgag aactgaagac atggctgtgt attactgtgc gagagcagca 300  
 gctccctggg gccagggcac cctggtcact gtctcctca 339

<210> 146  
 <211> 113  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 146

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

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

Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ser Lys Asn Thr Val Phe  
 65 70 75 80

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

Ala Arg Ala Ala Ala Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser  
 100 105 110

Ser

<210> 147  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 147

ggattcacct tcagtagcta tgct 24

<210> 148  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

10295w002-Sequence

<400> 148

Gly Phe Thr Phe Ser Ser Tyr Ala  
1 5

<210> 149

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 149

attagttata atgggggtac caca

24

<210> 150

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 150

Ile Ser Tyr Asn Gly Gly Thr Thr  
1 5

<210> 151

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 151

gcgagagcag cagctccc

18

<210> 152

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 152

Ala Arg Ala Ala Ala Pro  
1 5

<210> 153

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 153



10295w002-Sequence

gaaattgtgt tgacgcagtc tccagacacc ctgtctttgt ctccagggga aagagccacc 60  
 ctctcctgca gggccagtca gagtgttagc aacaggtact tagcctggta ccagcagaaa 120  
 cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180  
 gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
 cctgaagatt ttgcagtgtg ttactgtcac cagtatggaa gctcaccttg gacgttcggc 300  
 caagggacca aggtggaaat caaa 324

<210> 154  
 <211> 108  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 154

Glu Ile Val Leu Thr Gln Ser Pro Asp 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 Asn Arg  
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala 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 His Gln Tyr Gly Ser Ser Pro  
 85 90 95

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

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

<220>  
 <223> Synthetic

<400> 155

cagagtgtta gcaacaggta c

21

<210> 156  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

10295w002-Sequence

<220>  
<223> Synthetic

<400> 156

Gln Ser Val Ser Asn Arg Tyr  
1 5

<210> 157  
<211> 9  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 157  
ggtgcatcc

9

<210> 158  
<211> 3  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 158

Gly Ala Ser  
1

<210> 159  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 159  
caccagtatg gaagctcacc ttggacg

27

<210> 160  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 160

His Gln Tyr Gly Ser Ser Pro Trp Thr  
1 5

<210> 161  
<211> 360  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

# 10295w002-Sequence

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<400> 161
caggtgcagc tgggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc      60
tcctgcaagg cttttggata cactctcacc ggctactata tacactgggt gcgacaggcc      120
cctggacaag ggcttgagtg gatgggatgg atcaacccta acaatggtgg cacaaactat      180
gcacagaagt ttcagggcag ggtcaccatg accagggaca aatccatcag cacagcctac      240
atggagctga gcaggctgag atctgacgac acggccgttt attactgtgc gagatcactg      300
gaactgctcc ctgatggtat ggacgtctgg ggccaagggg ccacgggtcac cgtctcctca      360

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<210> 162
<211> 120
<212> PRT
<213> Artificial Sequence

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<220>
<223> Synthetic

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<400> 162
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1      5      10      15
Ser Val Lys Val Ser Cys Lys Ala Phe Gly Tyr Thr Leu Thr Gly Tyr
20     25     30
Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35     40     45
Gly Trp Ile Asn Pro Asn Asn Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50     55     60
Gln Gly Arg Val Thr Met Thr Arg Asp Lys Ser Ile Ser Thr Ala Tyr
65     70     75     80
Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85     90     95
Ala Arg Ser Leu Glu Leu Leu Pro Asp Gly Met Asp Val Trp Gly Gln
100    105    110
Gly Thr Thr Val Thr Val Ser Ser
115    120

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<210> 163
<211> 24
<212> DNA
<213> Artificial Sequence

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<220>
<223> Synthetic

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<400> 163
ggatacactc tcaccggcta ctat

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10295w002-Sequence

<210> 164  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 164

Gly Tyr Thr Leu Thr Gly Tyr Tyr  
 1 5

<210> 165  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 165  
 atcaacccta acaatggtgg caca

24

<210> 166  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 166

Ile Asn Pro Asn Asn Gly Gly Thr  
 1 5

<210> 167  
 <211> 39  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 167  
 gcgagatcac tggaactgct ccctgatggt atggacgtc

39

<210> 168  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 168

Ala Arg Ser Leu Glu Leu Leu Pro Asp Gly Met Asp Val  
 1 5 10

<210> 169

# 10295w002-Sequence

<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 169  
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60  
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120  
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180  
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
cctgaagatt ttgcagtgtg ttactgtcag cagtatggta gctcaccttg gacgttcggc 300  
caagggacca aggtggaaat caaa 324

<210> 170  
<211> 108  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 170  
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 Ala 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 Pro  
85 90 95  
Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
100 105

<210> 171  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 171

cagagtgtta gcagcagcta c

21

<210> 172  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

&lt;400&gt; 172

Gln Ser Val Ser Ser Ser Tyr  
 1 5

<210> 173  
 <211> 9  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 173  
 ggtgcatcc

9

<210> 174  
 <211> 3  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

&lt;400&gt; 174

Gly Ala Ser  
 1

<210> 175  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 175  
 cagcagtatg gtagctcacc ttggacg

27

<210> 176  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

&lt;400&gt; 176

Gln Gln Tyr Gly Ser Ser Pro Trp Thr  
 1 5

# 10295W002-Sequence

<210> 177  
 <211> 342  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 177  
 caggtgcaac tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgaaactc 60  
 tcctgtgcag cctctggatt caccttcagt agctattcct tacactgggt ccgccaggct 120  
 ccaggcaagg ggctggagtg ggtggcactt atttcatatg atggaagtaa tacatactat 180  
 gcagactccg tgaagggccg attcaccatc tccagagaca actccaataa cactctgttt 240  
 cttcaaatga ccagcctgag agctgaggac acggctatat attactgtgc ccggtctata 300  
 gcaacgtcct ggggccaggg agtcctggtc accgtctcct ca 342

<210> 178  
 <211> 114  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 178  
 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg 15  
 1 5 10  
 Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr 30  
 20 25 30  
 Ser Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 45  
 35 40 45  
 Ala Leu Ile Ser Tyr Asp Gly Ser Asn Thr Tyr Tyr Ala Asp Ser Val 60  
 50 55 60  
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Asn Asn Thr Leu Phe 80  
 65 70 75 80  
 Leu Gln Met Thr Ser Leu Arg Ala Glu Asp Thr Ala Ile Tyr Tyr Cys 95  
 85 90 95  
 Ala Arg Ser Ile Ala Thr Ser Trp Gly Gln Gly Val Leu Val Thr Val 110  
 100 105 110  
 Ser Ser

<210> 179  
 <211> 24  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 179

ggattcacct tcagtagcta ttcc

24

<210> 180

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 180

Gly Phe Thr Phe Ser Ser Tyr Ser  
1 5

<210> 181

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 181

atttcatatg atggaagtaa taca

24

<210> 182

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 182

Ile Ser Tyr Asp Gly Ser Asn Thr  
1 5

<210> 183

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 183

gcccgggtcta tagcaacgtc c

21

<210> 184

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic



10295w002-Sequence

<400> 184

Ala Arg Ser Ile Ala Thr Ser  
1 5

<210> 185

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 185

gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60  
ctctcctgca gggccagtca gagcgtttagc aacaggtact tagcctggca ccagcagaaa 120  
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180  
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
cctgaagatt ttgcagtgta ttactgtcag cagtatggta gctcaccttg ggcgttcggc 300  
caagggacca aggtggaaat caaa 324

<210> 186

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 186

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 Asn Arg  
20 25 30

Tyr Leu Ala Trp His Gln Gln Lys Pro Gly Gln Ala 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 Pro  
85 90 95

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

<210> 187

10295w002-Sequence

<211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 187  
 cagagcgtta gcaacaggta c

21

<210> 188  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 188

Gln Ser Val Ser Asn Arg Tyr  
 1 5

<210> 189  
 <211> 9  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 189  
 ggtgcatcc

9

<210> 190  
 <211> 3  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 190

Gly Ala Ser  
 1

<210> 191  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 191  
 cagcagtatg gtagctcacc ttgggcg

27

<210> 192  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

10295w002-Sequence

<220>  
<223> Synthetic

<400> 192

Gln Gln Tyr Gly Ser Ser Pro Trp Ala  
1 5

<210> 193  
<211> 357  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 193  
caggtgcagt tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60  
acctgcactg tctctggtgg agccatcaat acttactact ggagctggat ccggcagccc 120  
ccaggaagg gactggagtg gattgggtat atctattaca gaggaacac caactacaac 180  
ccctccctca ggagtcgagt caccatatca gtagacacgt ccaagaacca gttcttcctg 240  
aagctgaggt ctgtgaccgt tgcggactcg gccgtgtatt tctgtgagag aggctggaac 300  
taccgcgctg agtacttcca gcactggggc cagggcaccg tggtcaccgt ctcctca 357

<210> 194  
<211> 119  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 194

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

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

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

Gly Tyr Ile Tyr Tyr Arg Gly Asn Thr Asn Tyr Asn Pro Ser Leu Arg  
50 55 60

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

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

Arg Gly Trp Asn Tyr Arg Ala Glu Tyr Phe Gln His Trp Gly Gln Gly  
100 105 110

10295w002-Sequence

Thr Val Val Thr Val Ser Ser  
115

<210> 195  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 195  
ggtggagcca tcaatactta ctac

24

<210> 196  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 196

Gly Gly Ala Ile Asn Thr Tyr Tyr  
1 5

<210> 197  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 197  
atctattaca gaggaacac c

21

<210> 198  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 198

Ile Tyr Tyr Arg Gly Asn Thr  
1 5

<210> 199  
<211> 39  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 199  
gcgagaggct ggaactaccg cgctgagtac ttccagcac

39

# 10295w002-Sequence

<210> 200  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 200

Ala Arg Gly Trp Asn Tyr Arg Ala Glu Tyr Phe Gln His  
 1 5 10

<210> 201  
 <211> 354  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 201  
 caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60  
 acctgcactg tctctggtgg ctccatcagt agtcactact ggagctggat ccggcagccc 120  
 ccagggaagg gactggaatg gattggttat atctattaca gtgggagcac caactacaac 180  
 ccctccctca agagtcgagt caccatttca gtagacaggt ccaagaaccg gttctccctg 240  
 aagctgagct ctgtgaccgc tgcggacacg gccgtgtatt actgtgagag gaccttctac 300  
 gatgactacg catttgacta ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 202  
 <211> 118  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 202

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

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

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

Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys  
 50 55 60

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

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala

Arg Thr Phe Tyr Asp Asp Tyr Ala Phe Asp Tyr Trp Gly Gln Gly Thr  
                   100                                  105                                  110

Leu Val Thr Val Ser Ser  
                   115

<210> 203  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 203  
 ggtggctcca tcagtagtca ctac

24

<210> 204  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 204

Gly Gly Ser Ile Ser Ser His Tyr  
 1                                  5

<210> 205  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 205  
 atctattaca gtgggagcac c

21

<210> 206  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 206

Ile Tyr Tyr Ser Gly Ser Thr  
 1                                  5

<210> 207  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

# 10295w002-Sequence

<220>  
<223> Synthetic

<400> 207  
gcgaggacct tctacgatga ctacgcattt gactac

36

<210> 208  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 208

Ala Arg Thr Phe Tyr Asp Asp Tyr Ala Phe Asp Tyr  
1 5 10

<210> 209  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 209  
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60  
ctctcctgca gggccagtca gagtgttgac accacctact tagcctggta ccagcagaaa 120  
cctggccagg ctcccaggct cctcatcttt gatgcatcca gcagggccac tggcatccca 180  
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Asp Thr Thr  
20 25 30

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

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

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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 Pro  
85 90 95

Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys  
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Gln Ser Val Asp Thr Thr Tyr  
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Asp Ala Ser  
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Gln Gln Tyr Gly Ser Ser Pro Phe Thr  
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<212> DNA

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ccagggaagg gactggagtg gattgggtat gtcgattaca gtgggagcac cgactacaac 180

ccctccctca agagtcgagt caccatatca gtagacacgt ccaagaacca gttttccctg 240

aggctgaact ctgtgaccgc tgcggacacg gccgtgtatt actgtgagag aggatttaac 300

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

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

Gly Tyr Val Asp Tyr Ser Gly Ser Thr Asp Tyr Asn Pro Ser Leu Lys

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50

55

60

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

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

Arg Gly Phe Asn Trp Asn Tyr Glu Phe Asp Tyr Trp Gly Gln Gly Thr  
100 105 110

Leu Val Thr Val Ser Ser  
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Gly Gly Ser Ile Ser Ser Tyr Tyr  
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Val Asp Tyr Ser Gly Ser Thr

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Ala Arg Gly Phe Asn Trp Asn Tyr Glu Phe Asp Tyr  
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cctggccagg ctcccagact cctcatctat ggtgcatcca gcagggccac tggcatccca 180  
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
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caggggacca cgctggagat caaa 324

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<400> 226

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

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Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala 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 Pro  
 85 90 95

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

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21

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<400> 228

Gln Ser Val Ser Ser Thr Tyr  
 1 5

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 ggtgcatcc

9

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<400> 230

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Gly Ala Ser  
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<210> 232  
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Gln Gln Tyr Gly Ser Ser Pro Tyr Thr  
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ccagggaagg gactggaatg gattggctat atctattaca gtgggaacaa cttcaacccc 180  
tccctcaaga gtcgagtcac catatcagtt gacacgtcca agaaccagtt ctccctgaag 240  
ctgagctctg tgaccgctgc ggacacggcc gtgtattact gtgcgagagc gtttcactgg 300  
aactacgaat ttgactactg gggccaggga accctgggtca ccgtctcctc a 351

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<400> 234  
Gln Met Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu  
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr  
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20

25

30

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

Gly Tyr Ile Tyr Tyr Ser Gly Asn Asn Phe Asn Pro Ser Leu Lys Ser  
50 55 60

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

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

Ala Phe His Trp Asn Tyr Glu Phe Asp Tyr Trp Gly Gln Gly Thr Leu  
100 105 110

Val Thr Val Ser Ser  
115

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24

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Gly Gly Ser Ile Ser Ser Tyr Tyr  
1 5

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Ile Tyr Tyr Ser Gly Asn  
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Ala Arg Ala Phe His Trp Asn Tyr Glu Phe Asp Tyr  
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cctggccagg ctcccaggct cctcctctat ggtgcatcca gcaggaccac tgacatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtata ttactgtcag cagtatgata actcaccgct cactttcggc 300

ggagggacca aggtggagat caga 324

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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 Asn Asn  
20 25 30

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

Leu Tyr Gly Ala Ser Ser Arg Thr Thr Asp 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 Asp Asn Ser Pro  
85 90 95

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Arg  
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Gln Ser Val Ser Asn Asn Tyr  
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Gly Ala Ser  
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27

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<400> 248

Gln Gln Tyr Asp Asn Ser Pro Leu Thr  
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ccagggaagg gcctggagtg ggtctcaagt attagttgga atcagggcaa tatagactat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaaggg ctccctgtat 240  
ctacaaatga acagtctgag agctgaggac acggccttat attattgtgt aaaagatcgg 300  
agttcccact actactacta cggtatggac gtctggggcc aagggaccac ggtcaccgtc 360  
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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Glu Tyr  
20 25 30

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

Ser Ser Ile Ser Trp Asn Gln Gly Asn Ile Asp Tyr Ala Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Gly 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

Val Lys Asp Arg Ser Ser His Tyr Tyr Tyr Tyr Gly Met Asp Val Trp  
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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<400> 251

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Gly Phe Thr Phe Asp Glu Tyr Ala  
1 5

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<400> 256

Val Lys Asp Arg Ser Ser His Tyr Tyr Tyr Tyr Gly Met Asp Val  
 1 5 10 15

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 ccagggaagg ggctggagtg gattgggaaa atcaatcata gtggaagcac caactacaac 180  
 ccgtcccctca agatcgagt caccatatca gtagacaggt ccaggatcca gttctccctg 240  
 aagctgagtt ctgtgaccgc cgcggacacg gctgtgtatt actgtgagag agcgttgga 300  
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 Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Leu Ser Gly Tyr  
 20 25 30  
 Tyr Trp Asn Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile  
 35 40 45  
 Gly Lys Ile Asn His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys  
 50 55 60  
 Ser Arg Val Thr Ile Ser Val Asp Arg Ser Arg Ile 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 Ala Leu Glu Leu Leu Thr Asp Gly Met Asp Val Trp Gly Gln Gly  
 100 105 110  
 Thr Thr Val Thr Val Ser Ser  
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Gly Gly Ser Leu Ser Gly Tyr Tyr  
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# 10295w002-Sequence

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<400> 262  
Ile Asn His Ser Gly Ser Thr  
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Ala Arg Ala Leu Glu Leu Leu Thr Asp Gly Met Asp Val  
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ctctcctgca gggccagtca gagtgttagc agcaactact tagcctggta ccagcagaca 120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

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gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
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 caagggacca aggtggaaat caaa 324

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<400> 266

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 Asn  
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Thr Pro Gly Gln Ala 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 Pro  
 85 90 95

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

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Gln Ser Val Ser Ser Asn Tyr

10295w002-Sequence

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Gly Ala Ser  
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Gln Gln Tyr Gly Ser Ser Pro Trp Thr  
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tcctgtgcag cctctggatt cacctttgat gattatgccca tgcactgggt ccggcaagct

120

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ccagggaggg gcctggagtg ggtctcaagt attagttgga atagtataa catagactat 180  
 gcggactctg tgaagggccg gttcaccatc gccagagaca gcgccaagaa ctccctgtat 240  
 ctgcaaataa acagtctgag agctgaggac acggccttat attactgtgt gaaagatcgc 300  
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<400> 274

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

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

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

Ser Ser Ile Ser Trp Asn Ser Asp Asn Ile Asp Tyr Ala Asp Ser Val  
 50 55 60

Lys Gly Arg Phe Thr Ile Ala Arg Asp Ser 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

Val Lys Asp Arg Ser Ser His Tyr Tyr Tyr Tyr Gly Met Asp Val Trp  
 100 105 110

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

<210> 275  
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Gly Phe Thr Phe Asp Asp Tyr Ala  
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<210> 278

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Ile Ser Trp Asn Ser Asp Asn Ile  
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<223> Synthetic

<400> 280

Val Lys Asp Arg Ser Ser His Tyr Tyr Tyr Tyr Gly Met Asp Val  
1 5 10 15

<210> 281

<211> 357

<212> DNA

<213> Artificial Sequence

## 10295w002-Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 281

cagatgcagc tacaacagtg gggcgcagga ctgttgaagc cttcggagac cctgtccctc 60  
 acctgcgctg tctatggtgg gtccctcagt ggttactact ggaactggat ccgccagtcc 120  
 ccagggaagg ggctggagtg gattgggaaa atcaatcata gtggaagcac caactacaac 180  
 ccgtccctca agagtcgagt caccatatca gtagacaggt ccaggatcca gttctccctg 240  
 aagctgagtt ctgtgaccgc cgcggacacg gctgtgtatt actgtgagag agcgctggaa 300  
 ctactcacgg acggtatgga cgtctggggc caagggacca cggtcaccgt ctcctca 357

&lt;210&gt; 282

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 282

Gln Met 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

Tyr Trp Asn Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile  
 35 40 45

Gly Lys Ile Asn His Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys  
 50 55 60

Ser Arg Val Thr Ile Ser Val Asp Arg Ser Arg Ile 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 Ala Leu Glu Leu Leu Thr Asp Gly Met Asp Val Trp Gly Gln Gly  
 100 105 110

Thr Thr Val Thr Val Ser Ser  
 115

&lt;210&gt; 283

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 283

ggtgggtccc tcagtgggta ctac

24

<210> 284  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 284

Gly Gly Ser Leu Ser Gly Tyr Tyr  
 1 5

<210> 285  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 285

atcaatcata gtggaagcac c

21

<210> 286  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 286

Ile Asn His Ser Gly Ser Thr  
 1 5

<210> 287  
 <211> 39  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 287

gcgagagcgc tggaactact cacggacggt atggacgtc

39

<210> 288  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 288

Ala Arg Ala Leu Glu Leu Leu Thr Asp Gly Met Asp Val  
 1 5 10

# 10295w002-Sequence

<210> 289  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 289  
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60  
ctctcctgca gggccagtca gagtgttagc agcaactact tagcctggta ccagcagaca 120  
cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180  
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
cctgaagatt ttgcagtgta ttactgtcag cagtatggta gctcaccttg gacgttcggc 300  
caagggacca aggtggaaat caaa 324

<210> 290  
<211> 108  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 290  
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 Asn  
20 25 30  
Tyr Leu Ala Trp Tyr Gln Gln Thr Pro Gly Gln Ala 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 Pro  
85 90 95  
Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
100 105

<210> 291  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

10295w002-Sequence

<400> 291  
cagagtgtta gcagcaacta c 21

<210> 292  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 292  
Gln Ser Val Ser Ser Asn Tyr  
1 5

<210> 293  
<211> 9  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 293  
ggtgcatcc 9

<210> 294  
<211> 3  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 294

Gly Ala Ser  
1

<210> 295  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 295  
cagcagtatg gtagctcacc ttggacg 27

<210> 296  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 296

Gln Gln Tyr Gly Ser Ser Pro Trp Thr

10295w002-Sequence

1

5

<210> 297  
<211> 363  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 297  
gaggtgcagc tgggtggagtc tgggggaggc ttggtacagg ctggagggtc cctgagactc 60  
tcctgtgcag cctctggatt caccttcagt tatcatgaaa tgaactgggt ccgccaggct 120  
ccaggaagg gactggagtg ggtttcatac attggtagta gaggcactac caaacattat 180  
gcagaccctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat 240  
ctgcaaata atagcctgag agccgaggac acggctgttt attactgtgc gagtgaagtg 300  
ggatctattt tgggttactc tatggacgtc tggggccaag ggaccacggt caccgtctcc 360  
tca 363

<210> 298  
<211> 121  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 298  
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly  
1 5 10 15  
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Tyr His  
20 25 30  
Glu Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45  
Ser Tyr Ile Gly Ser Arg Gly Thr Thr Lys His Tyr Ala Asp Pro Val  
50 55 60  
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr  
65 70 75 80  
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys  
85 90 95  
Ala Ser Glu Val Gly Ser Ile Leu Gly Tyr Ser Met Asp Val Trp Gly  
100 105 110  
Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

10295w002-Sequence

<210> 299  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 299  
 ggattcacct tcagttatca tgaa

24

<210> 300  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 300

Gly Phe Thr Phe Ser Tyr His Glu  
 1 5

<210> 301  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 301  
 attggtagta gaggcactac caaa

24

<210> 302  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 302

Ile Gly Ser Arg Gly Thr Thr Lys  
 1 5

<210> 303  
 <211> 42  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 303  
 gcgagtgaag tgggatctat tttgggttac tctatggacg tc

42

<210> 304  
 <211> 14  
 <212> PRT

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 304

Ala Ser Glu Val Gly Ser Ile Leu Gly Tyr Ser Met Asp Val  
 1 5 10

&lt;210&gt; 305

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 305

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60  
 atcacttgcc gggcaagtca gagcgtagc aggtatttaa attggtgtca acagaaacca 120  
 gggaaagccc ctaagctcct gacctatgct gcatccagtt tgcaaagtgg ggtcccatca 180  
 aggttcagtg gcagtggatc tgggacagat ttactctca ccataagcag tctgcaacct 240  
 gaagattttg cagcttactt ctgtcaacag agttacagta cccctccgat caccttcggc 300  
 caagggacac gactggagat taaa 324

&lt;210&gt; 306

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 306

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Val Ser Arg Tyr  
 20 25 30

Leu Asn Trp Cys Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Thr  
 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 Ala Tyr Phe Cys Gln Gln Ser Tyr Ser Thr Pro Pro  
 85 90 95

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



100

10295w002-Sequence  
105

<210> 307  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 307  
cagagcgtta gcaggtat

18

<210> 308  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 308

Gln Ser Val Ser Arg Tyr  
1 5

<210> 309  
<211> 9  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 309  
gctgcatcc

9

<210> 310  
<211> 3  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 310

Ala Ala Ser  
1

<210> 311  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 311  
caacagagtt acagtacccc tccgatcacc

30

<210> 312

## 10295w002-Sequence

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

<220>  
 <223> Synthetic

<400> 312

Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
 1 5 10

<210> 313  
 <211> 375  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 313  
 caggtgcagc tggtgcagtc tggggctgag gtgaagaagc ctggggcctc agtgaaggtc 60  
 tcctgcaagg cttctggata caccttcacc agttctgata tcaactgggt gcgacaggcc 120  
 actggccagg ggcttgagtg ggtgggatgg atgaacccta actatggtta cacaggcagt 180  
 gcacggaagt tccaggacag agtcaccatg accaggaaca cctccttaag cactgcctac 240  
 ctggagctgc acagcctgag atctgaggac acggccgtgt attactgtgc gagagtcaca 300  
 tattgtagta gtgtaaccag ctgctttaga ccatttacct actggggcca gggaaccctg 360  
 gtcaccgtct ccgca 375

<210> 314  
 <211> 125  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 314

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Ser  
 20 25 30

Asp Ile Asn Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Val  
 35 40 45

Gly Trp Met Asn Pro Asn Tyr Gly Tyr Thr Gly Ser Ala Arg Lys Phe  
 50 55 60

Gln Asp Arg Val Thr Met Thr Arg Asn Thr Ser Leu Ser Thr Ala Tyr  
 65 70 75 80

Leu Glu Leu His Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys

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85

90

95

Ala Arg Val Thr Tyr Cys Ser Ser Val Thr Ser Cys Phe Arg Pro Phe  
100 105 110

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

<210> 315  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 315  
ggatacacct tcaccagttc tgat

24

<210> 316  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 316

Gly Tyr Thr Phe Thr Ser Ser Asp  
1 5

<210> 317  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 317  
atgaacccta actatgggta caca

24

<210> 318  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 318

Met Asn Pro Asn Tyr Gly Tyr Thr  
1 5

<210> 319  
<211> 54  
<212> DNA  
<213> Artificial Sequence

10295w002-Sequence

<220>  
<223> Synthetic

<400> 319  
gcgagagtca catattgtag tagtgtaacc agctgcttta gaccatttac ctac 54

<210> 320  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 320  
Ala Arg Val Thr Tyr Cys Ser Ser Val Thr Ser Cys Phe Arg Pro Phe  
1 5 10 15

Thr Tyr

<210> 321  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 321  
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60  
atcacttgcc gggcaagtca gagcattagc aactatttaa attggtatca gcagaaacca 120  
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180  
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240  
gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300  
caagggacac gactggagat taaa 324

<210> 322  
<211> 108  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 322  
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asn Tyr  
20 25 30

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

10295w002-Sequence

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 Ser Tyr Ser Thr Pro Pro  
85 90 95

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

<210> 323  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 323  
cagagcatta gcaactat

18

<210> 324  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 324

Gln Ser Ile Ser Asn Tyr  
1 5

<210> 325  
<211> 9  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 325  
gctgcatcc

9

<210> 326  
<211> 3  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 326

Ala Ala Ser  
1

# 10295w002-Sequence

<210> 327  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 327  
 caacagagtt acagtacccc tccgatcacc

30

<210> 328  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 328

Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
 1 5 10

<210> 329  
 <211> 345  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 329  
 caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60  
 acctgcactg tctctggtgg ctccatcagt agttactact ggagctggat ccggcagccc 120  
 ccagggaagg gactggagtg gattgggtat atctattaca gtgggagcac caactacaac 180  
 ccctccctca agagtcgagt caccatatca gtagacacgt ccaagaacca gttctccctg 240  
 aagctgagct ctgtgaccgc tgcggacacg gccgtgtatt actgtgagag aaaaaagctc 300  
 gtctttgact actggggcca gggaaccctg gtcaccgtct cctca 345

<210> 330  
 <211> 115  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 330

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

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

Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile

10295w002-Sequence  
 35 40 45

Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys  
 50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys 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 Lys Lys Leu Val Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr  
 100 105 110

Val Ser Ser  
 115

<210> 331  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 331  
 ggtggctcca tcagtagtta ctac

24

<210> 332  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 332

Gly Gly Ser Ile Ser Ser Tyr Tyr  
 1 5

<210> 333  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 333  
 atctattaca gtgggagcac c

21

<210> 334  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

# 10295w002-Sequence

<400> 334

Ile Tyr Tyr Ser Gly Ser Thr  
1 5

<210> 335

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 335

gcgagaaaaa agctcgtctt tgactac

27

<210> 336

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 336

Ala Arg Lys Lys Leu Val Phe Asp Tyr  
1 5

<210> 337

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 337

gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgtagc agcagctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgtg ttactgtcag cagtatggta actcaccttg gacgttcggc 300

caagggacca aggtggaaat caaa 324

<210> 338

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 338

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



# 10295w002-Sequence

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 Ala 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 Asn Ser Pro  
85 90 95

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

<210> 339  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 339  
cagagtgtta gcagcagcta c

21

<210> 340  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 340

Gln Ser Val Ser Ser Ser Tyr  
1 5

<210> 341  
<211> 9  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 341  
ggtgcatcc

9

<210> 342  
<211> 3  
<212> PRT  
<213> Artificial Sequence

10295w002-Sequence

<220>  
<223> Synthetic

<400> 342

Gly Ala Ser  
1

<210> 343  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 343  
cagcagtatg gtaactcacc ttggacg

27

<210> 344  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 344

Gln Gln Tyr Gly Asn Ser Pro Trp Thr  
1 5

<210> 345  
<211> 354  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 345  
caggtgcagc tacagcagtg gggcgcagga ctgttgaagc cttcggagac cctgtccctc 60  
acctgcgctg tctatggtgg gtccttcagt gattactact ggagctggat ccgccagccc 120  
ccagggaagg ggctggagtg gattggggaa atcaatcata gaggaagac caactacaac 180  
ccgtccctca agagtcgagt ctccatatca gtagaccgt ccaagaacca gttctccctg 240  
aagctgagtt ctgtgaccgc cgcggacacg gctgtgtatt actgtgcgcg acagggctgg 300  
aactacgcca tctttgacta ctggggccag ggaatcctgg tccccgtctc ctca 354

<210> 346  
<211> 118  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic

<400> 346

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

10295w002-Sequence

# 10295w002-Sequence

<210> 350  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 350

Ile Asn His Arg Gly Lys Thr  
 1 5

<210> 351  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 351  
 gcgcgacagg gctggaacta cgccatcttt gactac

36

<210> 352  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 352

Ala Arg Gln Gly Trp Asn Tyr Ala Ile Phe Asp Tyr  
 1 5 10

<210> 353  
 <211> 339  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 353  
 gacatcgtga tgaccagtc tccagactcc ctggtgtgt ctctgggcga gagggccacc 60  
 atcaactgca agtccagcca gagtgtttta tacaggtcca acaataagaa ctacttaggt 120  
 tggtagcagc agaaaccagg acagcctcct aagctgctca ttactgggc atcttcccgg 180  
 gaagccgggg tccctgaccg attcagtggc agcgggtctg ggacagaatt cactctcacc 240  
 atcagcagcc tgcaggctga agatgaggca gtttattact gtcagcaata ttatagtagt 300  
 cctccgacgt tcggccaagg gaccaaggtg gaaatcaaa 339

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10295w002-Sequence

<220>

<223> Synthetic

<400> 354

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

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

Ser Asn Asn Lys Asn Tyr Leu Gly Trp Tyr Gln Gln Lys Pro Gly Gln  
35 40 45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Ser Arg Glu Ala Gly Val  
50 55 60

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

Ile Ser Ser Leu Gln Ala Glu Asp Glu Ala Val Tyr Tyr Cys Gln Gln  
85 90 95

Tyr Tyr Ser Ser Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile  
100 105 110

Lys

<210> 355

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 355

cagagtgttt tatacaggtc caacaataag aactac

36

<210> 356

<211> 12

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<220>

<223> Synthetic

<400> 356

Gln Ser Val Leu Tyr Arg Ser Asn Asn Lys Asn Tyr  
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<211> 9

<212> DNA

<213> Artificial Sequence

10295w002-Sequence

<220>  
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<400> 357  
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9

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<220>  
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<400> 358

Trp Ala Ser  
1

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cagcaatatt atagtagtcc tccgacg

27

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<400> 360

Gln Gln Tyr Tyr Ser Ser Pro Pro Thr  
1 5

<210> 361  
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<212> DNA  
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acctgcgctg tctatggtgg gtccttcagt ggttactact ggagctggat ccgccagccc 120  
ccagggaagg ggctggagtg gattggagaa atcaatcata gtggaaaaac cacttacagc 180  
ccgtcccctca agatcgagtg caccatatca gtagacacgt ccaagagcca gttctccctg 240  
aagctgagct ctgtgaccgc cgcggacacg gctgtgtatt actgtgcgag acagggcttg 300  
aactacgcca tctttgacta ctggggccag ggaaccctgg tcaccgtctc ctca 354

10295w002-Sequence

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 <212> PRT  
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<220>  
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<400> 362

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 Phe Ser Gly Tyr  
 20 25 30  
 Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile  
 35 40 45  
 Gly Glu Ile Asn His Ser Gly Lys Thr Thr Tyr Ser Pro Ser Leu Lys  
 50 55 60  
 Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Ser 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 Gln Gly Leu Asn Tyr Ala Ile Phe Asp Tyr Trp Gly Gln Gly Thr  
 100 105 110  
 Leu Val Thr Val Ser Ser  
 115

<210> 363  
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 <212> DNA  
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<400> 363

ggtgggtcct tcagtgggta ctac

24

<210> 364  
 <211> 8  
 <212> PRT  
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<220>  
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<400> 364

Gly Gly Ser Phe Ser Gly Tyr Tyr  
 1 5

# 10295w002-Sequence

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<400> 366  
 Ile Asn His Ser Gly Lys Thr  
 1 5

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<400> 367  
 gcgagacagg gcttgaacta cgccatcttt gactac 36

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tggtatcagc agagaccagg acagcctcct aagctgctca ttactgggc atctaccg 180



10295w002-Sequence

gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240  
atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttttagtagt 300  
cctccgacgt tcggccaagg gaccaagggtg gaaatcaaa 339

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<220>  
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<400> 370

Tyr Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly  
1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Arg Ser Ile Leu Tyr Thr  
20 25 30

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val  
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr  
65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln  
85 90 95

Tyr Phe Ser Ser Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile  
100 105 110

Lys

<210> 371  
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<212> DNA  
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<223> Synthetic

<400> 371

cggagtattt tatacacctc caacaataag aactac 36

<210> 372  
<211> 12  
<212> PRT  
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<220>  
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10295w002-Sequence

<400> 372

Arg Ser Ile Leu Tyr Thr Ser Asn Asn Lys Asn Tyr  
1 5 10

<210> 373

<211> 9

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<223> Synthetic

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tgggcatct

9

<210> 374

<211> 3

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<400> 374

Trp Ala Ser  
1

<210> 375

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 375

cagcaatatt ttagtagtcc tccgacg

27

<210> 376

<211> 9

<212> PRT

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<220>

<223> Synthetic

<400> 376

Gln Gln Tyr Phe Ser Ser Pro Pro Thr  
1 5

<210> 377

<211> 354

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 377

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 acctgcgctg tctatggtgg gtctttcagt gggttctact ggagctggat ccgccagccc 120  
 ccaggaagg ggctggagtg gattggggaa atcaatcata gtggaagcgc caagtacaac 180  
 ccgtccctca agaatcgagt catcatatca atagacacgt ccaagaacca gttctccctg 240  
 aagctggact ctgtgaccgc cgcggacacg gctgtttata actgtgagag acagggctgg 300  
 aacttcgcca tctttgacta ctggggccag ggaacgttgg tcgacgtctc ctca 354

<210> 378  
 <211> 118  
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<220>  
 <223> Synthetic

<400> 378

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 Phe Ser Gly Phe  
 20 25 30

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

Gly Glu Ile Asn His Ser Gly Ser Ala Lys Tyr Asn Pro Ser Leu Lys  
 50 55 60

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

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

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

Leu Val Asp Val Ser Ser  
 115

<210> 379  
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<400> 379

ggtgggtctt tcagtgggtt ctac

24

<210> 380

10295w002-Sequence

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<220>  
 <223> Synthetic

<400> 380

Gly Gly Ser Phe Ser Gly Phe Tyr  
 1 5

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 <211> 21  
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<400> 381  
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21

<210> 382  
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<400> 382

Ile Asn His Ser Gly Ser Ala  
 1 5

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 gcgagacagg gctggaactt cgccatcttt gactac

36

<210> 384  
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 <212> PRT  
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<220>  
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<400> 384

Ala Arg Gln Gly Trp Asn Phe Ala Ile Phe Asp Tyr  
 1 5 10

<210> 385  
 <211> 339  
 <212> DNA

## 10295w002-Sequence

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&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 385

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atcaactgca agtccagcca gagtgtttta cacagttcct acaataagga ccacttagct 120

tggtaccagc agagaccagg acagcctcct aagctgctca ttctactgggc atctaccggg 180

gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240

atcagcagcc tgcaggctga agatgtggcg gtttattatt gtcagcaata taatattctt 300

cctccgacgt tcggccaagg gaccagggtg gaaatcaaa 339

&lt;210&gt; 386

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 386

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

Lys

&lt;210&gt; 387

&lt;211&gt; 36

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

10295w002-Sequence

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<210> 388  
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<400> 388  
Gln Ser Val Leu His Ser Ser Tyr Asn Lys Asp His  
1 5 10

<210> 389  
<211> 9  
<212> DNA  
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<220>  
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<400> 389  
tgggcatct 9

<210> 390  
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<220>  
<223> Synthetic

<400> 390

Trp Ala Ser  
1

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<211> 27  
<212> DNA  
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<400> 391  
cagcaatata atattcttcc tccgacg 27

<210> 392  
<211> 9  
<212> PRT  
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<220>  
<223> Synthetic

<400> 392

Gln Gln Tyr Asn Ile Leu Pro Pro Thr

## 10295w002-Sequence

1

5

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 <213> Artificial Sequence

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 gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccgtca 180  
 aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240  
 gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300  
 caaggacac gactggagat taaa 324

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<220>  
 <223> Synthetic

<400> 394

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr  
 20 25 30

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

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

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

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

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

<210> 395  
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 <212> DNA  
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<400> 395  
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18

<210> 396  
<211> 6  
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<220>  
<223> Synthetic

<400> 396

Gln Ser Ile Ser Ser Tyr  
1 5

<210> 397  
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<400> 397  
gctgcatcc

9

<210> 398  
<211> 3  
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<223> Synthetic

<400> 398

Ala Ala Ser  
1

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<211> 30  
<212> DNA  
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<400> 399  
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30

<210> 400  
<211> 10  
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<400> 400



# 10295w002-Sequence

Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
1 5 10

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<211> 369  
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<220>  
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<400> 401  
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tcctgtgcag ccactggatt cacctttgat gattttacca tgcactgggt ccggcaagct 120  
ccagggaagg gcctggagtg ggtctcaggt atcagttgga atagtggtag cataggctat 180  
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
ctgcaaataa acagtctgag agctgaggac acggccttgt actactgtgc aaaagataat 300  
agtggctacg gctattatta ctacggtatg gacgtctggg gccaaaggac cacggtcacc 360  
gtctcctca 369

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<211> 123  
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<400> 402  
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
1 5 10 15

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Ile Gly Tyr Val 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 Asn Ser Gly Tyr Gly Tyr Tyr Tyr Tyr Gly Met Asp Val  
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
Page 105

10295w002-Sequence  
120

115

<210> 403  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 403  
ggattcacct ttgatgattt tacc

24

<210> 404  
<211> 8  
<212> PRT  
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<220>  
<223> synthetic

<400> 404

Gly Phe Thr Phe Asp Asp Phe Thr  
1 5

<210> 405  
<211> 24  
<212> DNA  
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<400> 405  
atcagttgga atagtggtag cata

24

<210> 406  
<211> 8  
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<220>  
<223> synthetic

<400> 406

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 407  
<211> 48  
<212> DNA  
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<400> 407  
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48

<210> 408

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<211> 16  
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<220>  
 <223> synthetic

<400> 408

Ala Lys Asp Asn Ser Gly Tyr Gly Tyr Tyr Tyr Tyr Gly Met Asp Val  
 1 5 10 15

<210> 409  
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 <212> DNA  
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 ggccaggctc ccaggctcct catctatggc gcatccacca gggccactgg tatcccagcc 180  
 aggttcagtg gcagtgggtc tgggacagaa ttcactctca ccatcagcag cctgcagtct 240  
 gaagattttg caatttatta ctgtcagcag tataataatt ggcctctcac tttcggcgga 300  
 gggaccaagg tggagatcaa a 321

<210> 410  
 <211> 107  
 <212> PRT  
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<220>  
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<400> 410

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser His Ser Val Ser Arg Asn  
 20 25 30

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

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

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

Glu Asp Phe Ala Ile Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu  
 85 90 95

10295w002-Sequence

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

<210> 411  
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<212> DNA  
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<220>  
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<400> 411  
cacagtgtta gcaggaac

18

<210> 412  
<211> 6  
<212> PRT  
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<220>  
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<400> 412

His Ser Val Ser Arg Asn  
1 5

<210> 413  
<211> 9  
<212> DNA  
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<220>  
<223> synthetic

<400> 413  
ggtgcatcc

9

<210> 414  
<211> 3  
<212> PRT  
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<220>  
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<400> 414

Gly Ala Ser  
1

<210> 415  
<211> 27  
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27

# 10295w002-Sequence

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<220>  
 <223> synthetic

<400> 416

Gln Gln Tyr Asn Asn Trp Pro Leu Thr  
 1 5

<210> 417  
 <211> 372  
 <212> DNA  
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<220>  
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<400> 417  
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 ccaggaagg gcctggagt ggtctcaggt attagttgga atagtggtag cataggctat 180  
 gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
 ctgcaaatga acagtctgag agctggggac acggccttgt actactgtgc aaaagataat 300  
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 accgtctcct ca 372

<210> 418  
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<220>  
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<400> 418

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser 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

# 10295w002-Sequence

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

Ala Lys Asp Asn Ser Gly Tyr Gly Tyr Tyr Tyr Tyr Tyr Gly Met Asp  
100 105 110

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

<210> 419  
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<212> DNA  
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<220>  
<223> synthetic

<400> 419  
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24

<210> 420  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 420

Gly Phe Ser Phe Asp Asp Tyr Thr  
1 5

<210> 421  
<211> 24  
<212> DNA  
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<220>  
<223> synthetic

<400> 421  
attagttgga atagtggtag cata

24

<210> 422  
<211> 8  
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<213> Artificial Sequence

<220>  
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<400> 422

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 423  
<211> 51  
<212> DNA

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 423

gcaaaagata atagtggcta cggctattac tactactacg gtatggacgt c

51

&lt;210&gt; 424

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 424

Ala Lys Asp Asn Ser Gly Tyr Gly Tyr Tyr Tyr Tyr Tyr Gly Met Asp  
1 5 10 15

Val

&lt;210&gt; 425

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 425

gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgtagc agcaacttag cctggtacca gcagaaacct 120

ggccaggctc ccagactcct catctatggt gcatccacca gggccactgg tatcccagcc 180

aggttcagtg gcagtgggtc tgggacagaa ttcactctca ccatcagcag cctgcagtct 240

gaagattttg cagtttatta ctgtcagcag tattataact ggcctctcac tttcggcgga 300

gggaccaagg tggagatcaa a 321

&lt;210&gt; 426

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 426

Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly  
1 5 10 15Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn  
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile

10295w002-Sequence

35

40

45

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Asn Trp Pro Leu  
85 90 95

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

<210> 427  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 427  
cagagtgtta gcagcaac

18

<210> 428  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 428

Gln Ser Val Ser Ser Asn  
1 5

<210> 429  
<211> 9  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 429  
ggtgcatcc

9

<210> 430  
<211> 3  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 430

Gly Ala Ser



10295w002-Sequence

1

<210> 431  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 431  
cagcagtatt ataactggcc tctcact

27

<210> 432  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 432

Gln Gln Tyr Tyr Asn Trp Pro Leu Thr  
1 5

<210> 433  
<211> 372  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 433  
gaagtacagc tgggtggagtc tggggggaggc ttggtacagc ctggcaggtc cctgagactc 60  
tcctgtgtag cctctggatt cccctttgct gattatacca tgcactgggt ccggcaagct 120  
ccagggaagg gcctggagtg ggtctcagat attagttgga atagtggtag caaaggctat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca atgccaagaa ctccctgtat 240  
ctgcaaataa acagtctgag aactgaggac acggccttct attactgtgc aaaagatatg 300  
agtggctacg cccactactt ctactacggt atggacgtct ggggccaagg gaccacggtc 360  
accgtctcct ca 372

<210> 434  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 434

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

Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Pro Phe Ala Asp Tyr

## 10295w002-Sequence

20

25

30

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

Ser Asp Ile Ser Trp Asn Ser Gly Ser Lys 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 Thr Glu Asp Thr Ala Phe Tyr Tyr Cys  
                           85                          90                          95

Ala Lys Asp Met Ser Gly Tyr Ala His Tyr Phe Tyr Tyr Gly Met Asp  
                   100                          105                          110

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

<210> 435  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 435  
 ggattccctt ttgctgatta tacc

24

<210> 436  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 436

Gly Phe Pro Phe Ala Asp Tyr Thr  
   1                          5

<210> 437  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 437  
 attagttgga atagtggtag caaa

24

<210> 438  
 <211> 8  
 <212> PRT

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 438

Ile Ser Trp Asn Ser Gly Ser Lys

1 5

&lt;210&gt; 439

&lt;211&gt; 51

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 439

gcaaaagata tgagtggcta cgcccactac ttctactacg gtatggacgt c

51

&lt;210&gt; 440

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 440

Ala Lys Asp Met Ser Gly Tyr Ala His Tyr Phe Tyr Tyr Gly Met Asp

1

5

10

15

val

&lt;210&gt; 441

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 441

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60

atcacttgcc ggccaagtca gagcattagc agctatttaa attggtttca gcagaaacca 120

gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180

aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240

gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300

caagggacac gactggagat taaa 324

&lt;210&gt; 442

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

10295w002-Sequence

<220>

<223> synthetic

<400> 442

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 Pro Ser Gln Ser Ile Ser Ser Tyr  
20 25 30

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

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

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

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

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

<210> 443

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 443

cagagcatta gcagctat

18

<210> 444

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 444

Gln Ser Ile Ser Ser Tyr  
1 5

<210> 445

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 445

gctgcatcc

<210> 446  
 <211> 3  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

&lt;400&gt; 446

Ala Ala Ser  
 1

<210> 447  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 447  
 caacagagtt acagtacccc tccgatcacc

30

<210> 448  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

&lt;400&gt; 448

Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
 1 5 10

<210> 449  
 <211> 372  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 449  
 gaagtacaac tgggtggagtc tgggggaggc ttggtacagc ctggcagggtc cctaagactc 60  
 tcctgtgcag cctctggatt cacctttgat gattatacca tgcactgggt ccggcaagtt 120  
 ccagggaagg gcctggagtg ggtctcaggt attagttgga atagtggcag cttggcctac 180  
 gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ttccctgtat 240  
 ctgcaaatga acagtcttca ccctgaggac acggccctct attactgtgt aaaagatggt 300  
 agtggctacg gccactactc ctactacggt ttggacgtct ggggccaggg gaccacgggtc 360  
 accgtctcct ca 372

&lt;210&gt; 450

10295w002-Sequence

<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 450

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Leu Ala 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 His Pro Glu Asp Thr Ala Leu Tyr Tyr Cys  
85 90 95

Val Lys Asp Gly Ser Gly Tyr Gly His Tyr Ser Tyr Tyr Gly Leu Asp  
100 105 110

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

<210> 451  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 451

ggattcacct ttgatgatta tacc

24

<210> 452  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 452

Gly Phe Thr Phe Asp Asp Tyr Thr  
1 5

<210> 453

10295w002-Sequence

<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 453  
attagttgga atagtggcag cttg

24

<210> 454  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 454

Ile Ser Trp Asn Ser Gly Ser Leu  
1 5

<210> 455  
<211> 51  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 455  
gtaaaagatg gtagtggcta cggccactac tcctactacg gtttggacgt c

51

<210> 456  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 456

Val Lys Asp Gly Ser Gly Tyr Gly His Tyr Ser Tyr Tyr Gly Leu Asp  
1 5 10 15

Val

<210> 457  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 457  
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc

60

ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa

120

10295w002-Sequence

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180  
gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
cctgaagatt ttgcagtgtta ttactgtcag cagtatggta gttcaccttg gacgttcggc 300  
caagggacca aggtggaaat caaa 324

<210> 458  
<211> 108  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 458

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 Ala 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 Pro  
85 90 95

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

<210> 459  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 459

cagagtgtta gcagcagcta c 21

<210> 460  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 460



10295w002-Sequence

Gln Ser Val Ser Ser Ser Tyr  
1 5

<210> 461  
<211> 9  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 461  
ggtgcatcc

9

<210> 462  
<211> 3  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 462

Gly Ala Ser  
1

<210> 463  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 463  
cagcagtatg gtagttcacc ttggacg

27

<210> 464  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 464

Gln Gln Tyr Gly Ser Ser Pro Trp Thr  
1 5

<210> 465  
<211> 372  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 465  
gaagtacagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc

60

10295w002-Sequence

tcctgtgtag cctctggatt cccctttgct gattatacca tgcactgggt cgggcaagct 120  
ccaggggaagg gcctggagtg ggtctcagat attagttgga atagtggtag cataggctat 180  
gcggaactctg tgaagggccg attcaccatc tccagagaca atgccaagaa ctccctgtat 240  
ctgcaaataga acagtctgag aactgaggac acggccttgt attactgtgc aaaagatatg 300  
agtggctacg cccactactt ctactacggt atggacgtct ggggccaagg gaccacggtc 360  
accgtctcct ca 372

<210> 466  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 466

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

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

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

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

Ala Lys Asp Met Ser Gly Tyr Ala His Tyr Phe Tyr Tyr Gly Met Asp  
100 105 110

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

<210> 467  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 467

ggattcccct ttgctgatta tacc

24

<210> 468

10295wo02-Sequence

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

<220>  
 <223> synthetic

<400> 468

Gly Phe Pro Phe Ala Asp Tyr Thr  
 1 5

<210> 469  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 469  
 attagttgga atagtggtag cata

24

<210> 470  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 470

Ile Ser Trp Asn Ser Gly Ser Ile  
 1 5

<210> 471  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 471  
 gcaaaagata tgagtggcta cgcccactac ttctactacg gtatggacgt c

51

<210> 472  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 472

Ala Lys Asp Met Ser Gly Tyr Ala His Tyr Phe Tyr Tyr Gly Met Asp  
 1 5 10 15

Val

# 10295w002-Sequence

<210> 473  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 473  
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60  
atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120  
gggaaagccc ctaagctcct gatctttgct gcatccagtt tgcaaagtgg ggtcccatca 180  
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240  
gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300  
caagggacac gactggagat taaa 324

<210> 474  
<211> 108  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 474

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr  
20 25 30

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

Phe 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 Ser Tyr Ser Thr Pro Pro  
85 90 95

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

<210> 475  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 475  
cagagcatta gcagctat

18

<210> 476  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 476  
Gln Ser Ile Ser Ser Tyr  
1 5

<210> 477  
<211> 9  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 477  
gctgcatcc

9

<210> 478  
<211> 3  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 478

Ala Ala Ser  
1

<210> 479  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 479  
caacagagtt acagtacccc tccgatcacc

30

<210> 480  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 480

Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr

10295w002-Sequence

1

5

10

<210> 481  
<211> 372  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 481  
gaagtgcagc tgggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgaaactc 60  
tcctgtacag cctctggatt cacctttgct gattatacca tgcactgggt ccgacaaggt 120  
ccaggaagg gcctggagtg ggtctcagat attagttgga atagtggtag taaaggctat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
ctgcaaataa acagtctgag aactgaggac acggccttgt attactgtgc aaaagatatg 300  
agtggctacg cccactacta ctactacgct ttggacgtct ggggccaagg gaccacggtc 360  
accgtctcct ca 372

<210> 482  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 482  
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg 15  
1 5 10  
Ser Leu Lys Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ala Asp Tyr 30  
20 25 30  
Thr Met His Trp Val Arg Gln Gly Pro Gly Lys Gly Leu Glu Trp Val 45  
35 40 45  
Ser Asp Ile Ser Trp Asn Ser Gly Ser Lys Gly Tyr Ala Asp Ser Val 60  
50 55 60  
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr 80  
65 70 75 80  
Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr Ala Leu Tyr Tyr Cys 95  
85 90 95  
Ala Lys Asp Met Ser Gly Tyr Ala His Tyr Tyr Tyr Tyr Ala Leu Asp 110  
100 105 110  
Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser 120  
115 120

10295w002-Sequence

<210> 483  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 483  
 ggattcacct ttgctgatta tacc

24

<210> 484  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 484

Gly Phe Thr Phe Ala Asp Tyr Thr  
 1 5

<210> 485  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 485  
 attagttgga atagtggtag taaa

24

<210> 486  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 486

Ile Ser Trp Asn Ser Gly Ser Lys  
 1 5

<210> 487  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 487  
 gcaaaagata tgagtggcta cgcccactac tactactacg ctttggacgt c

51

<210> 488  
 <211> 17  
 <212> PRT

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 488

Ala Lys Asp Met Ser Gly Tyr Ala His Tyr Tyr Tyr Tyr Ala Leu Asp  
 1 5 10 15

Val

&lt;210&gt; 489

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 489

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60  
 atcacttgcc gggcaagtca gagcattagc aactatttaa attggtatca gcagaaacca 120  
 gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180  
 aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240  
 gaagattttg caacttacta ctgtcaacag agttacagta acccccgat caccttcggc 300  
 caagggacac gactggagat taaa 324

&lt;210&gt; 490

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 490

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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asn Tyr  
 20 25 30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Asn Pro Pro  
 Page 128



Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys  
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 gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Lys  
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Gly Met His Trp Val Arg Gln Ala Pro Val Lys Gly Leu Glu Trp Val  
 35 40 45

Ala 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  
 Page 130

65 70 75 80

Ala Lys Glu Gly Gly His Asp Tyr Gly Gly Thr Phe Asp Tyr Trp Gly  
100 105 110

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Ile Ser Tyr Asp Gly Ser Asn Lys  
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Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Asn Asn Tyr  
20 25 30

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

# 10295w002-Sequence

Tyr Asp Ala Ser Asn Leu Glu 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 Gln Gln Tyr Asp Asp Leu Pro Phe  
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Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys  
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10295w002-Sequence

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 ctgcaaataa acagtctgag agctgaggac acggccttgt attactgtgc aaaagataat 300  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr  
 20 25 30

# 10295w002-Sequence

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Lys 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 Asn Ser Gly Tyr Gly His Tyr Tyr Tyr Gly Met Asp Val  
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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180

aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240

gaagattttg cagtttatta ctgtcagcac tatattaact ggcctctcac tttcggcgga 300

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10295w002-Sequence

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9

10295w002-Sequence

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Gln His Tyr Ile Asn Trp Pro Leu Thr

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10295w002-Sequence

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

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

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

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Tyr Ile Asn Trp Pro Leu  
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys  
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| ccaggcaggg ggctggagtg ggtggcaatg atatattatg atggaaataa taaatactat | 180 |
| gcagactccg tgaggggccg attcaccgtt tccagagaca attccaagaa caccctgtat | 240 |
| ctgcaaatga gcagcctgag agccgaggac acggctctat atttctgtgc gcgagggcct | 300 |
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Ser Leu Arg Leu Ser Cys Gly Ala Ser Gly Phe Thr Phe Arg Ser Tyr  
 20 25 30

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

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

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

Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Phe Cys  
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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc

180



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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Arg Asn  
20 25 30

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Arg Pro Leu  
85 90 95

Thr Phe Gly Gly Gly Thr Glu Val Glu Ile Lys  
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10295w002-Sequence

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Gly Ala Ser  
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ccaggcaagg gactgcagtg ggtggcaatg atttactatg atggttaagaa taaatattat      180
gcagactccg tgagggggccg attcaccatc tccagagaca attccaagaa cacactgtat      240
ctgcaaatga acaatctgag agtcgaggac acggctatgt atttctgtgc gcgagggcct      300
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Ser Leu Arg Leu Ala Cys Val Ala Ser Gly Phe Thr Phe Arg Ser Tyr
20         25         30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Gln Trp Val
35         40         45
Ala Met Ile Tyr Tyr Asp Gly Lys Asn Lys Tyr Tyr Ala Asp Ser Val
50         55         60
Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65         70         75         80
Leu Gln Met Asn Asn Leu Arg Val Glu Asp Thr Ala Met Tyr Phe Cys
85         90         95
Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr
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Leu Val Thr Val Ser Ser
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 ggccaggctc ccaggctcct catctatggg gcatccacca gggccactgg tagcccagcc 180  
 aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctgcagtct 240  
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 35 40 45  
 Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ser Pro Ala Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser  
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 gcagactccg tgaggggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240  
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 Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 45  
 35 40 45  
 Ala Met Val Tyr Tyr Asp Gly Asn Asn Gln Tyr Tyr Ala Asp Ser Val 60  
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 Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 80  
 65 70 75 80  
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10295w002-Sequence

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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccggcc 180  
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20 25 30

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

Tyr Gly Ala Ser Thr 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 Gln Ser  
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu  
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Thr Phe Gly Gly Gly Thr Lys Val Val Ile Lys  
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&lt;400&gt; 594

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 1 5 10 15

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

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

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

Arg 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 Asp Asp Thr Ala Val Tyr Phe Cys  
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Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
 100 105 110

10295w002-Sequence

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Arg Pro Leu

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys  
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 ccaggcaggg gactggagtg ggtggcaatg atatattttg atggaaaaaa taaatactat 180  
 gcagactccg tgagggggccg attcaccatt tccagagaca attccaagaa caccctgtat 240  
 ctggaaatga gtagcctgag agccgaggac acggctgtat atttctgtgc gcgagggcct 300  
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 1 5 10 15

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

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

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

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

10295w002-Sequence

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

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
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&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 616

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro  
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&lt;210&gt; 617

&lt;211&gt; 321

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&lt;213&gt; Artificial Sequence

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ggccaggctc ccaggctcct catctatggg gcatccacca gggccactgg tgtcccagcc 180

aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctacagtct 240

gaagattttg cagtttttca ctgtcagcag tataataata ggcctctcac tttcggcgga 300

gggaccgagg tggagatcaa a 321

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&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

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&lt;223&gt; synthetic

&lt;400&gt; 618

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20 25 30Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile  
35 40 45Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly  
Page 161

10295w002-Sequence

50

55

60

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

Glu Asp Phe Ala Val Phe His Cys Gln Gln Tyr Asn Asn Arg Pro Leu  
85 90 95

Thr Phe Gly Gly Gly Thr Glu Val Glu Ile Lys  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Ser Phe  
 20 25 30

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

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

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

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

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
100 105 110

Leu Val Thr Val Ser Ser  
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10295w002-Sequence

Ile Tyr Phe Asp Gly Lys Asn Lys  
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ggccaggctc ccaggctcct catctatggg gcatccacca gggccactgg tgtcccagcc 180  
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctacagtct 240  
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<400> 634

10295w002-Sequence

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

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

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

Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly  
50 55 60

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

Glu Asp Phe Ala Val Phe His Cys Gln Gln Tyr Asn Asn Arg Pro Leu  
85 90 95

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

<210> 635  
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<400> 635  
cagagtatta gcaggaac

18

<210> 636  
<211> 6  
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<400> 636

Gln Ser Ile Ser Arg Asn  
1 5

<210> 637  
<211> 9  
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<400> 637  
ggtgcatcc

9

<210> 638

10295w002-Sequence

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<400> 638

Gly Ala Ser  
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cagcagtata ataataggcc tctcact

27

<210> 640  
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<400> 640

Gln Gln Tyr Asn Asn Arg Pro Leu Thr  
1 5

<210> 641  
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tcctgtgctg cgtctggatt caccttcaga agttttggca tgcactgggt ccgccaggct 120  
ccaggcaggg gactggagtg ggtggcaatg atatattttg atggaaaaaa taaatactat 180  
gcagactccg tgaggggccg attcaccatt tccagagaca attccaagaa caccctgtat 240  
ctggaaatga gcagcctgag agccgaggac acggctgtat atttctgtgc gcgagggcct 300  
gggtacaatt ggctcgacct ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 642  
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<220>  
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10295w002-Sequence

<400> 642

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 Arg Ser Phe  
20 25 30

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

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

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

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

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
100 105 110

Leu Val Thr Val Ser Ser  
115

<210> 643

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> synthetic

<400> 643

ggattcacct tcagaagttt tggc

24

<210> 644

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 644

Gly Phe Thr Phe Arg Ser Phe Gly  
1 5

<210> 645

<211> 24

<212> DNA

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<223> synthetic



# 10295w002-Sequence

<400> 645  
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<210> 646  
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<400> 646  
Ile Tyr Phe Asp Gly Lys Asn Lys  
1 5

<210> 647  
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<400> 647  
gcgcgagggc ctgggtacaa ttggctcgac ccc 33

<210> 648  
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<400> 648  
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1 5 10

<210> 649  
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<400> 649  
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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tgtcccagcc 180  
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctacagtct 240  
gaagattttg cagtttttca ctgtcagcag tataataata ggcctctcac tttcggcgga 300  
gggaccgagg tggagatcaa a 321

<210> 650

10295w002-Sequence

<211> 107  
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<220>  
<223> synthetic

<400> 650

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

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

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

Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly  
50 55 60

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

Glu Asp Phe Ala Val Phe His Cys Gln Gln Tyr Asn Asn Arg Pro Leu  
85 90 95

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

<210> 651  
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<220>  
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<400> 651

cagagtgtta gcaggaac

18

<210> 652  
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<212> PRT  
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<220>  
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<400> 652

Gln Ser Val Ser Arg Asn  
1 5

<210> 653  
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10295w002-Sequence

<220>  
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<400> 653  
ggtgcatcc

9

<210> 654  
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<212> PRT  
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<220>  
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<400> 654

Gly Ala Ser  
1

<210> 655  
<211> 27  
<212> DNA  
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<400> 655  
cagcagtata ataataggcc tctcact

27

<210> 656  
<211> 9  
<212> PRT  
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<220>  
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<400> 656

Gln Gln Tyr Asn Asn Arg Pro Leu Thr  
1 5

<210> 657  
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<212> DNA  
<213> Artificial Sequence

<220>  
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|                                                                   |     |
|-------------------------------------------------------------------|-----|
| <400> 657                                                         |     |
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| tcctgtgctg cgtctggatt caccttcaga agttttggca tgcactgggt ccgccaggct | 120 |
| ccaggcaggg gactggagtg ggtggcaatg atatattttg atggaaaaaa taaatactat | 180 |
| gcagactccg tgaggggccg attcaccatt tccagagaca attccaagaa caccctgtat | 240 |
| ctggaaatga gcagcctgag agccgaggac acggctgtat atttctgtgc gcgagggcct | 300 |
| gggtacaatt ggctcgaccc ctggggccag ggaaccctgg tcaccgtctc ctca       | 354 |

# 10295w002-Sequence

<210> 658  
 <211> 118  
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<220>  
 <223> synthetic

<400> 658

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 Arg Ser Phe  
 20 25 30

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

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

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

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

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
 100 105 110

Leu Val Thr Val Ser Ser  
 115

<210> 659  
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<220>  
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<400> 659

ggattcacct tcagaagttt tggc

24

<210> 660  
 <211> 8  
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<220>  
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<400> 660

Gly Phe Thr Phe Arg Ser Phe Gly  
 1 5

# 10295w002-Sequence

<210> 661  
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<213> Artificial Sequence

<220>  
<223> synthetic

<400> 661  
atatattttg atggaaaaaa taaa

24

<210> 662  
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<212> PRT  
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<223> synthetic

<400> 662

Ile Tyr Phe Asp Gly Lys Asn Lys  
1 5

<210> 663  
<211> 33  
<212> DNA  
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<220>  
<223> synthetic

<400> 663  
gcgcgagggc ctgggtacaa ttggctcgac ccc

33

<210> 664  
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<400> 664

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro  
1 5 10

<210> 665  
<211> 321  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 665  
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60

ctctcctgta gggccagtca gagtgtagc aggaacttgg cctggtacca gcaaaaacct

120

ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tgtcccagcc

180

10295W002-Sequence

aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctacagtct 240  
gaagattttg cagtttttca ctgtcagcag tataataata ggcctctcac tttcggcgga 300  
gggaccgagg tgagatcaa a 321

<210> 666  
<211> 107  
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<213> Artificial Sequence

<220>  
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<400> 666

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

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

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

Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly  
50 55 60

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

Glu Asp Phe Ala Val Phe His Cys Gln Gln Tyr Asn Asn Arg Pro Leu  
85 90 95

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

<210> 667  
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<400> 667

cagagtgtta gcaggaac 18

<210> 668  
<211> 6  
<212> PRT  
<213> Artificial Sequence

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<400> 668

Gln Ser Val Ser Arg Asn

10295w002-Sequence

1

5

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<220>  
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<400> 669  
ggtgcatcc

9

<210> 670  
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<400> 670

Gly Ala Ser  
1

<210> 671  
<211> 27  
<212> DNA  
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<223> synthetic

<400> 671  
cagcagtata ataataggcc tctcact

27

<210> 672  
<211> 9  
<212> PRT  
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<220>  
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<400> 672

Gln Gln Tyr Asn Asn Arg Pro Leu Thr  
1 5

<210> 673  
<211> 354  
<212> DNA  
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<220>  
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<400> 673  
caggtgcagt tgggtggagtc tgggggaggc gtgggtccagc ctgggaggtc cctgagactc

60

tcctgtgttg cgtctggatt caccttcaga agttatggca tgcactgggt ccgccaggct

120

10295w002-Sequence

ccaggcaagg gactgcagtg ggtggcaatg atttactatg atggttaagaa taaatattat 180  
gcagactccg tgagggggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240  
ctgcaaataga acagtctgag agccgaagac acggctatgt atttctgtgc gcgagggcct 300  
gggtacaact ggctcgaccc ctggggccag ggaaccctgg tcactgtctc ctca 354

<210> 674  
<211> 118  
<212> PRT  
<213> Artificial Sequence

<220>  
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<400> 674

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 Val Ala Ser Gly Phe Thr Phe Arg Ser Tyr  
20 25 30

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

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

Arg 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 Met Tyr Phe Cys  
85 90 95

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
100 105 110

Leu Val Thr Val Ser Ser  
115

<210> 675  
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<212> DNA  
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<220>  
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<400> 675

ggattcacct tcagaagtta tggc

24

<210> 676  
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<212> PRT  
<213> Artificial Sequence



10295w002-Sequence

<220>  
<223> synthetic

<400> 676

Gly Phe Thr Phe Arg Ser Tyr Gly  
1 5

<210> 677  
<211> 24  
<212> DNA  
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<220>  
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<400> 677  
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24

<210> 678  
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<220>  
<223> synthetic

<400> 678

Ile Tyr Tyr Asp Gly Lys Asn Lys  
1 5

<210> 679  
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<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 679  
gcgcgagggc ctgggtacaa ctggctcgac ccc

33

<210> 680  
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<212> PRT  
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<220>  
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<400> 680

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro  
1 5 10

<210> 681  
<211> 321  
<212> DNA  
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<220>  
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# 10295w002-Sequence

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ctctcctgca gggccagtca gagaattagc agcaacttgg cctggtacca gcaaaaacct      120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tagcccagcc      180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct      240
gaagatgttg cagtttatta ctgtcagcaa cataataact ggcctctcac tttcggcgga      300
gggaccaagg tggagatcaa a                                              321

```

```

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<212> PRT
<213> Artificial Sequence

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<220>
<223> synthetic

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```

<400> 682
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1      5      10
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Ile Ser Ser Asn
20     25     30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35     40     45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ser Pro Ala Arg Phe Ser Gly
50     55     60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65     70     75     80
Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His Asn Asn Trp Pro Leu
85     90     95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100    105

```

```

<210> 683
<211> 18
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> synthetic

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```

<400> 683
cagagaatta gcagcaac                                              18

```

```

<210> 684
<211> 6
<212> PRT

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<213> Artificial Sequence

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<223> synthetic

<400> 684

Gln Arg Ile Ser Ser Asn  
1 5

<210> 685

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 685

ggtgcatcc

9

<210> 686

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<220>

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<400> 686

Gly Ala Ser  
1

<210> 687

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 687

cagcaacata ataactggcc tctcact

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<210> 688

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 688

Gln Gln His Asn Asn Trp Pro Leu Thr  
1 5

<210> 689

<211> 354

<212> DNA

<213> Artificial Sequence

# 10295w002-Sequence

<220>

<223> synthetic

<400> 689

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ccaggcaggg gactggagtg ggtggcaatg atatattttg atggaaaaaa taaatactat      180
gcagactccg tgagggggccg attcaccatt tccagagaca attccaagaa caccctgtat      240
ctggaaatga gtagcctgag agccgaggac acggctgtat atttctgtgc gcgagggcct      300
gggtacaact ggctcgaccc ctggggccag ggaaccctgg tcaccgtctc ctca              354
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<210> 690

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

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<400> 690

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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 Arg Ser Phe
          20          25          30
```

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

```
Ala Met Ile Tyr Phe Asp Gly Lys Asn Lys Tyr Tyr Ala Asp Ser Val
          50          55          60
```

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

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

```
Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr
          100          105          110
```

```
Leu Val Thr Val Ser Ser
          115
```

<210> 691

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 691

ggtttcacct tcagaagttt tggc

24

<210> 692  
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<220>  
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<400> 692

Gly Phe Thr Phe Arg Ser Phe Gly  
 1 5

<210> 693  
 <211> 24  
 <212> DNA  
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<220>  
 <223> synthetic

<400> 693

atatattttg atggaaaaaa taaa

24

<210> 694  
 <211> 8  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 694

Ile Tyr Phe Asp Gly Lys Asn Lys  
 1 5

<210> 695  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 695

gcgcgagggc ctgggtacaa ctggctcgac ccc

33

<210> 696  
 <211> 11  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 696

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro  
 1 5 10

# 10295w002-Sequence

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<211> 321  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

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ctctcctgta gggccagtca gagtattagc aggaacttgg cctggtacca gcaaaaacct 120  
ggccaggctc ccaggctcct catctatggg gcaaccacca gggccactgg tgtcccagcc 180  
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctacagtct 240  
gaagattttg cagtttttta ctgtcagcag tataataata ggcctctcac tttcggcgga 300  
gggaccgagg tggagatcaa a 321

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<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 698  
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1 5 10 15  
Glu Arg Val Ile Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Arg Asn  
20 25 30  
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile  
35 40 45  
Tyr Gly Ala Thr Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly  
50 55 60  
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser  
65 70 75 80  
Glu Asp Phe Ala Val Phe Tyr Cys Gln Gln Tyr Asn Asn Arg Pro Leu  
85 90 95  
Thr Phe Gly Gly Gly Thr Glu Val Glu Ile Lys  
100 105

<210> 699  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 699  
cagagtatta gcaggaac

18

<210> 700  
<211> 6  
<212> PRT  
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<220>  
<223> synthetic

<400> 700  
Gln Ser Ile Ser Arg Asn  
1 5

<210> 701  
<211> 9  
<212> DNA  
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<220>  
<223> synthetic

<400> 701  
ggtgcaacc

9

<210> 702  
<211> 3  
<212> PRT  
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<220>  
<223> synthetic

<400> 702

Gly Ala Thr  
1

<210> 703  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 703  
cagcagtata ataataggcc tctcact

27

<210> 704  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
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<400> 704

Gln Gln Tyr Asn Asn Arg Pro Leu Thr

## 10295w002-Sequence

1

5

<210> 705  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
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 ccaggcaggg gactggagtg ggtggcaatg atatattttg atggaaaaaa taaatactat 180  
 gcagactccg tgaggggccg attcaccatt tccagagaca attccaagaa caccctgtat 240  
 ctggaaatga gtagcctgag agccgaggac acggctgtat atttctgtgc gcgagggcct 300  
 ggggtacaact ggctcgacct ctggggccag ggaaccctgg tcaccgtctc ctca 354

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

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

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

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

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

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
 100 105 110

Leu Val Thr Val Ser Ser  
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Ile Tyr Phe Asp Gly Lys Asn Lys  
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&lt;400&gt; 712

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&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 713

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 ggccaggctc ccaggctcct catctatggt gcaaccacca gggccactgg tgtcccagcc 180  
 aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctacagtct 240  
 gaagattttg cagtttttta ctgtcagcag tataataata ggcctctcac tttcggcgga 300  
 gggaccgagg tggagatcaa a 321

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&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (38)..(38)

&lt;223&gt; Xaa = Any Amino Acid

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

Glu Arg Val Ile Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Arg Asn  
 20 25 30

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

Tyr Gly Ala Thr Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly  
 50 55 60

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

Glu Asp Phe Ala Val Phe Tyr Cys Gln Gln Tyr Asn Asn Arg Pro Leu  
 Page 186

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

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Gly Ala Thr  
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 ccaggcaagg ggctggagtg ggtggcaatg atatattatg atggaacaa taaatactat 180  
 gcagactccg tgagggggccg attcaccatc tccagagaca actccaagaa cacgctgtat 240  
 ctgcaaatga acagcctgag agccgatgac acggctgtgt atttctgtgc gcgagggcct 300  
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Ser Leu Arg Leu Ser Cys Ile Ala Ser Gly Phe Thr Phe Arg Ser Tyr  
 20 25 30

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

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

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

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

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
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Leu Val Thr Val Ser Ser  
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Gly Phe Thr Phe Arg Ser Tyr Gly  
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&lt;400&gt; 727

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33

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&lt;211&gt; 11

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 728

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro  
1 5 10

&lt;210&gt; 729

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 729

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ggccaggctc ccaggctcct catctatggg gcatccacca gggccactgg tatcccagcc 180

aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240

gaagattttg cagtttatta ctgtcagcag tataataaca ggcctctcac tttcggcgga 300

gggaccaagg tggagatcaa a 321

&lt;210&gt; 730

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

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&lt;223&gt; synthetic

&lt;400&gt; 730

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

55

60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Arg Pro Leu  
85 90 95

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

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Gln Ser Val Ser Ser Asn  
1 5

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9

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Gln Gln Tyr Asn Asn Arg Pro Leu Thr  
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ccaggaagg gcctggagtg ggtctcaggt attagttgga atagtcgtag catagactat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
ctgcaaatga acagtctgag agctgaggac acggccttgt attactgtgt aaaagataat 300  
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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr  
20 25 30

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

40

45

Ser Gly Ile Ser Trp Asn Ser Arg Ser Ile Asp 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

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

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

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Gly Phe Thr Phe Asp Asp Tyr Ser  
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Val Lys Asp Asn Ser Gly Tyr Gly Arg Tyr Tyr Tyr Tyr Gly Met Asp  
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Val

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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactag tatccagcc 180

aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240

gaagattttg cagtttattt ctgtcagcac tattataact ggcctctcac tttcggcgga 300

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Lys Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly  
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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Gly Asn  
20 25 30

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

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

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

Glu Asp Phe Ala Val Tyr Phe Cys Gln His Tyr Tyr Asn Trp Pro Leu  
85 90 95

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

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Gln Ser Val Ser Gly Asn  
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Gly Ala Ser  
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ccagggaagg gcctggagtg ggtctcaggt atcagttgga atagtggtag cataggctat 180  
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
ctgcaaatga acagtctgag agctgaggac acggccttgt actactgtgc aaaagataat 300  
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10295w002-Sequence

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Ile Gly Tyr Val 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 Asn Ser Gly Tyr Gly Tyr Tyr Tyr Tyr Gly Met Asp Val  
100 105 110

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

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Ile Ser Trp Asn Ser Gly Ser Ile  
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 tggtagcagc agaaaccagg acagcctcct aagctgctca ttactgggc atctaccg 180  
 gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240  
 atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttatagtact 300  
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 1 5 10 15

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

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val  
 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr  
 65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln  
 85 90 95

Tyr Tyr Ser Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile  
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Lys

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Gln Ser Val Leu Tyr Ser Ser Asn Asn Lys Asn Tyr  
 1 5 10

# 10295w002-Sequence

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Trp Ala Ser  
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<213> Artificial Sequence

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<223> synthetic

<400> 767  
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27

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Gln Gln Tyr Tyr Ser Thr Pro Tyr Thr  
1 5

<210> 769  
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acctgcacct tctctgggtt ctactcagc actagtggaa tgtgtgtgag ctggatccgt  
cagccccag ggaaggccct ggagtggctt gcacgcattg attgggatga tgataaatac

60

120

180



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tacagcacat ctctgaagac caggctcacc atctccaagg acacctccaa aaaccaggtg 240  
gtccttaciaa tgaccaacat ggaccctgtg gacacagcca cgtattactg tgcacggatg 300  
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gtctcctca 369

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<400> 770

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

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

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

Trp Leu Ala Arg Ile Asp Trp Asp Asp Asp Lys Tyr Tyr Ser Thr Ser  
50 55 60

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

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr  
85 90 95

Cys Ala Arg Met Asp Ile Val Gly Ala Arg Gly Gly Trp Phe Asp Pro  
100 105 110

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

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10295w002-Sequence

<220>  
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<400> 772

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1 5 10

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21

<210> 774  
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<400> 774

Ile Asp Trp Asp Asp Asp Lys  
1 5

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45

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<400> 776

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1 5 10 15

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# 10295w002-Sequence

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gggaaagccc ctaagtccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca    180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct    240
gaagattttg caacttatta ctgccaacag tataatagtt acccgctcac tttcggcgga    300
gggaccaagg tggagatcaa a                                              321

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<220>
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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1      5      10
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr
20     25     30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
35     40     45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Lys 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 Thr Lys Val Glu Ile Lys
100    105

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Gln Gly Ile Ser Asn Tyr  
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9

<210> 782

<211> 3

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Ala Ala Ser  
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<212> DNA

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27

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<400> 784

Gln Gln Tyr Asn Ser Tyr Pro Leu Thr  
1 5

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10295w002-Sequence

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ccaggcaagg ggctggagtg ggtggcaatg atatattatg atggaaataa taaaaagtat      180
gcagactccg tgagggggccg attcaccatt tccagagaca attccaagaa cacgctgtat      240
ctgcaaatga acagcctgag agtcgaggac acggctgtgt atttctgtgc gcgagggcct      300
gggtacaact ggctcgaccc ctggggccag ggaaccctgg tcaccgtctc ctcagccaaa      360
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Ser Tyr
20          25          30

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

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

Arg 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 Val Glu Asp Thr Ala Val Tyr Phe Cys
85          90          95

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr
100         105         110

Leu Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Pro Val Tyr Pro
115         120         125

Leu Ala Pro Gly Ser Leu
130
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10295w002-Sequence

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Gly Phe Thr Phe Arg Ser Tyr Gly  
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24

<210> 790

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Ile Tyr Tyr Asp Gly Asn Asn Lys  
1 5

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10295w002-Sequence

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Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro  
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<210> 793

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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactga tatcccagcc 180  
aggttcagtg gcagtgggtc tgggacagag ttcattctca acatcagcag cctgcagtct 240  
gaagattttg cactttatta ctgtcaacaa tatagtaact ggcctctcac tttcggcgga 300  
gggaccgagg tggagatcaa a 321

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<211> 107

<212> PRT

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<220>

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

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

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

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

Ser Gly Ser Gly Thr Glu Phe Ile Leu Asn Ile Ser Ser Leu Gln Ser  
65 70 75 80

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

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

<210> 795

10295w002-Sequence

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<220>  
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18

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Gln Ser Val Ser Arg Asn  
 1 5

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9

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Gly Ala Ser  
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10295w002-Sequence

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Gln Gln Tyr Ser Asn Trp Pro Leu Thr  
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ccaggcaggg gactggagtg ggtggcaatg atatattttg atggaaaaaa taaatactat 180  
gcagactccg tgaggggccg attcaccatt tccagagaca attccaagaa caccctgtat 240  
ctggaaatga gtagcctgag agccgaggac acggctgtat atttctgtgc gcgagggcct 300  
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1 5 10 15

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

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

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

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

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

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
100 105 110

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Leu Val Thr Val Ser Ser  
115

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<400> 804

Gly Phe Thr Phe Arg Ser Phe Gly  
1 5

<210> 805  
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24

<210> 806  
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<400> 806

Ile Tyr Phe Asp Gly Lys Asn Lys  
1 5

<210> 807  
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33

# 10295w002-Sequence

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<400> 808

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro  
 1 5 10

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 ggccaggctc ccaggctcct catctatggt gcaaccacca gggccactgg tgtcccagcc 180  
 aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctacagtct 240  
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 gggaccgagg tgagatcaa a 321

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

Glu Arg Val Ile Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Arg Asn  
 20 25 30

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

Tyr Gly Ala Thr Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly  
 50 55 60

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

Glu Asp Phe Ala Val Phe Tyr Cys Gln Gln Tyr Asn Asn Arg Pro Leu  
 Page 211

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

<210> 811  
<211> 18  
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Gln Ser Ile Ser Arg Asn  
1 5

<210> 813  
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<400> 813  
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9

<210> 814  
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Gly Ala Thr  
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 ccaggcaggg gactggagtg ggtggcaatg atatattttg atggaaaaaa taaatactat 180  
 gcagactccg tgagggggccg attcaccatt tccagagaca attccaagaa caccctgtat 240  
 ctggaaatga gtagcctgag agccgaggac acggctgtat atttctgtgc gcgagggcct 300  
 gggtagaact ggctcgaccc ctggggccag ggaaccctgg tcaccgtctc ctca 354

<210> 818  
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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 Arg Ser Phe  
 20 25 30

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

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

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

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

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
100 105 110

Leu Val Thr Val Ser Ser  
115

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<210> 820  
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1 5

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<400> 821  
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24

<210> 822  
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<400> 822

Ile Tyr Phe Asp Gly Lys Asn Lys  
1 5

<210> 823  
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## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 823

gcgcgagggc ctgggtacaa ctggctcgac ccc

33

&lt;210&gt; 824

&lt;211&gt; 11

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 824

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro  
1 5 10

&lt;210&gt; 825

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 825

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ctctcctgta gggccagtca gagtattagc aggaacttgg cctggtacca gcagaaacct 120

ggccaggctc ccaggctcct catctatggt gcaaccacca gggccactgg tgtcccagcc 180

aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctacagtct 240

gaagattttg cagtttttta ctgtcagcag tataataata ggcctctcac tttcggcgga 300

gggaccgagg tggagatcaa a 321

&lt;210&gt; 826

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 826

Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly  
1 5 10 15Glu Arg Val Ile Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Arg Asn  
20 25 30Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile  
35 40 45Tyr Gly Ala Thr Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly  
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## 10295w002-Sequence

50

55

60

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

Glu Asp Phe Ala Val Phe Tyr Cys Gln Gln Tyr Asn Asn Arg Pro Leu  
 85 90 95

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

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<400> 827  
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18

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<220>  
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Gln Ser Ile Ser Arg Asn  
 1 5

<210> 829  
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9

<210> 830  
 <211> 3  
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<400> 830

Gly Ala Thr  
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<210> 831



10295w002-Sequence

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<400> 831  
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27

<210> 832  
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Gln Gln Tyr Asn Asn Arg Pro Leu Thr  
1 5

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ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaactaa taaatattat 180  
ttagattccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgttt 240  
ctgcaaatga acagcctgag agccgaagac acggctgtgt attactgtgc gagagatcgg 300  
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<400> 834

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

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

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

# 10295w002-Sequence

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Phe  
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 Arg Gly Ser Ile Ile Thr His Trp Gly Gln Gly Thr Leu  
100 105 110

Val Thr Val Ser Ser  
115

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<400> 835  
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24

<210> 836  
<211> 8  
<212> PRT  
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<220>  
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<400> 836

Gly Phe Thr Phe Ser Ser Tyr Ala  
1 5

<210> 837  
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<220>  
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<400> 837  
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24

<210> 838  
<211> 8  
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<400> 838

10295w002-Sequence

Ile Trp Tyr Asp Gly Thr Asn Lys  
1 5

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<400> 840  
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1 5 10

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gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180  
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240  
gaagattttg caacttacta ctgtcaacag acttacagta cccctccgat caccttcggc 300  
caagggacac gactggagat taaa 324

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<400> 842  
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly  
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asn Ile Ser Ser Tyr  
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10295w002-Sequence

20

25

30

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

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

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

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

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys  
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Gln Gln Thr Tyr Ser Thr Pro Pro Ile Thr  
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ccagggaagg gcctggagtg ggtctcagat attagtgtga atagtgggac cataggctat 180

gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240

ctgcaaataa acagtctgag acctgaggac acggccttgt attactgtgc aaaagatatg 300

agtggctacg cccactacta ctactacggt atggacgtct ggggccaagg gaccacggtc 360

accgtctcct ca 372

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

10295w002-Sequence

# 10295w002-Sequence

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<400> 854

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 1 5

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51

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<400> 856

Ala Lys Asp Met Ser Gly Tyr Ala His Tyr Tyr Tyr Tyr Gly Met Asp  
 1 5 10 15

Val

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<400> 857

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120

gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca

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aggttcagtg gcagtggatc tgggacagat ttactctca ccatcagcag tctgcaacct

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caagggacac gactggagat taaa

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10295w002-Sequence

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<400> 858

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr  
 20 25 30

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

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

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

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

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

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Gln Ser Ile Ser Ser Tyr  
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10295w002-Sequence

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9

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Ala Ala Ser  
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Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
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ccagggaagg gcctggagtg ggtctccgat attagttaga atagtggtag cataggctat 180  
gcggactctg tgaagggccg attcaccgtc tccagagaca acgccaagaa ctccctgtat 240  
ctgcaaatga acagtctgag aggtgaggac acggccctgt attactgtgc aaaagatatg 300  
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accgtctcct ca

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 1 5 10 15

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

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

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

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

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

Ala Lys Asp Met Ser Gly Tyr Ala His Tyr Gly Tyr Tyr Gly Met Asp  
 100 105 110

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

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&lt;400&gt; 868

Gly Phe Thr Phe Asp Asp Tyr Thr

10295w002-Sequence

1

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24

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Ile Ser Trp Asn Ser Gly Ser Ile  
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<210> 871  
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<400> 871  
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51

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<400> 872

Ala Lys Asp Met Ser Gly Tyr Ala His Tyr Gly Tyr Tyr Gly Met Asp  
1 5 10 15

Val

<210> 873  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 873

10295w002-Sequence

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atcacttgcc gggcaagtca gagcattagg aactatttaa attggtatca gcagaaacca 120  
gggaaagtcc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180  
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240  
gaagattttg caacttacta ctgtcaacag agttacagta accctccgat caccttcggc 300  
caagggacac gactggagat taaa 324

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<211> 108  
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<220>  
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<400> 874

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Arg Asn Tyr  
20 25 30

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

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

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

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

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

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10295wo02-Sequence

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Gln Ser Ile Arg Asn Tyr  
1 5

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9

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Ala Ala Ser  
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30

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Gln Gln Ser Tyr Ser Asn Pro Pro Ile Thr  
1 5 10

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# 10295W002-Sequence

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ccaggggaagg gcctggagtg gatctctgat attagttgga atggtggaac caaaggctat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaaaaa ctccctgtat 240  
ctgcaaattg acagtctgag aggtgaggac acggccttat attactgtgt aaaagataaa 300  
agtggctacg ggcacttcta cttcggtttg gacgtctggg gccaaaggac cacggtcacc 360  
gtctcctca 369

<210> 882  
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<400> 882  
Glu Ala Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg  
1 5 10 15  
Ser Leu Arg Leu Ser Cys Thr Thr Ser Gly Phe Thr Phe Asp Asp Tyr  
20 25 30  
Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile  
35 40 45  
Ser Asp Ile Ser Trp Asn Gly Gly Thr Lys 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 Asp Ser Leu Arg Gly Glu Asp Thr Ala Leu Tyr Tyr Cys  
85 90 95  
Val Lys Asp Lys Ser Gly Tyr Gly His Phe Tyr Phe Gly Leu Asp Val  
100 105 110  
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

<210> 883  
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<212> DNA  
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<400> 883

ggattcacct ttgatgatta tacc

24

<210> 884  
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<400> 884

Gly Phe Thr Phe Asp Asp Tyr Thr  
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<210> 885  
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<400> 885  
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<210> 886  
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Ile Ser Trp Asn Gly Gly Thr Lys  
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<210> 887  
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<400> 888

Val Lys Asp Lys Ser Gly Tyr Gly His Phe Tyr Phe Gly Leu Asp Val  
 1 5 10 15

# 10295w002-Sequence

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 gggaaagccc ctaagctcct gatctatgct gcatccagtt tggaaagtgg ggtcccttca 180  
 aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaccct 240  
 gaagattttg caacttacta ctgtcaacag agctacagta accctccgat caccttcggc 300  
 caagggacac gactggagat taaa 324

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

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<400> 891  
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<400> 892  
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1 5

<210> 893  
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9

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Ala Ala Ser  
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Gln Gln Ser Tyr Ser Asn Pro Pro Ile Thr

## 10295w002-Sequence

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10

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 gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
 ctgcaaataa acagtctgag agctgaggac acggccttgt attactgtgt aaaagataaa 300  
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 gtctcctcc 369

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<400> 898  
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 1 5 10 15  
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 20 25 30  
 Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45  
 Ser Glu Ile Ser Trp Asn Ser Gly Ser Ile Gly Tyr Val 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  
 Val Lys Asp Lys Ser Gly Tyr Gly His Tyr Tyr Ile Gly Met Asp Val  
 100 105 110  
 Trp Gly Gln Gly Thr Thr Val Ile Val Ser Ser  
 115 120

10295w002-Sequence

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<400> 899  
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<220>  
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<400> 900

Gly Phe Lys Phe Ala Asp Tyr Ala  
 1 5

<210> 901  
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<400> 901  
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24

<210> 902  
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<210> 903  
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 <212> DNA  
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<400> 903  
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48

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10295w002-Sequence

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Val Lys Asp Lys Ser Gly Tyr Gly His Tyr Tyr Ile Gly Met Asp Val  
1 5 10 15

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gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180  
aggttcagtg gcagtggatc tgggacagat ttactctca ccatcagcag tctgcaacct 240  
gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300  
caagggacac gactggagat taaa 324

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1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr  
20 25 30

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

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

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

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

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

100

10295w002-Sequence  
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Gln Ser Ile Ser Ser Tyr  
 1 5

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9

<210> 910  
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Ala Ala Ser  
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<210> 912

10295w002-Sequence

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<400> 912

Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
1 5 10

<210> 913  
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ccaggggaagg gcctggagtg ggtctccgat attagttaga atagtggtag cataggctat 180  
gcggactctg tgaagggccg attcaccgtc tccagagaca acgccaagaa ctccctgtat 240  
ctgcaaatga acagtctgag aggtgaggac acggccttgt attactgtgc aaaagatatg 300  
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accgtctcct ca 372

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<400> 914

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

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

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

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

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

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

Ala Lys Asp Met Ser Gly Tyr Gly His Tyr Gly Lys Tyr Gly Met Asp  
                   100                                  105                                  110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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24

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<400> 916

Gly Phe Thr Phe Asp Asp Tyr Thr  
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<400> 917  
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24

<210> 918  
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<400> 918

Ile Ser Trp Asn Ser Gly Ser Ile  
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10295w002-Sequence

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<210> 920  
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<400> 920  
Ala Lys Asp Met Ser Gly Tyr Gly His Tyr Gly Lys Tyr Gly Met Asp  
1 5 10 15

Val

<210> 921  
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atcacttgcc gggcaagtca gagcattagg agctatttaa attggtatca gcagaaacca 120  
gggaaagtcc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180  
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcaacag tctgcaacct 240  
gacgattttg caacttacta ctgtcaacag acttacagta accctccgat caccttcggc 300  
caagggacac gactggagat taaa 324

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<400> 922  
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Arg Ser Tyr  
20 25 30

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



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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 Asn Ser Leu Gln Pro  
65 70 75 80

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

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

<210> 923  
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18

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Gln Ser Ile Arg Ser Tyr  
1 5

<210> 925  
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9

<210> 926  
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<400> 926

Ala Ala Ser  
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<400> 927  
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30

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<400> 928

Gln Gln Thr Tyr Ser Asn Pro Pro Ile Thr  
1 5 10

<210> 929  
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ccagggaagg gcctggagtg ggtctcaatt attagttgga atggtaatac cattgactat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
cttcaaataga acagtctgag agctgaggac acggccttgt attactgtgc aaaagataag 300  
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accgtctcct ca 372

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<400> 930

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

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

# 10295w002-Sequence

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

Ser Ile Ile Ser Trp Asn Gly Asn Thr Ile Asp 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 Lys Ser Gly Tyr Gly His Phe Tyr Tyr Tyr Val Leu Asp  
100 105 110

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

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24

<210> 932  
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<400> 932

Gly Phe Thr Phe Asp Asp Tyr Thr  
1 5

<210> 933  
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<400> 933  
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24

<210> 934  
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10295w002-Sequence

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Ile Ser Trp Asn Gly Asn Thr Ile  
1 5

<210> 935  
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<212> DNA  
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<400> 935  
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<210> 936  
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<400> 936  
Ala Lys Asp Lys Ser Gly Tyr Gly His Phe Tyr Tyr Tyr Val Leu Asp  
1 5 10 15

Val

<210> 937  
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<212> DNA  
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<400> 937  
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gggaaagccc ctaaactcct gatctatgct gcttccagtt tgcaaagtgg ggtcccgtca 180  
aggttcagtg gcagtggttc tgggacagat ttcactctca ccatcagcag tctgcaacct 240  
gaagattttg caacttacta ctctcaacag agttacagtt tcccgtggac gttcggccaa 300  
gggaccaagg tggaaatcaa a 321

<210> 938  
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<220>  
<223> synthetic

10295w002-Sequence

<400> 938

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asn Asn Tyr  
20 25 30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Ser Gln Gln Ser Tyr Ser Phe Pro Trp  
85 90 95

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

<210> 939

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<213> Artificial Sequence

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<400> 939

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18

<210> 940

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<212> PRT

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<400> 940

Gln Ser Ile Asn Asn Tyr  
1 5

<210> 941

<211> 9

<212> DNA

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9

10295w002-Sequence

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<400> 942

Ala Ala Ser  
1

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27

<210> 944  
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Gln Gln Ser Tyr Ser Phe Pro Trp Thr  
1 5

<210> 945  
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ccaggtaagg gactagagtg gatggcacac atatggtata atggaaagaa taaatattat 180  
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctatat 240  
ctgcaaatga acagcctgag acccgaggac acggctgtat attattgtgc gagagatggt 300  
gtatcagcac gtggtactcc atttgactac tggggccagg gaaccctggt caccgtctcc 360  
tca 363

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## 10295w002-Sequence

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&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 946

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

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

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

Ala His Ile Trp Tyr Asn Gly Lys 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 Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

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

Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

&lt;210&gt; 947

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 947

ggatttagtt tcagggacta tggc

24

&lt;210&gt; 948

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 948

Gly Phe Ser Phe Arg Asp Tyr Gly  
1 5

&lt;210&gt; 949

&lt;211&gt; 24

&lt;212&gt; DNA

10295w002-Sequence

<213> Artificial Sequence

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<400> 949

atatggtata atggaaagaa taaa

24

<210> 950

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<212> PRT

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<400> 950

Ile Trp Tyr Asn Gly Lys Asn Lys  
1 5

<210> 951

<211> 42

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<400> 951

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<210> 952

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<400> 952

Ala Arg Asp Gly Val Ser Ala Arg Gly Thr Pro Phe Asp Tyr  
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<210> 953

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<212> DNA

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atctcctgca ttgccagcca gtacattgat gatgatgtga actggtacca acagaaacca

120

ggagaaaactg ctattttcat tattcaagaa gcttctactc tcgttcctgg aatctcacct

180

cgattcagtg gcagcgggta tggaacacat tttaccctca caattaataa catagattct

240

gaggatgctg cattttactt ctgtctccaa catgataatt tcccgtacac ttttggccag

300



gggaccaagc tggagatcaa a

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 <212> PRT  
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<220>  
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Glu Thr Thr Leu Thr Gln Ser Pro Ala Phe Met Ser Ala Ala Pro Gly  
 1 5 10 15

Asp Lys Val Ser Ile Ser Cys Ile Ala Ser Gln Tyr Ile Asp Asp Asp  
 20 25 30

Val Asn Trp Tyr Gln Gln Lys Pro Gly Glu Thr Ala Ile Phe Ile Ile  
 35 40 45

Gln Glu Ala Ser Thr Leu Val Pro Gly Ile Ser Pro Arg Phe Ser Gly  
 50 55 60

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

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

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

<210> 955  
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<220>  
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&lt;400&gt; 955

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18

<210> 956  
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&lt;400&gt; 956

Gln Tyr Ile Asp Asp Asp  
 1 5

&lt;210&gt; 957

10295w002-Sequence

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9

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<400> 958

Glu Ala Ser  
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27

<210> 960  
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Leu Gln His Asp Asn Phe Pro Tyr Thr  
1 5

<210> 961  
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| tcctgtgcag cctcttattt caccttttagc agttttgcc tgaactgggt ccgccaggct   | 120 |
| ccagggcagg gcctggagtg ggtctcagct attagtggta gggctctcagc tattagtgggt | 180 |
| agtggtggtgta tcacatacta cgcagactcc gtgaagggcc ggttcatcat ctccagagac | 240 |

10295w002-Sequence

aattccaaga acacgctgta tctgcaaatag agcggcctga gagccgagga cacggccgta 300  
tattactgtg cgaaaggccc ctatttgact acagtcaccc cctttgacta ctggggccag 360  
ggaaccctgg tcaccgtctc ctca 384

<210> 962  
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<220>  
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<400> 962

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

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

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

Ser Ala Ile Ser Gly Arg Val Ser Ala Ile Ser Gly Ser Gly Gly Ile  
50 55 60

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

Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Ser Gly Leu Arg Ala Glu  
85 90 95

Asp Thr Ala Val Tyr Tyr Cys Ala Lys Gly Pro Tyr Leu Thr Thr Val  
100 105 110

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

<210> 963  
<211> 24  
<212> DNA  
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<220>  
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<400> 963

tatttcacct ttagcagttt tgcc 24

<210> 964  
<211> 8  
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<220>  
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10295w002-Sequence

<400> 964

Tyr Phe Thr Phe Ser Ser Phe Ala  
1 5

<210> 965

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<212> DNA

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<220>

<223> synthetic

<400> 965

attagtggta gtggtggtat caca

24

<210> 966

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 966

Ile Ser Gly Ser Gly Gly Ile Thr  
1 5

<210> 967

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

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<400> 967

gcgaaaggcc cctatttgac tacagtcacc ccctttgact ac

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<210> 968

<211> 14

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<220>

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<400> 968

Ala Lys Gly Pro Tyr Leu Thr Thr Val Thr Pro Phe Asp Tyr  
1 5 10

<210> 969

<211> 324

<212> DNA

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<223> synthetic

<400> 969

10295w002-Sequence

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atcacttgtc gggcgagtca ggggattagc agctgggttag cctgggtatca gcagaaacca 120  
gggaaagccc ctaaactcct gatctatgct gtatccagtt tgcaaaatgg ggtcccatca 180  
aggttcagcg gcagtggatc tgggacagat ttcaccctca ccatcagcag cctgcagcct 240  
gaagactttg caacttacta ttgtcaacag gctaacagtt tcccattcac tttcggccct 300  
gggaccaagc tggagatcaa acga 324

<210> 970  
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<220>  
<223> synthetic

<400> 970

Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Val 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 Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45

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

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

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

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

<210> 971  
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<220>  
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<400> 971

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<210> 972  
<211> 6  
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10295wo02-Sequence

<220>  
<223> synthetic

<400> 972

Gln Gly Ile Ser Ser Trp  
1 5

<210> 973  
<211> 9  
<212> DNA  
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<220>  
<223> synthetic

<400> 973  
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9

<210> 974  
<211> 3  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 974

Ala Val Ser  
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<210> 975  
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<212> DNA  
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<220>  
<223> synthetic

<400> 975  
caacaggcta acagtttccc attcact

27

<210> 976  
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<212> PRT  
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<220>  
<223> synthetic

<400> 976

Gln Gln Ala Asn Ser Phe Pro Phe Thr  
1 5

<210> 977  
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10295W002-Sequence

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ccaggggaagg gcctggagtg ggtctcaggt attagttgga atagtggtag tataggttat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
ctgcaaataa acagtctgag agctgaggac acggccttat attactgtgt aaaagataat 300  
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gtctcctca 369

<210> 978  
<211> 123  
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<220>  
<223> synthetic

<400> 978  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ala 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 Gly Ile Ser Trp Asn Ser Gly Ser 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  
Val Lys Asp Asn Ser Gly Tyr Ala Ser Tyr Tyr Tyr Gly Met Asp Val  
100 105 110  
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

<210> 979  
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<220>  
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<400> 979

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<210> 980  
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<400> 980

Gly Phe Thr Phe Ala Asp Tyr Ala  
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<220>  
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24

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<220>  
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<400> 982

Ile Ser Trp Asn Ser Gly Ser Ile  
 1 5

<210> 983  
 <211> 48  
 <212> DNA  
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<220>  
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<400> 983

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48

<210> 984  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 984

Val Lys Asp Asn Ser Gly Tyr Ala Ser Tyr Tyr Tyr Gly Met Asp Val  
 1 5 10 15



# 10295w002-Sequence

<210> 985  
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atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120  
gggaaagccc ctaagctcct gatctacgat gcatccaatt tggaaacagg ggtcccatca 180  
aggttcagtg gaagtggatc tgggacagat tttactttca ccatcagcag cctgcagcct 240  
gaagatattg caacatatta ctgtcaacag tatgataatc tcccattcac tttcggcct 300  
gggaccaaag tggatatcaa acga 324

<210> 986  
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<212> PRT  
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<400> 986  
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1 5 10 15  
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr  
20 25 30  
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45  
Tyr Asp Ala Ser Asn Leu Glu 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 Gln Gln Tyr Asp Asn Leu Pro Phe  
85 90 95  
Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg  
100 105

<210> 987  
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<400> 987  
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1 5

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9

<210> 990  
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<400> 990

Asp Ala Ser  
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<210> 991  
<211> 27  
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<400> 991  
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27

<210> 992  
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<400> 992

Gln Gln Tyr Asp Asn Leu Pro Phe Thr

## 10295w002-Sequence

1

5

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 ccaggcaaag ggctggagtg ggtgacagtt atattacatg atggaagtta taaatactat 180  
 gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cagctacat 240  
 ctgcaaataa acagcctgag aactgaggac acggctgtat attactgtgc gaaagggcct 300  
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 acggtcaccg tctcctca 378

<210> 994  
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<400> 994  
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 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Tyr 30  
 20 25 30  
 Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 45  
 35 40 45  
 Thr Val Ile Leu His Asp Gly Ser Tyr Lys Tyr Tyr Ala Asp Ser Val 60  
 50 55 60  
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu His 80  
 65 70 75 80  
 Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr Ala Val Tyr Tyr Cys 95  
 85 90 95  
 Ala Lys Gly Pro Met Phe Arg Gly Val Pro Tyr Asn His Tyr Tyr Gly 110  
 100 105 110  
 Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser 125  
 115 120 125

10295w002-Sequence

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24

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Gly Phe Thr Phe Ser Asn Tyr Gly  
 1 5

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<400> 998

Ile Leu His Asp Gly Ser Tyr Lys  
 1 5

<210> 999  
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 <212> DNA  
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<220>  
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<400> 999  
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57

<210> 1000  
 <211> 19  
 <212> PRT

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1000

Ala Lys Gly Pro Met Phe Arg Gly Val Pro Tyr Asn His Tyr Tyr Gly  
 1 5 10 15

Met Asp Val

&lt;210&gt; 1001

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1001

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60  
 atcacttgcc gggcaagtca gggcatcaga aatgatttag gctggtatca gcagaaacca 120  
 gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtctcatca 180  
 aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240  
 gaagattttg caacttatta ctgtctacag cataatagtt acccgtagac ttttggccag 300  
 gggaccaagg tggaaatcaa acga 324

&lt;210&gt; 1002

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1002

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 Arg Asn Asp  
 20 25 30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Tyr  
 Page 261

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

<210> 1003  
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<220>  
<223> synthetic

<400> 1003  
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18

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<211> 6  
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<220>  
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<400> 1004

Gln Gly Ile Arg Asn Asp  
1 5

<210> 1005  
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<212> DNA  
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<220>  
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<400> 1005  
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9

<210> 1006  
<211> 3  
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Ala Ala Ser  
1

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<210> 1008  
 <211> 9  
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&lt;400&gt; 1008

Leu Gln His Asn Ser Tyr Pro Tyr Thr  
 1 5

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 ccaggcaagg ggctggaatg ggtgacattt atatggtatg atggaagtaa taaatactat 180  
 gcagactccg cgaagggccg attcaccatc accagagaca attccaagaa cacggtgtat 240  
 ctgcaaatgg acagcctgag agccgatgac acggctgttt attattgtgt gagagatcag 300  
 gcagctctct actattttga ctcttggggc cagggaaccc tggtcaccgt ctcctca 357

<210> 1010  
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<220>  
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&lt;400&gt; 1010

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 Thr Ala Ser Gly Phe Pro Phe Ser Arg Tyr  
 20 25 30

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

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

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

# 10295w002-Sequence

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

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

Thr Leu Val Thr Val Ser Ser  
115

<210> 1011  
<211> 24  
<212> DNA  
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<400> 1011  
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24

<210> 1012  
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<400> 1012

Gly Phe Pro Phe Ser Arg Tyr Gly  
1 5

<210> 1013  
<211> 24  
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<400> 1013  
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24

<210> 1014  
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<400> 1014

Ile Trp Tyr Asp Gly Ser Asn Lys  
1 5

<210> 1015  
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## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1015

gtgagagatc aggcagctct ctactatctt gactct

36

&lt;210&gt; 1016

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1016

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Arg | Asp | Gln | Ala | Ala | Leu | Tyr | Tyr | Phe | Asp | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |

&lt;210&gt; 1017

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1017

|            |            |            |             |             |            |     |
|------------|------------|------------|-------------|-------------|------------|-----|
| gacatccaga | tgaccagtc  | tccatcttcc | gtgtctgcat  | ctgtaggaga  | cagagtcacc | 60  |
| atcacttgtc | gggcgagtc  | gggtattagc | aggtgggttag | cctgggtatca | gcagaaacca | 120 |
| gggaaagccc | ctaagctcct | gatctctgct | gcatccagtt  | tgcaaagtgg  | agtcccatca | 180 |
| aggttcagcg | gcagtggatc | tgggacagat | ttcactctca  | ccatcagcgg  | cctgcagcct | 240 |
| gaagattttg | caacttacta | ttgtcaaaag | gctaacagtt  | tccctttcac  | tttcggccct | 300 |
| gggaccaagc | tggagatcaa | acga       |             |             |            | 324 |

&lt;210&gt; 1018

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1018

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ile | Gln | Met | Thr | Gln | Ser | Pro | Ser | Ser | Val | Ser | Ala | Ser | Val | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Arg | Val | Thr | Ile | Thr | Cys | Arg | Ala | Ser | Gln | Gly | Ile | Ser | Arg | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ala | Ala | Ser | Ser | Leu | Gln | Ser | Gly | Val | Pro | Ser | Arg | Phe | Ser | Gly |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

10295w002-Sequence

50

55

60

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

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

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

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Gln Gly Ile Ser Arg Trp  
1 5

<210> 1021  
<211> 9  
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<400> 1021  
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9

<210> 1022  
<211> 3  
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<400> 1022

Ala Ala Ser  
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<210> 1023

# 10295w002-Sequence

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<400> 1024

Gln Lys Ala Asn Ser Phe Pro Phe Thr  
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 ccaggcaagg ggctggagtg ggtgacagtt atattacatg atggaagtaa tagatactct 180  
 gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctttat 240  
 ctgcaaatga acatcctgag agttgaggac acggctgtgt attactgtac gaaaggggct 300  
 atggttcggg gagtccctta caatcactac tacggcatgg acgtctgggg ccaagggacc 360  
 acggtcaccg tctcctca 378

<210> 1026  
 <211> 126  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 1026

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 Ser Tyr  
 20 25 30

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

10295w002-Sequence

35

40

45

Thr Val Ile Leu His Asp Gly Ser Asn Arg Tyr Ser 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 Ile Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

Thr Lys Gly Ala Met Val Arg Gly Val Pro Tyr Asn His Tyr Tyr Gly  
100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120 125

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<400> 1027  
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<212> PRT  
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Gly Phe Thr Phe Ser Ser Tyr Gly  
1 5

<210> 1029  
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<210> 1030  
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Ile Leu His Asp Gly Ser Asn Arg  
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<210> 1031

<211> 57

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<210> 1032

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Thr Lys Gly Ala Met Val Arg Gly Val Pro Tyr Asn His Tyr Tyr Gly  
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Met Asp Val

<210> 1033

<211> 324

<212> DNA

<213> Artificial Sequence

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<400> 1033

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gggaaagccc ctaagcgcct aatctatgct gcatccattt tgcaaagtgg ggtcccatca 180

aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240

gaagattttg caacttatta ctgtctacag cataatagtt acccgtagac ttttggccag 300

gggaccaagc tgagatcaa acga 324

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<212> PRT

<213> Artificial Sequence

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<223> synthetic

<400> 1034

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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 Arg Asn Asp  
20 25 30

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

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

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

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

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

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<400> 1035  
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<210> 1036  
<211> 6  
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<220>  
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<400> 1036

Gln Gly Ile Arg Asn Asp  
1 5

<210> 1037  
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<212> DNA  
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9

<210> 1038

10295w002-Sequence

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<400> 1038

Ala Ala Ser  
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<210> 1039  
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<212> DNA  
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27

<210> 1040  
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<400> 1040

Leu Gln His Asn Ser Tyr Pro Tyr Thr  
1 5

<210> 1041  
<211> 378  
<212> DNA  
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<400> 1041  
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ccaggcaagg ggctggagtg ggtgacagtt atattacatg atggaagtaa tagatactat 180  
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctttat 240  
ctgcaaatga acatcctgag agctgaggac acggctgtgt attactgtac gaaaggggct 300  
atggttcggg gagtccctta caatcactac tacggcatgg acgtctgggg ccaagggacc 360  
acggtcaccg tctcctca 378

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10295w002-Sequence

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<223> synthetic

<400> 1042

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 Ser Tyr  
20 25 30

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

Thr Val Ile Leu His Asp Gly Ser Asn Arg 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 Ile Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

Thr Lys Gly Ala Met Val Arg Gly Val Pro Tyr Asn His Tyr Tyr Gly  
100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120 125

<210> 1043

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<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1043

ggattcacct tcagtagcta tggc

24

<210> 1044

<211> 8

<212> PRT

<213> Artificial Sequence

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<223> synthetic

<400> 1044

Gly Phe Thr Phe Ser Ser Tyr Gly  
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<210> 1045

<211> 24

<212> DNA

<213> Artificial Sequence



# 10295w002-Sequence

<220>  
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<210> 1046  
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 <212> PRT  
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Ile Leu His Asp Gly Ser Asn Arg  
 1 5

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Met Asp Val

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 gggaaagccc ctaagcgcct gatctatgct gcatccaatt tgcaaagtgg ggtcccatca 180  
 aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240

10295w002-Sequence

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1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp  
20 25 30

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

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

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

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg  
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120

180

10295w002-Sequence

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 acggtcaccg tctcctca 378

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser 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 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 Tyr Ser Lys Asn Thr Leu Tyr  
 65 70 75 80

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

Ala Lys Gly Ala Met Val Arg Gly Val Pro Tyr Asn Tyr Tyr Tyr Gly  
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Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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10295w002-Sequence

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Gly Phe Thr Phe Ser Ser Tyr Gly  
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Ile Ser Tyr Asp Gly Ser Asn Lys  
1 5

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Ala Lys Gly Ala Met Val Arg Gly Val Pro Tyr Asn Tyr Tyr Tyr Gly  
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Met Asp Val

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&lt;400&gt; 1065

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gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180

aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240

gaagattttg caacttatta ctgtctacag cataatagtt acccgtagac ttttgccag 300

gggaccaagc tggagatcaa a 321

&lt;210&gt; 1066

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1066

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

&lt;210&gt; 1067

&lt;211&gt; 18

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

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&lt;223&gt; synthetic

&lt;400&gt; 1067

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10295w002-Sequence

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<210> 1069  
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9

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Ala Ala Ser  
 1

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27

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Leu Gln His Asn Ser Tyr Pro Tyr Thr  
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# 10295w002-Sequence

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ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaagtaa taaatactat 180  
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ctgcaaatac acagcctgag agctgaggac acggctgtgt attactgtgc gaaaggggcc 300  
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1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Leu Thr Phe Ser Ser 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 Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Thr 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 Gly Ala Met Val Arg Gly Val Pro Tyr Asn Tyr Tyr Tyr Gly  
100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120 125

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10295w002-Sequence

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Gly Leu Thr Phe Ser Ser Tyr Gly  
1 5

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<220>

<223> synthetic

<400> 1077

atatcatatg atggaagtaa taaa

24

<210> 1078

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<212> PRT

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<223> synthetic

<400> 1078

Ile Ser Tyr Asp Gly Ser Asn Lys  
1 5

<210> 1079

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<212> DNA

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1 5 10 15

Met Asp Val

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| atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaacca | 120 |
| gggaaagccc ctaagcgcct gatctatgct gcgtccagtt tgcaaagtgg ggtcccatca | 180 |
| aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct | 240 |
| gaagattttg caacttatta ctgtctacag cataatagtt acccgtagac ttttggccag | 300 |
| gggaccaagc tggagatcaa a                                           | 321 |

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<400> 1082

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1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp  
20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg 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 Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
65 70 75 80

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys  
Page 282

100

10295w002-Sequence  
105

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Gln Gly Ile Arg Asn Asp  
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27

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Leu Gln His Asn Ser Tyr Pro Tyr Thr  
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 gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240  
 ctgcaaatga acagcctgag agctgaggac acggctgtac attactgtgc gaaaggggct 300  
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 acggtcaccg tctcctca 378

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 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Ser Phe  
 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 Ser Tyr Asp Gly Asn Tyr 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 Arg Ala Glu Asp Thr Ala Val His Tyr Cys  
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85

90

95

Ala Lys Gly Ala Met Val Arg Gly Val Pro Tyr Asn Phe Tyr Tyr Gly  
100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120 125

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24

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Ile Ser Tyr Asp Gly Asn Tyr Lys  
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<210> 1095  
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Met Asp Val

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aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240  
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Val Ile Arg Asn Asp  
20 25 30

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

10295w002-Sequence

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

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

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

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

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Gln Val Ile Arg Asn Asp  
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9

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Ala Ala Ser  
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# 10295w002-Sequence

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27

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Leu Gln His Asn Ser Tyr Pro Tyr Thr  
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1 5 10 15

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



# 10295w002-Sequence

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Met Asp Tyr Ala Asp Ser Val  
50 55 60

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

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

Ala Lys Asp Lys Ser Gly Tyr Gly Ser Phe Tyr Tyr Gly Met Asp Val  
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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Gly Phe Thr Phe Asp Asp Tyr Thr  
1 5

<210> 1109  
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<400> 1109  
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<210> 1110  
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Ala Lys Asp Lys Ser Gly Tyr Gly Ser Phe Tyr Tyr Gly Met Asp Val  
1 5 10 15

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cctggccagg ctcccaggct cctcatccat ggtgcgtcca ccagggccac tggcatccca 180  
gacaggttca gtggcagtgg gtcagggaca gacttcactc tcaccatcag cagactggag 240  
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Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
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<213> Artificial Sequence

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<223> synthetic

<400> 1118

Gly Ala Ser

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<210> 1119

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Gln Gln Arg Ala His Ser Pro Tyr Thr

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5

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ccaggacagg gcctggagtg ggtctcaggt attagttgga atagtggtag cagagactat 180

gcggactctg tgaagggccg attcaccatc tccagagaca atgccaggaa ctccctgttt 240

ctgcaaatga acagtctgag taatgaggac acggccatgt attactgcg aaaagataag 300

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Arg Asp Tyr Ala Asp Ser Val  
50 55 60

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

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

Ala Lys Asp Lys Ser Gly Tyr Gly Ser Tyr Phe Tyr Gly Met Asp Val  
100 105 110

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

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24

<210> 1124

<211> 8

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<400> 1124

Gly Phe Ser Phe Asp Asn Tyr Ala  
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10295w002-Sequence

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<210> 1127  
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cctggccagg ctcccaggct cctcatccat ggtgctgcca ccagggccac tggcatccca 180  
gacaggttca gtggcagtgg gtcagggaca gacttcactc tcaccatcag cagactggag 240  
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Asp Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Arg Asn Ile  
20 25 30

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

Ile His Gly Ala Ser Thr 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 Arg Val Ser Leu Pro  
85 90 95

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys  
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1 5

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| ccaggacagg gcctggagtg ggtctcaggt attagttgga atggtggttag cagagactat | 180 |
| gcggactctg tgaagggccg attcaccatc tccagagaca acgccaggaa ctccctgttt  | 240 |
| ctgcaaatga acagtctgtt tactgaggac acggccttgt attactgtgc aaaagataag  | 300 |
| agtggctacg gtcctactt ctacggtatg gacgtctggg gcccaaggac cacggtcacc   | 360 |



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

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

Ser Gly Ile Ser Trp Asn Gly Gly Ser Arg Asp Tyr Ala Asp Ser Val  
 50 55 60

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

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

Ala Lys Asp Lys Ser Gly Tyr Gly Ser Tyr Phe Tyr Gly Met Asp Val  
 100 105 110

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

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10295w002-Sequence

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Ala Lys Asp Lys Ser Gly Tyr Gly Ser Tyr Phe Tyr Gly Met Asp Val  
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120

10295w002-Sequence

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gacagggttca gtggcagtgg gtcagggaca gacttcactc tcaccatcag cagactggag 240  
cctgaagatt ttgcagttta ttactgtcag cagcgtgtta gttcaccgta cacttttggc 300  
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Asp Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Arg Asn Ile  
20 25 30

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

Ile His Gly Ala Ser Thr 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 Arg Val Ser Ser Pro  
85 90 95

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys  
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10295w002-Sequence

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Gln Gln Arg Val Ser Ser Pro Tyr Thr  
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10295w002-Sequence

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gcggactctg tgaagggccg attcaccatc tccagagaca acgccaggaa ctccctgttt 240  
ctgcaaataa acagtctgag tactgaggac acggccttgt attactgtgc aaaagataag 300  
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gtctcctca 369

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<400> 1154

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1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp 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 Gly Ile Ser Trp Asn Ser Gly Ser Arg Asp Tyr Ala Asp Ser Val  
50 55 60

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

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

Ala Lys Asp Lys Ser Gly Tyr Gly Ser Tyr Tyr Tyr Gly Met Asp Val  
100 105 110

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

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10295w002-Sequence

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## 10295w002-Sequence

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&lt;400&gt; 1161

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cctggccagg ctcccaggct cctcatccat ggtgcgtcca ccagggccac tggcatccca 180

gacaggttca gtggcagtgg gtcagggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagttta ttactgtcag cagcgtgtta gctcaccgta cacttttggc 300

caggggacca agctggagat caaa 324

&lt;210&gt; 1162

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1162

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

&lt;210&gt; 1163

&lt;211&gt; 21

&lt;212&gt; DNA

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&lt;400&gt; 1163

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10295w002-Sequence

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10295w002-Sequence

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ccagggaagg gccttgagtg ggtctcaggt attagttgga atagtaatag tatagactat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa atccctgttt 240  
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Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Thr Phe Ala Asp Phe  
20 25 30

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

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

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

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

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

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

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10295w002-Sequence

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Gly Phe Thr Phe Ala Asp Phe Thr  
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24

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# 10295w002-Sequence

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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tgtcccagcc 180  
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatccgcag cctgcaatct 240  
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Glu Arg Ala Ile Leu Ser Cys Arg Ala Ser Gln Asn Ile Asn Ser Asn  
20 25 30

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

Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly  
50 55 60

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

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

Thr Phe Gly His Gly Thr Arg Leu Glu Ile Lys  
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10295w002-Sequence

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Gly Ala Ser  
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10295w002-Sequence

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Gln Gln Tyr Tyr Asn Trp Pro Ile Thr  
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ccaggaaagg gcctggagtg ggtctcaggt attagttgga atggtggtag taaagactat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acaccaggaa ctccctgtct 240  
ctgcaaataa acagtctgag aattgaagac acggccttat attactgtgc aaaagataag 300  
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<400> 1186

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp 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 Gly Ile Ser Trp Asn Gly Gly Ser Lys Asp Tyr Ala Asp Ser Val  
50 55 60

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

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

Ala Lys Asp Lys Ser Gly Tyr Gly Ser Phe Tyr Tyr Gly Leu Asp Val  
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Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

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## 10295w002-Sequence

48

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 cctggccagg ctcccaggct cctcatccat ggtgCGtcca ccagggccac tggcatccca 180  
 gacaggttca gtggcagtgg gtcagggaca gacttcactc tcaccatcag cagactggag 240  
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Asp Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Arg Ser Ile  
 20 25 30

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

Ile His Gly Ala Ser Thr 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

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Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Val Ser Ser Pro  
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Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys  
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Gly Ala Ser  
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ccaggaaagg gcctggagtg ggtctcagat attagttgga atagtggtag catagactat 180  
gcggactctg tgaagggccg attcaccatt tccagagaca atgccaggaa ctccctgttt 240  
ctacaaatga gcagtctgag aactgaggac acggcctcgt attactgtat aaaagataag 300  
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20 25 30  
Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45  
Ser Asp Ile Ser Trp Asn Ser Gly Ser Ile Asp Tyr Ala Asp Ser Val  
50 55 60

# 10295w002-Sequence

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

Leu Gln Met Ser Ser Leu Arg Thr Glu Asp Thr Ala Ser Tyr Tyr Cys  
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Ile Lys Asp Lys Ser Gly Tyr Gly Ser Tyr Asn Tyr Gly Leu Asp Val  
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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# 10295w002-Sequence

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 cctggccagg ctcccaggct cctcatccat ggtgctgcca ccagggccac tggcatccca 180  
 gacaggttca gtggcagtgg gtcggggaca gacttcactc tcaccatcag cagactggag 240  
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 1 5 10 15

Asp Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ile  
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu  
 Page 315

Ile His Gly Ala Ser Thr 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 Leu Tyr Tyr Cys His Gln Arg Val Ser Ser Pro  
85 90 95

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys  
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Gly Ala Ser

10295w002-Sequence

1

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ccaggaaagg gcctggagtg ggtctcaggt attagttgga atagtggtag taaagactat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acaccaggaa ctccctgttt 240  
ctgcaaataa acagtctgag aactgaagac acggccttat attactgtgc aaaagataag 300  
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gtctcctca 369

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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr

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20

25

30

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

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

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

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

Ala Lys Asp Lys Ser Gly Tyr Gly Ser Phe Tyr Tyr Gly Met Asp Val  
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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## 10295w002-Sequence

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&lt;400&gt; 1222

Ile Ser Trp Asn Ser Gly Ser Lys

1

5

&lt;210&gt; 1223

&lt;211&gt; 48

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

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48

&lt;210&gt; 1224

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

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&lt;223&gt; synthetic

&lt;400&gt; 1224

Ala Lys Asp Lys Ser Gly Tyr Gly Ser Phe Tyr Tyr Gly Met Asp Val

1

5

10

15

&lt;210&gt; 1225

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&lt;212&gt; DNA

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accaaggtgg aaatcaaa 318

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&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

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&lt;400&gt; 1226

# 10295w002-Sequence

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Trp  
20 25 30

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

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

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

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Pro  
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Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
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10295w002-Sequence

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

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

Ala Val Ile Ala Asn 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 Arg Pro Glu Asp Thr Ala Val Tyr Phe Cys  
85 90 95

Ala Lys Glu Gly Gly Thr Ser Gly Ser Tyr Tyr Tyr Tyr Gly Met Asp  
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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Gly Leu Thr Phe Ser Thr Tyr Val  
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10295w002-Sequence

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Ile Ala Asn Asp Gly Ser Asn Lys  
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 tgggtaccagc agaaaccagg acagcctcct aagcttctcc ttactgggc atctaccgg 180  
 gaatccggga tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240

10295w002-Sequence

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

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

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

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr  
65 70 75 80

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

Tyr Tyr Ser Ile Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile  
100 105 110

Lys Arg

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Gln Ser Leu Leu Phe Asn Ser Ile Asn Lys Asn Tyr  
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Trp Ala Ser  
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Gln Gln Tyr Tyr Ser Ile Pro Trp Thr  
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60

10295w002-Sequence

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cctggacaag ggcttgagt gatgggatgg atcaacccta aaagtgggtg cacaaattat 180  
gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac 240  
atggaactga gcaggctgag atccgacgac atggccgtgt attattgtgc gagaatgggg 300  
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1 5 10 15

Ser Val Lys Val Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Gly Tyr  
20 25 30

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

Gly Trp Ile Asn Pro Lys Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe  
50 55 60

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

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

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

Leu Val Thr Val Ser Ser  
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Ala Arg Met Gly Asp Gly Ala Val Phe Asp Phe  
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10295w002-Sequence

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20 25 30  
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45  
Tyr Thr Ala Ser Asn Leu Gln Asn 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  
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10295w002-Sequence

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| tcctgtgcag cctctggatt cacctttgat gattatacca tgcactgggt ccggcaagct  | 120 |
| ccaggaagg gcctggagtg ggtctcaggt attagttgga acagtggtag cataggctat   | 180 |
| gcggactctg tgaagggccg attcaccatt tccagagaca acgccaagaa ctccctgtat  | 240 |
| ttgcaaatga acagtctgag agctgaggac acggccttgt tttactgtgc aaaagatcaa  | 300 |
| agtggttacg gccactacta ctacggtatg gacgtctggg gccaaggac cacggtcacc   | 360 |
| gtctcctca                                                          | 369 |

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| Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr |    | 20  | 25  | 30  |
| Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val |    | 35  | 40  | 45  |
| Ser Gly Ile Ser Trp Asn Ser Gly Ser 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 Phe Tyr Cys |    | 85  | 90  | 95  |
| Ala Lys Asp Gln Ser Gly Tyr Gly His Tyr Tyr Tyr Gly Met Asp Val |    | 100 | 105 | 110 |
| Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser                     |    | 115 | 120 |     |

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10295w002-Sequence

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10295W002-Sequence

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

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

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

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

Glu Asp Phe Ala Val Tyr His Cys Gln Gln Tyr Asn Asn Trp Pro Leu  
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys  
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Gly Ala Ser  
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gcagactccg tgatgggccg attcaccatc tccagagaca attccaagaa tacactgtat 240  
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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 Ser Phe Asp Gly Lys Asn Lys Tyr Tyr Ala Asp Ser Val  
50 55 60  
Met 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 Ser Ala Val Phe Phe Cys  
85 90 95  
Ala Arg Ser Tyr Asp Ile Leu Thr Gly Tyr Gly Ala Gly Tyr Ser Tyr  
100 105 110

10295w002-Sequence

His Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser  
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24

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Gly Phe Thr Phe Ser Tyr Tyr Gly  
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<210> 1285  
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24

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Ile Ser Phe Asp Gly Lys Asn Lys  
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<210> 1287  
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10295w002-Sequence

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His Tyr Gly Met Asp Val  
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aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240  
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Arg Ile Ser Ser Phe  
20 25 30

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



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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg  
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Gln Arg Ile Ser Ser Phe  
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<210> 1294  
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# 10295w002-Sequence

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Gln Gln Ser Tyr Arg Thr Pro Leu Thr  
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 cctggacaag ggcttgagtg gatgggatgg attaacccta aaagtgggtgt cacaaattat 180  
 gcacagaagt ttcaggacag agtcgccatg accagggaca cgtccatcag cacagcctac 240  
 atggaactga gcaggctgag atctgacgac acggccgtgt attactgtgc gagaatgggg 300  
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 1 5 10 15

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

Tyr Met His Trp Met Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met  
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35

40

45

Gly Trp Ile Asn Pro Lys Ser Gly Val Thr Asn Tyr Ala Gln Lys Phe  
50 55 60

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

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

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

Leu Val Thr Val Ser Ser  
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<210> 1299  
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Gly Tyr Thr Leu Ser Gly Tyr Tyr  
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Ala Arg Met Gly Asp Gly Ala Val Phe Asp Phe  
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gggaaagccc ctaagctcct aatctatact gcatccaatt tacaaaatgg ggtcccatca 180

aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240

gaagattttg caacttacta ctgtcaacag agttacagga ccccgctcac tttcggcgga 300

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Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Arg Ile Ser Ser Phe  
20 25 30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Arg Thr Pro Leu  
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Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg  
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10295w002-Sequence

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10295w002-Sequence

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1 5 10 15

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

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

Ser Thr Ile Ser Phe 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 Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

Ala Lys Gly Gly Gly Thr Ser Gly Ser Tyr Phe Tyr Tyr Gly Met Asp  
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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Ala Lys Gly Gly Gly Thr Ser Gly Ser Tyr Phe Tyr Tyr Gly Met Asp  
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gggaaagccc ctaagctcct aatctatact gcatccaatt tacaaaatgg ggtcccatca 180

aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240

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gggaccaagc tggagatcaa acga 324



# 10295w002-Sequence

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 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Arg Ile Ser Ser Phe  
 20 25 30

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

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

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

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

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

<210> 1323  
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<400> 1323  
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18

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<220>  
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<400> 1324

Gln Arg Ile Ser Ser Phe  
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<210> 1325  
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10295w002-Sequence

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Gln Gln Ser Tyr Arg Thr Pro Leu Thr

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cctggacaag ggcttgagt gatgggatgg atcaacccta acagtgatgt cacaaagtat 180

gcacagaagt ttcagggcag ggtcaccttg accagggaca cgtccatcag tgcagcctat 240

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Ser Met Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr  
 20 25 30

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

Gly Trp Ile Asn Pro Asn Ser Asp Val Thr Lys Tyr Ala Gln Lys Phe  
 50 55 60

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

Ile Asp Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Ile Tyr Tyr Cys  
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Ala Arg Met Gly Asp Gly Ala Val Phe Asp Tyr Trp Gly Gln Gly Thr  
 100 105 110

Leu Val Thr Val Ser Ser  
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10295w002-Sequence

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120

10295w002-Sequence

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 aggttcagtg gcagtggatt tgggacagat ttactctca ccatcagcag tctgcaacct 240  
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Arg Ile Ser Ser Tyr  
 20 25 30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg  
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 gcacagaggt ttcagggcag ggtcaccatg accagggaca cgtccatcag tactgcctac 240  
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Ser Val Lys Val Ser Cys Lys Thr Ser Gly Tyr Ser Phe Ile Gly Tyr  
 20 25 30

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

Gly Trp Ile Asn Pro Lys Ser Gly Val Thr Asn Tyr Ala Gln Arg Phe  
 50 55 60

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

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

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

Leu Val Thr Val Ser Ser  
 115

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10295w002-Sequence

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 aggttcagtg gcactggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240  
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 gggaccaaaag tggatatcaa acga 324

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 20 25 30  
 Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile  
 35 40 45  
 Tyr Thr Ala Ser Asn Leu Gln Asn Gly Val Pro Ser Arg Phe Ser Gly  
 50 55 60  
 Thr Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
 65 70 75 80  
 Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Arg Thr Pro Leu  
 85 90 95  
 Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys Arg  
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| tcctgcaaga cttctggata caccttcacc ggctactata tgcactggat acgacaggcc  | 120 |
| cctggacaag ggcttgagtg gatgggatgg atcaacccta aaagtgggtgg cacaaattat | 180 |
| gcacagaagt ttcagggcag ggtcaccatg accagggaca cgtccatcag cacagcctac  | 240 |
| atggaactga gcaggctgag atccgacgac atggccgtgt attattgtgc gagaatgggg  | 300 |
| gacggtgcag tgtttgactt ctggggccag ggaaccctgg tcaccgtctc ctca        | 354 |

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

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10295w002-Sequence

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<400> 1368

Ala Arg Met Gly Asp Gly Ala Val Phe Asp Phe  
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## 10295w002-Sequence

1

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10

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&lt;211&gt; 327

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

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&lt;400&gt; 1369

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gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180

aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240

gaagattttg caacttacta ctgtcaacag agttacagta cccctccgct cactttcggc 300

ggagggacca aagtggatat caaacga 327

&lt;210&gt; 1370

&lt;211&gt; 109

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1370

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1 5 10 15Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr  
20 25 30Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile  
35 40 45Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
65 70 75 80Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro  
85 90 95Leu Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys Arg  
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Gln Ser Ile Ser Ser Tyr  
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# 10295W002-Sequence

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1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr  
20 25 30

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

Gly Trp Ile Asn Pro Asn Ser Asp Val Thr Asn Tyr Ala Gln Lys Phe  
50 55 60

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

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

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

Leu Val Thr Val Ser Ser  
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10295w002-Sequence

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Gly Tyr Thr Phe Thr Gly Tyr Tyr  
 1 5

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<210> 1383  
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<210> 1384  
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&lt;400&gt; 1384

Ala Arg Met Gly Asp Gly Ala Val Phe Asp Tyr  
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&lt;210&gt; 1385

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1385

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 gggaaagccc ctaaggtgct gatctctgtt gcatccagtt tgcaaagtgg ggtcccatca 180  
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&lt;210&gt; 1386

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1386

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 Arg Ile Ser Ser Tyr  
 20 25 30

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

Ser Val 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 Ser Tyr Tyr Cys Gln Gln Ser Tyr Asn Thr Pro Leu  
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg  
 Page 361

100

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Gln Arg Ile Ser Ser Tyr  
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Val Ala Ser  
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10295w002-Sequence

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Gln Gln Ser Tyr Asn Thr Pro Leu Thr  
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 gcagactctg tgaagggccg attcaccatc tccagagaca attccaagaa ctcaactttat 240  
 ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gaaagccggt 300  
 cccgctacgg tgacacggag gtactactac tactacgggt tggacgtctg gggccaaggg 360  
 accacggtca ccgtctcctc a 381

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

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

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

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

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

Ala Lys Ala Gly Pro Ala Thr Val Thr Arg Arg Tyr Tyr Tyr Tyr Tyr  
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Gly Leu Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Arg Ile Ser Ser Tyr  
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Leu Asn Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Val Leu Ile  
35 40 45

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg  
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ile Gly Tyr  
20 25 30

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

40

45

Gly Trp Ile Asn Pro Lys Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe  
50 55 60

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

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

Ala Arg Met Gly Asp Gly Ala Met Phe Asp Tyr Trp Gly Gln Gly Thr  
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Leu Val Thr Val Ser Ser  
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Gly Tyr Thr Phe Ile Gly Tyr Tyr  
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gggaaagccc ctaaggtcct gatctatact gcatccagtt tgcaaagtgg ggtcccatca 180

cgattcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240

gaagattttg caacttacta ctgtcaacag agttacagta ccccgctcac tttcggcgga 300

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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Arg Ile Ser Ser Tyr  
20 25 30

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys  
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Gln Gln Ser Tyr Ser Thr Pro Leu Thr  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp 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 Leu Ile Ser Gly Asp Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val  
50 55 60

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

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

Ala Lys Asp Asp Ser Ser Ser Ser Trp Tyr Tyr Tyr Tyr Tyr Gly Met  
100 105 110

Asp Val Trp Gly Arg Gly Thr Thr Val Thr Val Ser Ser  
115 120 125

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gggaccaagg tggagatcaa acga 324

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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Arg Ile Ser Ser Tyr  
 20 25 30

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

Ser Val 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 Ser Tyr Tyr Cys Gln Gln Ser Tyr Asn Thr Pro Leu  
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Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg  
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180

gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctctat

240

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300

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

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

Ser Asp Ile Ser Trp Asn Ser Gly Ser Lys Asp 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 Thr Glu Asp Thr Ala Phe Tyr Tyr Cys  
85 90 95

Ala Lys Asp Ser Arg Gly Tyr Gly Leu Tyr Tyr His Leu Gly Leu Asp  
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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Ala Lys Asp Ser Arg Gly Tyr Gly Leu Tyr Tyr His Leu Gly Leu Asp  
1 5 10 15

val

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

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

Ser Asp Ile Ser Trp Asn Ser Gly Ser Ile Ala 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 Thr Glu Asp Thr Ala Phe Tyr Tyr Cys  
85 90 95

Ala Lys Asp Ser Arg Gly Tyr Gly His Tyr Lys Tyr Leu Gly Leu Asp  
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Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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 1 5 10 15

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Val

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accgtctcct ca 372

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1 5 10 15

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

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

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

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

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

Val Lys Asp Gly Ser Gly Tyr Gly Arg Phe His Tyr Tyr Ala Met Asp  
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
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115

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 1 5 10 15

Val

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 ccagggaagg gcctggagtg ggtctcagat attagttgga atagtggtag caaagactat 180  
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 ctgcaaataa acagtctgag agctgaagac acggccttgt attactgtgt aaaatatgga 300  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ala Asp Tyr  
 20 25 30

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Phe Leu Tyr  
 Page 382

65 70 75 80

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

Val Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr Phe Tyr Ala Met Asp  
100 105 110

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

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10295w002-Sequence

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Val

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 gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
 ctgcaaataa acagtctgag aactgaggac acggccttgt attactgtgc aaaatatgga 300  
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 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ala Asp Tyr  
 Page 384



## 10295w002-Sequence

20

25

30

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

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

Ala Lys Tyr Gly Ser Gly Tyr Gly Arg Tyr Phe Phe Tyr Ala Met Asp  
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## 10295w002-Sequence

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&lt;211&gt; 17

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&lt;400&gt; 1480

Ala Lys Tyr Gly Ser Gly Tyr Gly Arg Tyr Phe Phe Tyr Ala Met Asp

1

5

10

15

val

&lt;210&gt; 1481

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&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

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&lt;223&gt; synthetic

&lt;400&gt; 1481

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ccagggaagg gcctggagtg ggtctcagat attagttgga atagtaatag taaagactat 180

gcggactctg tgaagggccg attcaccatc tccagagaca atgccaagaa ctccctctat 240

ctacaaatga acagtctgag agctgaggac acggccttgt attactgtgt aaaagatgga 300

agtggctacg ggaaattttc cctctacgct ttggacgtct ggggccaagg gaccacggtc 360

accgtctcct ca 372

&lt;210&gt; 1482

&lt;211&gt; 124

&lt;212&gt; PRT

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&lt;400&gt; 1482

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

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

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

Ser Asp Ile Ser Trp Asn Ser Asn Ser Lys Asp 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

Val Lys Asp Gly Ser Gly Tyr Gly Lys Phe Ser Leu Tyr Ala Leu Asp  
 100 105 110

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

&lt;210&gt; 1483

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

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&lt;223&gt; synthetic

&lt;400&gt; 1483

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&lt;210&gt; 1484

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1484

Gly Phe Ala Phe Asn Asp Tyr Thr  
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&lt;210&gt; 1485

&lt;211&gt; 24

&lt;212&gt; DNA

## 10295w002-Sequence

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&lt;210&gt; 1486

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

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&lt;400&gt; 1486

Ile Ser Trp Asn Ser Asn Ser Lys

1

5

&lt;210&gt; 1487

&lt;211&gt; 51

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

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&lt;400&gt; 1487

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51

&lt;210&gt; 1488

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1488

Val Lys Asp Gly Ser Gly Tyr Gly Lys Phe Ser Leu Tyr Ala Leu Asp

1

5

10

15

Val

&lt;210&gt; 1489

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1489

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180

10295w002-Sequence

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 1 5 10 15

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

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

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

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

Leu Gln Met Asp Ser Leu Arg Ala Ala Asp Thr Ala Phe Tyr Tyr Cys  
 85 90 95

Ala Lys Asp Lys Ser Gly Tyr Gly His Phe Tyr Tyr Tyr Ala Met Asp  
 100 105 110

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

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Ala Lys Asp Lys Ser Gly Tyr Gly His Phe Tyr Tyr Tyr Ala Met Asp  
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Val

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## 10295w002-Sequence

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&lt;223&gt; synthetic

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 ctgcaaatga acagtctgag aggtgaggac acggccttgt attactgtgc aaaagatgga 300  
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 accgtctcct ca 372

&lt;210&gt; 1498

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1498

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

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&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

10295w002-Sequence

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accgtctcct ca 372

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Lys Asp 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 Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp

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

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

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

Ser Asp Ile Ser Trp Asn Ser Gly Ser Met Gly Tyr Ala Asp Ser Val  
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10295w002-Sequence

50

55

60

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

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

Ala Lys Asp Gly Ser Gly Tyr Gly Lys Tyr Phe Phe Tyr Ala Met Asp  
100 105 110

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

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10295w002-Sequence

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Val

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ccagggaagg gcctggagtg ggtctcagat attagttgga atagtggtag taaaggctat 180  
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10295w002-Sequence

24

# 10295w002-Sequence

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<220>  
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Ile Ser Trp Asn Ser Gly Ser Lys  
1 5

<210> 1527  
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<212> DNA  
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51

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<212> PRT  
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Val Lys Asp Gly Ser Gly Tyr Gly Lys Tyr His Phe Tyr Ala Met Asp  
1 5 10 15

Val

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ccagggaagg gcctggaatg ggtctcagat attagtgtga atagtggtag cagaggctat 180  
gcggactctg tgaagggccg attcaccatc tccagagata atgccgagaa ctccctgtac 240  
ctgcaaatga acagtctgag agctgaggac acggccttgt attactgtgc aaaagataaa 300  
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# 10295w002-Sequence

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<220>  
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<400> 1530

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

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

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

Ser Asp Ile Ser Trp Asn Ser Gly Ser Arg Gly Tyr Ala Asp Ser Val  
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Glu 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 Lys Ser Gly Tyr Gly His Tyr Tyr Tyr Tyr Ala Met Asp  
 100 105 110

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

<210> 1531  
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24

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<400> 1532

Gly Phe Thr Phe Asp Asp Tyr Thr  
 1 5



# 10295w002-Sequence

<210> 1533  
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24

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<400> 1534

Ile Ser Trp Asn Ser Gly Ser Arg  
 1 5

<210> 1535  
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 <212> DNA  
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51

<210> 1536  
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<220>  
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<400> 1536

Ala Lys Asp Lys Ser Gly Tyr Gly His Tyr Tyr Tyr Tyr Ala Met Asp  
 1 5 10 15

Val

<210> 1537  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
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<400> 1537  
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60

10295w002-Sequence

tcctgtgaag cctctggatt cacctttgct gattatacct tgcactgggt cgggcaagct 120  
ccaggggaagg gcctggaatg ggtctcagat attagttgga atagtggcac cagaggctat 180  
gcggactctg tgaggggccg attcaccatc tccagagaca acgccaagaa gtccctgtat 240  
ctgcaaataa acagtctgag atctgaggac acggccttgt attactgtgt gaaagatgga 300  
agtggctacg ggagatataa tttctacgct atggacgtct ggggccaagg gaccacggtc 360  
accgtctcct ca 372

<210> 1538  
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<212> PRT  
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<220>  
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<400> 1538

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

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

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

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

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

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

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

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

<210> 1539  
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<212> DNA  
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<400> 1539

ggattcacct ttgctgatta tacc

24

<210> 1540

10295wo02-Sequence

<211> 8  
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<400> 1540

Gly Phe Thr Phe Ala Asp Tyr Thr  
 1 5

<210> 1541  
 <211> 24  
 <212> DNA  
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<400> 1541  
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24

<210> 1542  
 <211> 8  
 <212> PRT  
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<220>  
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<400> 1542

Ile Ser Trp Asn Ser Gly Thr Arg  
 1 5

<210> 1543  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1543  
 gtgaaagatg gaagtggtta cgggagatat aatttctacg ctatggacgt c

51

<210> 1544  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<400> 1544

Val Lys Asp Gly Ser Gly Tyr Gly Arg Tyr Asn Phe Tyr Ala Met Asp  
 1 5 10 15

Val

# 10295w002-Sequence

<210> 1545  
 <211> 369  
 <212> DNA  
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<400> 1545  
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 tcctgtgcag cctctggatt tacctttgct gactatacca tgcactgggt ccggcaaggt 120  
 ccagggaagg gcctggagtg ggtctcagat attggttgga atagtaatac tataggctat 180  
 gcggactctg tgaagggccg attcgccatc tccagagaca acgccaagaa ctccctgtat 240  
 cttcaaatac acagtctgac acctgaggac acggccttat attactgtgt aaaggataaa 300  
 agtggctacg ggaaattcca atacggtttg gacgtctggg gccaaaggac cacggtcacc 360  
 gtctcctca 369

<210> 1546  
 <211> 123  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 1546

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

<210> 1547

10295w002-Sequence

<211> 24  
 <212> DNA  
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<220>  
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<400> 1547  
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24

<210> 1548  
 <211> 8  
 <212> PRT  
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<220>  
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<400> 1548

Gly Phe Thr Phe Ala Asp Tyr Thr  
 1 5

<210> 1549  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
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<400> 1549  
 attggttgga atagtaatac tata

24

<210> 1550  
 <211> 8  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 1550

Ile Gly Trp Asn Ser Asn Thr Ile  
 1 5

<210> 1551  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1551  
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48

<210> 1552  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

# 10295w002-Sequence

<220>

<223> synthetic

<400> 1552

Val Lys Asp Lys Ser Gly Tyr Gly Lys Phe Gln Tyr Gly Leu Asp Val  
1 5 10 15

<210> 1553

<211> 369

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1553

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ccaggggaagg gcctggagtg ggtctcagat attggttgga atagtaacag tataggctat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
ctccaaatga acagtctgag acctgaggac acggccttgt atttctgtgt aaaggataaa 300  
agtggctacg ggaaattttt catcggtttg gacgtctggg gccaaaggac aatggtcacc 360  
gtctcttca 369

<210> 1554

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1554

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

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

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

Ser Asp Ile Gly Trp Asn Ser Asn Ser 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 Pro Glu Asp Thr Ala Leu Tyr Phe Cys  
85 90 95

Val Lys Asp Lys Ser Gly Tyr Gly Lys Phe Phe Ile Gly Leu Asp Val  
Page 406

100

10295w002-Sequence

105

110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser  
 115 120

<210> 1555  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1555  
 ggatttacat ttgacgatta tacc

24

<210> 1556  
 <211> 8  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 1556

Gly Phe Thr Phe Asp Asp Tyr Thr  
 1 5

<210> 1557  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1557  
 attggttgga atagtaacag tata

24

<210> 1558  
 <211> 8  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 1558

Ile Gly Trp Asn Ser Asn Ser Ile  
 1 5

<210> 1559  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
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<400> 1559

gtaaaggata aaagtgggcta cgggaaattt ttcacggtt tggacgtc

<210> 1560  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1560

Val Lys Asp Lys Ser Gly Tyr Gly Lys Phe Phe Ile Gly Leu Asp Val  
 1 5 10 15

<210> 1561  
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 <212> DNA  
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<220>  
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 tcctgtgcag cctctggatt tacatttgac gattatacca tgcactgggt ccggcaaggt 120  
 ccagggaagg gcctggagtg ggtctcagat attggttggga atagtaatac taaaggctat 180  
 gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ttccctgtat 240  
 ctccaaatga acagtctgag acctgaggac acggccttgt atttctgtgt gaaggataaa 300  
 agtggctacg ggaaattttt catcggtttg gacgtctggg gccaaaggac aatggtcacc 360  
 gtctcttca 369

<210> 1562  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1562

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

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

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

Ser Asp Ile Gly Trp Asn Ser Asn Thr Lys 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  
 Page 408



10295wo02-Sequence

65 70 75 80

Leu Gln Met Asn Ser<sub>85</sub> Leu Arg Pro Glu Asp<sub>90</sub> Thr Ala Leu Tyr Phe<sub>95</sub> Cys

Val Lys Asp Lys<sub>100</sub> Ser Gly Tyr Gly Lys<sub>105</sub> Phe Phe Ile Gly<sub>110</sub> Leu Asp Val

Trp Gly Gln<sub>115</sub> Gly Thr Met Val Thr<sub>120</sub> Val Ser Ser

|       |                     |
|-------|---------------------|
| <210> | 1563                |
| <211> | 24                  |
| <212> | DNA                 |
| <213> | Artificial Sequence |

<220>  
<223> synthetic

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24

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|-------|---------------------|
| <210> | 1564                |
| <211> | 8                   |
| <212> | PRT                 |
| <213> | Artificial Sequence |

$\langle 220 \rangle$   
 $\langle 223 \rangle$  synthetic

<400> 1564

Gly Phe Thr Phe Asp Asp Tyr Thr  
1 5

|       |                     |
|-------|---------------------|
| <210> | 1565                |
| <211> | 24                  |
| <212> | DNA                 |
| <213> | Artificial Sequence |

<220>  
<223> synthetic

<400> 1565  
attggttgga atagtaatac taaa

24

|       |                     |
|-------|---------------------|
| <210> | 1566                |
| <211> | 8                   |
| <212> | PRT                 |
| <213> | Artificial Sequence |

<220>  
<223> synthetic

<400> 1566

Ile Gly Trp Asn Ser Asn Thr Lys  
1 5

<210> 1567

## 10295w002-Sequence

<211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1567  
 gtgaaggata aaagtggcta cgggaaattt ttcatcggtt tggacgtc

48

<210> 1568  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1568

Val Lys Asp Lys Ser Gly Tyr Gly Lys Phe Phe Ile Gly Leu Asp Val  
 1 5 10 15

<210> 1569  
 <211> 369  
 <212> DNA  
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<220>  
 <223> synthetic

<400> 1569  
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 ccagggacgg gcctggagtg ggtctcagat attggttgga gtggtggttag tttaggctat 180  
 gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
 ttggaaatga acaatctgcg acctgaagac acggccttgt attattgtgt aaaggataaa 300  
 agtggctacg ggaaattcca gtacggtttg gacgtctggg gccaaggac cacggtcacc 360  
 gtctcctca 369

<210> 1570  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1570

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

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

Thr Met His Trp Val Arg Gln Gly Pro Gly Thr Gly Leu Glu Trp Val  
 Page 410

Ser Asp Ile Gly Trp Ser Gly Gly Ser Leu 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 Glu Met Asn Asn Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys  
85 90 95

Val Lys Asp Lys Ser Gly Tyr Gly Lys Phe Gln Tyr Gly Leu Asp Val  
100 105 110

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

<210> 1571  
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<212> DNA  
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<220>  
<223> synthetic

<400> 1571  
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24

<210> 1572  
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<212> PRT  
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<220>  
<223> synthetic

<400> 1572

Gly Phe Thr Phe Ala Asp Tyr Thr  
1 5

<210> 1573  
<211> 24  
<212> DNA  
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<220>  
<223> synthetic

<400> 1573  
attggttgga gtggtggtag tttta

24

<210> 1574  
<211> 8  
<212> PRT  
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<220>  
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# 10295w002-Sequence

<400> 1574

Ile Gly Trp Ser Gly Gly Ser Leu  
1 5

<210> 1575

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1575

gtaaaggata aaagtggcta cgggaaattc cagtacgggt tggacgtc

48

<210> 1576

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1576

Val Lys Asp Lys Ser Gly Tyr Gly Lys Phe Gln Tyr Gly Leu Asp Val  
1 5 10 15

<210> 1577

<211> 369

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1577

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ccagggaagg gcctggagtg ggtctcagat attggttgga atagtaacac tataggctat 180

gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240

ctccaaatga acagtctgag accagaggac acggccttgt atttctgtgt aaaggataaa 300

agtggctacg ggaaatTTTT catcggtttg gacgtctggg gccaaaggac aatggtcacc 360

gtctcttca 369

<210> 1578

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1578

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

| 10295w002-Sequence |                   |                    |                    |                   |                   |                   |                    |                    |                   |                   |                   |                   |                    |                   |                   |  |
|--------------------|-------------------|--------------------|--------------------|-------------------|-------------------|-------------------|--------------------|--------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|--|
| 1                  | 5                 |                    |                    |                   | 10                |                   |                    |                    | 15                |                   |                   |                   |                    |                   |                   |  |
| Ser                | Leu               | Arg                | Leu <sub>20</sub>  | Ser               | Cys               | Ala               | Ala                | Ser <sub>25</sub>  | Gly               | Phe               | Lys               | Phe               | Asp <sub>30</sub>  | Gly               | Tyr               |  |
| Thr                | Met               | His <sub>35</sub>  | Trp                | Val               | Arg               | Gln               | Gly <sub>40</sub>  | Pro                | Gly               | Lys               | Gly               | Leu <sub>45</sub> | Glu                | Trp               | Val               |  |
| Ser                | Asp <sub>50</sub> | Ile                | Gly                | Trp               | Asn               | Ser <sub>55</sub> | Asn                | Thr                | Ile               | Gly               | Tyr <sub>60</sub> | Ala               | Asp                | Ser               | Val               |  |
| Lys <sub>65</sub>  | Gly               | Arg                | Phe                | Thr               | Ile <sub>70</sub> | Ser               | Arg                | Asp                | Asn               | Ala <sub>75</sub> | Lys               | Asn               | Ser                | Leu               | Tyr <sub>80</sub> |  |
| Leu                | Gln               | Met                | Asn                | Ser <sub>85</sub> | Leu               | Arg               | Pro                | Glu                | Asp <sub>90</sub> | Thr               | Ala               | Leu               | Tyr                | Phe <sub>95</sub> | Cys               |  |
| Val                | Lys               | Asp                | Lys <sub>100</sub> | Ser               | Gly               | Tyr               | Gly                | Lys <sub>105</sub> | Phe               | Phe               | Ile               | Gly               | Leu <sub>110</sub> | Asp               | Val               |  |
| Trp                | Gly               | Gln <sub>115</sub> | Gly                | Thr               | Met               | Val               | Thr <sub>120</sub> | Val                | Ser               | Ser               |                   |                   |                    |                   |                   |  |

|       |                     |
|-------|---------------------|
| <210> | 1579                |
| <211> | 24                  |
| <212> | DNA                 |
| <213> | Artificial Sequence |

<220>  
<223> synthetic

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<400> 1579
gggttttaaat ttgatggtta tacc
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24

|       |                     |
|-------|---------------------|
| <210> | 1580                |
| <211> | 8                   |
| <212> | PRT                 |
| <213> | Artificial Sequence |

<220>  
<223> synthetic

<400> 1580

Gly Phe Lys Phe Asp Gly Tyr Thr  
1 5

|       |                     |
|-------|---------------------|
| <210> | 1581                |
| <211> | 24                  |
| <212> | DNA                 |
| <213> | Artificial Sequence |

$\langle 220 \rangle$   
 $\langle 223 \rangle$  synthetic

<400> 1581  
attggttgga atagtaacac tata

24

# 10295w002-Sequence

<210> 1582  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1582

Ile Gly Trp Asn Ser Asn Thr Ile  
1 5

<210> 1583  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1583  
gtaaaggata aaagtgagta cgggaaattt ttcacggtt tggacgtc

48

<210> 1584  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1584

Val Lys Asp Lys Ser Gly Tyr Gly Lys Phe Phe Ile Gly Leu Asp Val  
1 5 10 15

<210> 1585  
<211> 369  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1585  
caggtgcagc tgggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60  
tcctgtgcag cctctggatt cacctttgat gattatacca tgcactgggt ccggcaaggt 120  
ccagggaagg gcctggagtg ggtctcagat attggttgga atagtaatac tataggctat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaggaa ctccctgtat 240  
ctgcaaatga acagtctgcg acctgaagac acggccttat attactgtgt aaaggataaa 300  
agtggctacg ggaaattcca atacggtttg gacgtctggg gccaaaggac cacggtcacc 360  
gtctcctca 369

<210> 1586  
<211> 123  
<212> PRT

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1586

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

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

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

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

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

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

Val Lys Asp Lys Ser Gly Tyr Gly Lys Phe Gln Tyr Gly Leu Asp Val  
 100 105 110

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

&lt;210&gt; 1587

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1587

ggattcacct ttgatgatta tacc

24

&lt;210&gt; 1588

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1588

Gly Phe Thr Phe Asp Asp Tyr Thr  
 1 5

&lt;210&gt; 1589

&lt;211&gt; 24

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10295w002-Sequence

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<400> 1590

Ile Gly Trp Asn Ser Asn Thr Ile  
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<210> 1591

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<400> 1591

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48

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Val Lys Asp Lys Ser Gly Tyr Gly Lys Phe Gln Tyr Gly Leu Asp Val  
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<210> 1593

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<212> DNA

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ccagggaagg gcctggagtg ggtctcagac attagttgga gtggtggttag catagactat 180

acggactctg tgaagggccg attctccatc tccagagaca acgccaagaa ctccctgtat 240

ctgcaaatga acagtctgag agttgaagac acggccttgt attattgtgt aaaagataaa 300



10295w002-Sequence

agtggctacg ggaagtactc ttacggtttg gacgtctggg gccaagggac cacggtcacc 360  
gtctcctca 369

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<400> 1594

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1 5 10 15

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

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

Ser Asp Ile Ser Trp Ser Gly Gly Ser Ile Asp Tyr Thr Asp Ser Val  
50 55 60

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

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

Val Lys Asp Lys Ser Gly Tyr Gly Lys Tyr Ser Tyr Gly Leu Asp Val  
100 105 110

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

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<400> 1595

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Gly Phe Lys Phe Asp Asp Tyr Thr  
1 5

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Val Lys Asp Lys Ser Gly Tyr Gly Lys Tyr Ser Tyr Gly Leu Asp Val  
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10295w002-Sequence

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ccaggggaagg ggctggagtg ggttggccgt attaaaagca taagtgatgg tgggacaaca 180  
gactacgctg catccgtgaa aggcagattc accatctcaa gagaagattc aaaaaatatg 240  
ctgtttctgg aaatgaatag tctgaaaacc gaggacacag ccgtgtttta ctgtaccaca 300  
gaggtcgcta gaactccgaa ctactggggc cggggaaccc tggtcaccgt ctcctca 357

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<220>  
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<400> 1602

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

Ser Leu Arg Ile Ser Cys Ala Ala Ser Gly Phe Ser Phe Ile Asn Ala  
20 25 30

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

Gly Arg Ile Lys Ser Ile Ser Asp Gly Gly Thr Thr Asp Tyr Ala Ala  
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Glu Asp Ser Lys Asn Met  
65 70 75 80

Leu Phe Leu Glu Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Phe  
85 90 95

Tyr Cys Thr Thr Glu Val Ala Arg Thr Pro Asn Tyr Trp Gly Arg Gly  
100 105 110

Thr Leu Val Thr Val Ser Ser  
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<210> 1605

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attaaaagca taagtgatgg tgggacaaca

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<210> 1606

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<212> PRT

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<400> 1606

Ile Lys Ser Ile Ser Asp Gly Gly Thr Thr  
1 5 10

<210> 1607

<211> 30

<212> DNA

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<223> synthetic

<400> 1607

accacagagg tcgctagaac tccgaactac

30

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<211> 10

<212> PRT

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<400> 1608

Thr Thr Glu Val Ala Arg Thr Pro Asn Tyr  
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<210> 1609

<211> 372

<212> DNA

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10295w002-Sequence

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<400> 1609

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cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag caagggatac 180  
gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
cttcaaata ga actctcttag ggcagaagac acagcattgt attattgctc aaaatacggc 300  
agtgggttatg gcaagtttta tcattatgga ctggacgtgt ggggacaagg gacaacagtg 360  
acagtgaagta gc 372

<210> 1610

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1610

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg  
1 5 10 15  
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr  
20 25 30  
Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45  
Ser Gly Ile Ser Trp Asn Ser Gly Ser Lys 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 Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
100 105 110  
Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

<210> 1611

<211> 24

<212> DNA

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10295w002-Sequence

<400> 1611  
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<212> PRT  
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<400> 1612  
Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1613  
<211> 24  
<212> DNA  
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<400> 1613  
atatcatgga actcaggaag caag 24

<210> 1614  
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<220>  
<223> synthetic

<400> 1614  
Ile Ser Trp Asn Ser Gly Ser Lys  
1 5

<210> 1615  
<211> 51  
<212> DNA  
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<400> 1615  
gcaaaatacg gcagtgggta tggcaagttt taccattatg gactggacgt g 51

<210> 1616  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1616  
Ala Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp

1

5

10

15

val

&lt;210&gt; 1617

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1617

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tcttgtgccg cttctggttt cactttcgac gattatagca tgcattgggt acgacaggct 120

cccggaaaag ggctggaatg ggtgtcagga attagttgga actcaggaag tattggatac 180

gctgattcag tcaaaggacg cttcacaatc tcaagggaca acgctaaaaa ctcactttat 240

ttgcaaatga actctctccg cgctgaagat accgctctct attattgcdc caaagatggg 300

tctggttacg gttatTTTTA ctactatgga atggacgttt ggggccaagg aacaactgtc 360

acagtatcat cc 372

&lt;210&gt; 1618

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1618

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

10295w002-Sequence

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

<210> 1619  
 <211> 24  
 <212> DNA  
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<220>  
 <223> synthetic

<400> 1619  
 ggtttcactt tcgacgatta tagc

24

<210> 1620  
 <211> 8  
 <212> PRT  
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<220>  
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<400> 1620

Gly Phe Thr Phe Asp Asp Tyr Ser  
 1 5

<210> 1621  
 <211> 24  
 <212> DNA  
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<220>  
 <223> synthetic

<400> 1621  
 attagttgga actcaggaag tatt

24

<210> 1622  
 <211> 8  
 <212> PRT  
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<220>  
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<400> 1622

Ile Ser Trp Asn Ser Gly Ser Ile  
 1 5

<210> 1623  
 <211> 51  
 <212> DNA  
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<220>  
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<400> 1623  
 gccaaagatg ggtctggtta cggttatctt tactactatg gaatggacgt t

51



# 10295w002-Sequence

<210> 1624  
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<220>  
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<400> 1624

Ala Lys Asp Gly Ser Gly Tyr Gly Tyr Phe Tyr Tyr Tyr Gly Met Asp  
 1 5 10 15

Val

<210> 1625  
 <211> 372  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1625

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 ccaggtaaag gactcgaatg ggtaagcggc atatcttgga actcaggcag tattggctac 180  
 gcagattcag taaaaggaag attcactatt tcaagggata atgctaagaa cagtctctac 240  
 ttgcaaatga atagcttgcg cgcagaagat acagcacttt attattgtgc aaaagatgga 300  
 agcggttatg ggaaatttta ttattatggt atggatgtat ggggtcaagg tacaacagtt 360  
 actgtgtcaa gt 372

<210> 1626  
 <211> 124  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 1626

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

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

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

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

10295w002-Sequence

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 Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
100 105 110

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

<210> 1627  
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<212> DNA  
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<220>  
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<400> 1627  
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24

<210> 1628  
<211> 8  
<212> PRT  
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<400> 1628

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1629  
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<220>  
<223> synthetic

<400> 1629  
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24

<210> 1630  
<211> 8  
<212> PRT  
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<220>  
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<400> 1630

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

# 10295w002-Sequence

<210> 1631  
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 <212> DNA  
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<210> 1632  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<400> 1632  
 Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
 1 5 10 15

Val

<210> 1633  
 <211> 324  
 <212> DNA  
 <213> Artificial Sequence

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<400> 1633  
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 atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120  
 gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccgtca 180  
 aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240  
 gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300  
 caagggacac gactggagat taaa 324

<210> 1634  
 <211> 108  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1634  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr  
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10295w002-Sequence

20

25

30

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

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

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

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

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

<210> 1635  
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<212> DNA  
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<400> 1635  
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18

<210> 1636  
<211> 6  
<212> PRT  
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<220>  
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<400> 1636

Gln Ser Ile Ser Ser Tyr  
1 5

<210> 1637  
<211> 9  
<212> DNA  
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<220>  
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<400> 1637  
gctgcatcc

9

<210> 1638  
<211> 3  
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# 10295w002-Sequence

<400> 1638

Ala Ala Ser  
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<210> 1639

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<212> DNA

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<220>

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<400> 1639

caacagagtt acagtacccc tccgatcacc

30

<210> 1640

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1640

Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr  
1 5 10

<210> 1641

<211> 369

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1641

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ccagggaagg gcctggagtg ggtctcaggt attagttgga atagtggtag tataggctat 180

gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa gtccctgtat 240

ctgcaaataa acagtctgag agctgaggac acggccttgt attactgtgc aaaagataat 300

agtggctacg gtcactacta ctacggaatg gacgtctggg gccaaaggac cacggtcacc 360

gtcgctca 369

<210> 1642

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1642

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

| 10155001 Sequence |                   |                    |                    |                   |                   |                   |                    |                    |                   |                   |                   |                   |                    |                   |                   |  |  |  |  |
|-------------------|-------------------|--------------------|--------------------|-------------------|-------------------|-------------------|--------------------|--------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|--|--|--|--|
| 1                 |                   |                    |                    |                   | 5                 |                   |                    |                    |                   | 10                |                   |                   |                    |                   | 15                |  |  |  |  |
| Ser               | Leu               | Arg                | Leu <sub>20</sub>  | Ser               | Cys               | Ala               | Ala                | Ser <sub>25</sub>  | Gly               | Phe               | Thr               | Phe               | Asp <sub>30</sub>  | Asp               | Tyr               |  |  |  |  |
| Thr               | Met               | His <sub>35</sub>  | Trp                | Val               | Arg               | Gln               | Ala <sub>40</sub>  | Pro                | Gly               | Lys               | Gly               | Leu <sub>45</sub> | Glu                | Trp               | Val               |  |  |  |  |
| Ser               | Gly <sub>50</sub> | Ile                | Ser                | Trp               | Asn               | Ser <sub>55</sub> | Gly                | Ser                | Ile               | Gly               | Tyr <sub>60</sub> | Ala               | Asp                | Ser               | Val               |  |  |  |  |
| Lys <sub>65</sub> | Gly               | Arg                | Phe                | Thr               | Ile <sub>70</sub> | Ser               | Arg                | Asp                | Asn               | Ala <sub>75</sub> | Lys               | Lys               | Ser                | Leu               | Tyr <sub>80</sub> |  |  |  |  |
| Leu               | Gln               | Met                | Asn                | Ser <sub>85</sub> | Leu               | Arg               | Ala                | Glu                | Asp <sub>90</sub> | Thr               | Ala               | Leu               | Tyr                | Tyr <sub>95</sub> | Cys               |  |  |  |  |
| Ala               | Lys               | Asp                | Asn <sub>100</sub> | Ser               | Gly               | Tyr               | Gly                | His <sub>105</sub> | Tyr               | Tyr               | Tyr               | Gly               | Met <sub>110</sub> | Asp               | Val               |  |  |  |  |
| Trp               | Gly               | Gln <sub>115</sub> | Gly                | Thr               | Thr               | Val               | Thr <sub>120</sub> | Val                | Ala               | Ser               |                   |                   |                    |                   |                   |  |  |  |  |

|       |                     |
|-------|---------------------|
| <210> | 1643                |
| <211> | 24                  |
| <212> | DNA                 |
| <213> | Artificial Sequence |

<220>  
<223> synthetic

<400> 1643  
ggattcacct ttgatgatta tacc

24

|       |                     |
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| <210> | 1644                |
| <211> | 8                   |
| <212> | PRT                 |
| <213> | Artificial Sequence |

<220>  
<223> synthetic

<400> 1644

Gly Phe Thr Phe Asp Asp Tyr Thr  
1 5

|       |                     |
|-------|---------------------|
| <210> | 1645                |
| <211> | 24                  |
| <212> | DNA                 |
| <213> | Artificial Sequence |

<220>  
<223> synthetic

<400> 1645  
attagttgga atagtggtag tata

24

# 10295w002-Sequence

<210> 1646  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1646

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 1647  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1647  
gcaaaagata atagtggcta cggtcactac tactacggaa tggacgtc

48

<210> 1648  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1648

Ala Lys Asp Asn Ser Gly Tyr Gly His Tyr Tyr Tyr Gly Met Asp Val  
1 5 10 15

<210> 1649  
<211> 320  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1649  
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ctctcctgca gggccagtca gagtgttagc agcaacttag cctggtacca gcaaaaacct 120  
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180  
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240  
gaagattttg cagtttatta ctgtcagcac tatattaact ggcctctcac tttcggcgga 300  
gggaccaagg tggagatcaa 320

<210> 1650  
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<212> PRT  
<213> Artificial Sequence

10295w002-Sequence

<220>

<223> synthetic

<400> 1650

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

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

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

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

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

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

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

<210> 1651

<211> 18

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<220>

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<400> 1651

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18

<210> 1652

<211> 6

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<213> Artificial Sequence

<220>

<223> synthetic

<400> 1652

Gln Ser Val Ser Ser Asn  
1 5

<210> 1653

<211> 9

<212> DNA

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<400> 1653



ggtgcatcc

<210> 1654  
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<220>  
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&lt;400&gt; 1654

Gly Ala Ser  
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<210> 1655  
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<220>  
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<400> 1655  
 cagcactata ttaactggcc tctcact

27

<210> 1656  
 <211> 9  
 <212> PRT  
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<220>  
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&lt;400&gt; 1656

Gln His Tyr Ile Asn Trp Pro Leu Thr  
 1 5

<210> 1657  
 <211> 369  
 <212> DNA  
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<220>  
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<400> 1657  
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 ccagggaagg gcctggagtg ggtctcaggt atcagttgga atagtggtag cataggctat 180  
 gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
 ctgcaaatga acagtctgag agctgaggac acggccttgt actactgtgc aaaagataat 300  
 agtggctacg gctattatta ctacggtatg gacgtctggg gccaaaggac cacggtcacc 360  
 gtctcctca 369

&lt;210&gt; 1658

10295w002-Sequence

<211> 123  
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<220>  
<223> synthetic

<400> 1658

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Ile Gly Tyr Val 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 Asn Ser Gly Tyr Gly Tyr Tyr Tyr Tyr Gly Met Asp Val  
100 105 110

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

<210> 1659  
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<220>  
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<400> 1659

ggattcacct ttgatgattt tacc

24

<210> 1660  
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<400> 1660

Gly Phe Thr Phe Asp Asp Phe Thr  
1 5

<210> 1661

10295w002-Sequence

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<400> 1661  
atcagttgga atagtggtag cata

24

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<211> 8  
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<400> 1662

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 1663  
<211> 48  
<212> DNA  
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<400> 1663  
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48

<210> 1664  
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<400> 1664

Ala Lys Asp Asn Ser Gly Tyr Gly Tyr Tyr Tyr Gly Met Asp Val  
1 5 10 15

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<400> 1665  
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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc  
aggttcagtg gcagtgggtc tgggacagaa ttactctca ccatcagcag cctgcagtct

60

120

180

240

10295w002-Sequence

gaagattttg caatttatta ctgtcagcag tataataatt ggcctctcac tttcggcgga 300  
gggaccaagg tggagatcaa a 321

<210> 1666  
<211> 107  
<212> PRT  
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<220>  
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<400> 1666

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser His Ser Val Ser Arg Asn  
20 25 30

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

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

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

Glu Asp Phe Ala Ile Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu  
85 90 95

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

<210> 1667  
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<220>  
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<400> 1667

cacagtgtta gcaggaac 18

<210> 1668  
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<220>  
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<400> 1668

His Ser Val Ser Arg Asn  
1 5

# 10295w002-Sequence

<210> 1669  
<211> 9  
<212> DNA  
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<220>  
<223> synthetic

<400> 1669  
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9

<210> 1670  
<211> 3  
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<220>  
<223> synthetic

<400> 1670

Gly Ala Ser  
1

<210> 1671  
<211> 27  
<212> DNA  
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<400> 1671  
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27

<210> 1672  
<211> 9  
<212> PRT  
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<400> 1672

Gln Gln Tyr Asn Asn Trp Pro Leu Thr  
1 5

<210> 1673  
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<212> DNA  
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<220>  
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<400> 1673  
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ccagggaagg gcctggagtg ggtctcaggt attagttgga atagtggtag tataggctat

60

120

180

10295w002-Sequence

gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa gtcctgtat 240  
 ctgcaaatga acagtctgag agctgaggac acggccttgt attactgtgc aaaagataat 300  
 agtggctacg gtcactacta ctacggaatg gacgtctggg gccaagggac cacggtcacc 360  
 gtcgcctca 369

<210> 1674  
 <211> 123  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1674

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

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

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

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

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

Trp Gly Gln Gly Thr Thr Val Thr Val Ala Ser  
 115 120

<210> 1675  
 <211> 24  
 <212> DNA  
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<220>  
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<400> 1675

ggattcacct ttgatgatta tacc 24

<210> 1676  
 <211> 8  
 <212> PRT  
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10295w002-Sequence

<220>  
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<400> 1676

Gly Phe Thr Phe Asp Asp Tyr Thr  
1 5

<210> 1677  
<211> 24  
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<220>  
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<400> 1677  
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24

<210> 1678  
<211> 8  
<212> PRT  
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<220>  
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<400> 1678

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 1679  
<211> 48  
<212> DNA  
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<220>  
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<400> 1679  
gcaaaagata atagtggcta cggtcactac tactacggaa tggacgtc

48

<210> 1680  
<211> 16  
<212> PRT  
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<220>  
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<400> 1680

Ala Lys Asp Asn Ser Gly Tyr Gly His Tyr Tyr Tyr Gly Met Asp Val  
1 5 10 15

<210> 1681  
<211> 321  
<212> DNA  
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<220>  
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10295w002-Sequence

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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180  
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240  
gaagattttg cagtttatta ctgtcagcac tatattaact ggcctctcac tttcggcgga 300  
gggaccaagg tggagatcaa a 321

<210> 1682  
<211> 107  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1682

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Tyr Ile Asn Trp Pro Leu  
85 90 95

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

<210> 1683  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1683

cagagtgtta gcagcaac 18

<210> 1684  
<211> 6  
<212> PRT



<213> Artificial Sequence

<220>

<223> synthetic

<400> 1684

Gln Ser Val Ser Ser Asn  
1 5

<210> 1685

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1685

ggtgcatcc

9

<210> 1686

<211> 3

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1686

Gly Ala Ser  
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<210> 1687

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1687

cagcactata ttaactggcc tctcact

27

<210> 1688

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1688

Gln His Tyr Ile Asn Trp Pro Leu Thr  
1 5

<210> 1689

<211> 354

<212> DNA

<213> Artificial Sequence

## 10295w002-Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1689

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ccaggcaagg ggctggagtg ggtggcaatg gtatactatg atggaaataa tcaatactat      180
gcagactccg tgagggggccg attcaccatc tccagagaca attccaagaa cacgctgtat      240
ctgcaaatga acagcctgag agccgatgac acggctgtgt atttctgtgc gcgagggcct      300
gggtacaact ggctcgaccc ctggggccag ggaaccctgg tcaccgtctc ctca          354

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&lt;210&gt; 1690

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1690

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 Arg Ser Tyr  
20 25 30

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

Ala Met Val Tyr Tyr Asp Gly Asn Asn Gln Tyr Tyr Ala Asp Ser Val  
50 55 60

Arg 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 Asp Asp Thr Ala Val Tyr Phe Cys  
85 90 95

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
100 105 110

Leu Val Thr Val Ser Ser  
115

&lt;210&gt; 1691

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1691

ggatttacct tcagaagtta tgcc

<210> 1692  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1692

Gly Phe Thr Phe Arg Ser Tyr Ala  
 1 5

<210> 1693  
 <211> 24  
 <212> DNA  
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<220>  
 <223> synthetic

<400> 1693

gtatactatg atggaaataa tcaa

<210> 1694  
 <211> 8  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 1694

Val Tyr Tyr Asp Gly Asn Asn Gln  
 1 5

<210> 1695  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1695

gcgcgagggc ctgggtacaa ctggctcgac ccc

<210> 1696  
 <211> 11  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 1696

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro  
 1 5 10

# 10295w002-Sequence

<210> 1697  
<211> 321  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1697  
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ggccaggctc ccaggctcct catctatggg gcatccacca gggccactgg tatcccggcc 180  
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctgcagtct 240  
gaagattttg cagtttatta ctgtcagcag tataataact ggcctctcac tttcggcgga 300  
gggaccaagg tggatgatcaa a 321

<210> 1698  
<211> 107  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1698

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

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

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

Tyr Gly Ala Ser Thr 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 Gln Ser  
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu  
85 90 95

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

<210> 1699  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

10295w002-Sequence

<400> 1699  
cagagtgtta gcaggaac

18

<210> 1700  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1700

Gln Ser Val Ser Arg Asn  
1 5

<210> 1701  
<211> 9  
<212> DNA  
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<220>  
<223> synthetic

<400> 1701  
ggtgcatcc

9

<210> 1702  
<211> 3  
<212> PRT  
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<220>  
<223> synthetic

<400> 1702

Gly Ala Ser  
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<210> 1703  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1703  
cagcagtata ataactggcc tctcact

27

<210> 1704  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1704

Gln Gln Tyr Asn Asn Trp Pro Leu Thr

## 10295w002-Sequence

1

5

<210> 1705  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
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 gcagactccg tgaggggccg attcaccatc tccagagaca attccaagaa cacactgtat 240  
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<210> 1706  
 <211> 118  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1706

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

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

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

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

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

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

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro Trp Gly Gln Gly Thr  
 100 105 110

Leu Val Thr Val Ser Ser  
 115

<210> 1707

10295w002-Sequence

<211> 24  
<212> DNA  
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<220>  
<223> synthetic

<400> 1707  
ggattcacct tcagaagtta tggc

24

<210> 1708  
<211> 8  
<212> PRT  
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<220>  
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<400> 1708

Gly Phe Thr Phe Arg Ser Tyr Gly  
1 5

<210> 1709  
<211> 24  
<212> DNA  
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<220>  
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<400> 1709  
atttactatg atggaagaa taaa

24

<210> 1710  
<211> 8  
<212> PRT  
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<220>  
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<400> 1710

Ile Tyr Tyr Asp Gly Lys Asn Lys  
1 5

<210> 1711  
<211> 33  
<212> DNA  
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<220>  
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<400> 1711  
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33

<210> 1712  
<211> 11  
<212> PRT  
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10295w002-Sequence

<220>  
<223> synthetic

<400> 1712

Ala Arg Gly Pro Gly Tyr Asn Trp Leu Asp Pro  
1 5 10

<210> 1713  
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<400> 1713

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ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tagcccagcc 180  
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctgcagtct 240  
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gggaccaagg tgagatcaa a 321

<210> 1714  
<211> 107  
<212> PRT  
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<220>  
<223> synthetic

<400> 1714

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Ile Ser Ser Asn  
20 25 30

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

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

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

Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln His His Asn Trp Pro Leu  
85 90 95

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



10295w002-Sequence

<210> 1715  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1715  
 cagagaatta gcagcaac

18

<210> 1716  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1716

Gln Arg Ile Ser Ser Asn  
 1 5

<210> 1717  
 <211> 9  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1717  
 ggtgcatcc

9

<210> 1718  
 <211> 3  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1718

Gly Ala Ser  
 1

<210> 1719  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1719  
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27

<210> 1720  
 <211> 9  
 <212> PRT

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1720

Gln Gln His His Asn Trp Pro Leu Thr  
1 5

&lt;210&gt; 1721

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1721

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

&lt;210&gt; 1722

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1722

Gly Tyr Thr Phe Thr Arg Tyr Thr  
1 5

&lt;210&gt; 1723

## 10295w002-Sequence

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

<220>  
 <223> synthetic

<400> 1723

Ile Asn Pro Ser Arg Gly Tyr Thr  
 1 5

<210> 1724  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1724

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr  
 1 5 10

<210> 1725  
 <211> 106  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1725

Asp 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 Tyr Met  
 20 25 30

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

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

Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Asn Ser Leu Glu Ala Glu  
 65 70 75 80

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

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

<210> 1726  
 <211> 11  
 <212> PRT

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1726

Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Tyr  
 1 5 10

&lt;210&gt; 1727

&lt;211&gt; 3

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1727

Asp Thr Ser  
 1

&lt;210&gt; 1728

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1728

Gln Gln Trp Ser Ser Asn Pro Leu Thr  
 1 5

&lt;210&gt; 1729

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1729

|                                                                   |     |
|-------------------------------------------------------------------|-----|
| gaagtacagc ttgtagaatc cggcggagga ctggtacaac ctggaagaag tcttagactg | 60  |
| agttgcgag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct  | 120 |
| cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag caagggatac  | 180 |
| gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac | 240 |
| cttcaaatga actctcttag ggcagaagac acagcattgt attattgcg aaatacggc   | 300 |
| agtggttatg gcaagtttta tcattatgga ctggacgtgt ggggacaagg gacaacagt  | 360 |
| acagtga gta gc                                                    | 372 |

&lt;210&gt; 1730

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

10295w002-Sequence

<220>

<223> synthetic

<400> 1730

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Lys 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 Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
100 105 110

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

<210> 1731

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1731

gggtttacat tcgacgatta cagc

24

<210> 1732

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1732

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1733

<211> 24

<212> DNA

<213> Artificial Sequence

10295w002-Sequence

<220>  
 <223> synthetic  
 <400> 1733  
 atatcatgga actcaggaag caag 24

<210> 1734  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1734

Ile Ser Trp Asn Ser Gly Ser Lys  
 1 5

<210> 1735  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1735  
 gcaaaatagc gcagtgggta tggcaagttt tatcattatg gactggacgt g 51

<210> 1736  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1736

Ala Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
 1 5 10 15

Val

<210> 1737  
 <211> 372  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1737  
 gaagtacagt tggtagaatc tggaggagga ctcgtgcaac caggacgatc attgcggttg 60  
 agttgtgctg ctagtggatt cacattcgac gactatgcta tgcattgggt aagacaggct 120  
 ccaggaaaag gactcgaatg ggtgtcagga ataagttgga actccggaag cattgggtac 180  
 gcagattcag tcaaagggcg attcaccata tcccagagata acgctaagaa ctactttac 240

10295w002-Sequence

cttcaaataga actctcttcg agcagaggac actgcacttt attattgcgc taaggacggc 300  
tccggttatg gatattttta ttattatgga atggacgtat ggggacaagg cactactgtt 360  
accgttagtt cc 372

<210> 1738  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1738

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp 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 Gly Ile Ser Trp Asn Ser Gly Ser 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 Gly Ser Gly Tyr Gly Tyr Phe Tyr Tyr Tyr Gly Met Asp  
100 105 110

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

<210> 1739  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1739

ggattcacat tcgacgacta tgct 24

<210> 1740  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

10295w002-Sequence

<400> 1740

Gly Phe Thr Phe Asp Asp Tyr Ala  
1 5

<210> 1741

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1741

ataagttgga actccggaag catt

24

<210> 1742

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1742

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 1743

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1743

gctaaggacg gctccggtta tggatatattt tattattatg gaatggacgt a

51

<210> 1744

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1744

Ala Lys Asp Gly Ser Gly Tyr Gly Tyr Phe Tyr Tyr Tyr Gly Met Asp  
1 5 10 15

Val

<210> 1745

<211> 372

<212> DNA

<213> Artificial Sequence



10295w002-Sequence

<220>

<223> synthetic

<400> 1745

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tcttgtgccg cttctggttt cactttcgac gattatagca tgcattgggt acgacaggct      120
cccggaaaag ggctggaatg ggtgtcagga attagttgga actcaggaag tattggatac      180
gctgattcag tcaaaggacg cttcacaatc tcaagggaca acgctaaaaa ctcactttat      240
ttgcaaatga actctctccg cgctgaagat accgctctct attattgcg caaagatggg      300
tctggttacg gttattttta ctactatgga atggacgttt ggggccaagg aacaactgtc      360
acagtatcat cc                                                                372

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<210> 1746

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1746

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser 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 Gly Ser Gly Tyr Gly Tyr Phe Tyr Tyr Tyr Gly Met Asp
          100          105          110

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

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<210> 1747

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

10295w002-Sequence

<400> 1747  
ggtttcactt tcgacgatta tagc 24

<210> 1748  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1748  
Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1749  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1749  
attagttgga actcaggaag tatt 24

<210> 1750  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1750  
Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 1751  
<211> 51  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1751  
gccaaagatg ggtctggtta cggttatttt tactactatg gaatggacgt t 51

<210> 1752  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1752  
Ala Lys Asp Gly Ser Gly Tyr Gly Tyr Phe Tyr Tyr Tyr Gly Met Asp

1

5

10

15

val

&lt;210&gt; 1753

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1753

gaagttcaac ttgtggaaag tggcggagga ttggttcaac caggacgttc attgaggctt 60

tcattgacgag cttccggatt tacatttgac gattacgcaa tgcactgggt tagacaggca 120

ccaggaaaag gactggagtg ggtgagcggg atttcatgga acagcggcag tatcggttat 180

gcagactcag ttaaaggaag attcaccatc agtagagaca acgcaaaaaa ttccctttat 240

ctccaaatga actctcttag ggccgaagat acagcattgt actactgcdc aaaagacgga 300

tcagggttacg gaaaatttta ctactatggt atggatgtat ggggtcaggg aaccacagta 360

actgtatcaa gc 372

&lt;210&gt; 1754

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1754

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

10295w002-Sequence

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

<210> 1755  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1755  
 ggatttacat ttgacgatta cgca

24

<210> 1756  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1756

Gly Phe Thr Phe Asp Asp Tyr Ala  
 1 5

<210> 1757  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1757  
 atttcatgga acagcggcag tatc

24

<210> 1758  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1758

Ile Ser Trp Asn Ser Gly Ser Ile  
 1 5

<210> 1759  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1759  
 gcaaaagacg gatcaggtta cggaattt tactactatg gtatggatgt a

51

# 10295w002-Sequence

<210> 1760  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1760

Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
 1 5 10 15

Val

<210> 1761  
 <211> 372  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1761

|            |            |            |             |             |            |     |
|------------|------------|------------|-------------|-------------|------------|-----|
| gaagtgcac  | tcgttgaaag | cggaggagga | ctgggtccagc | ccggcagatc  | tctcagattg | 60  |
| tcttgcgctg | catccggatt | tacatttgac | gactattcaa  | tgactgggt   | acggcaagcc | 120 |
| ccaggtaaag | gactcgaatg | ggtaagcggc | atatcttgga  | actcaggcag  | tattggctac | 180 |
| gcagattcag | taaaaggaag | attcactatt | tcaagggata  | atgctaagaa  | cagtctctac | 240 |
| ttgcaaatga | atagcttgcg | cgcagaagat | acagcacttt  | attattgtgc  | aaaagatgga | 300 |
| agcggttatg | ggaaatttta | ttattatggt | atggatgtat  | gggggtcaagg | tacaacagtt | 360 |
| actgtgtcaa | gt         |            |             |             |            | 372 |

<210> 1762  
 <211> 124  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1762

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

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

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

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

# 10295w002-Sequence

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 Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
100 105 110

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

<210> 1763  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1763  
ggatttacat ttgacgacta ttca

24

<210> 1764  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1764

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1765  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1765  
atatcttgga actcaggcag tatt

24

<210> 1766  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1766

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

# 10295w002-Sequence

<210> 1767  
<211> 51  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1767  
gcaaaagatg gaagcgggta tgggaaattt tattattatg gtatggatgt a 51

<210> 1768  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1768  
Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
1 5 10 15

Val

<210> 1769  
<211> 372  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1769  
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cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag catcggatac 180  
gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
cttcaaata actctcttag ggcagaagac acagcattgt attattgctc aaaatacggc 300  
agtgggttatg gcaagtttta tcattatgga ctggacgtgt ggggacaagg gacaacagtg 360  
acagtga gta gc 372

<210> 1770  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1770  
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg  
1 5 10 15

10295w002-Sequence

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser 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 Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
100 105 110

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

<210> 1771  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1771  
gggtttacat tgcacgatta cagc

24

<210> 1772  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1772

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1773  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1773  
atatcatgga actcaggaag catc

24

<210> 1774



## 10295w002-Sequence

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

<220>  
 <223> synthetic

<400> 1774

Ile Ser Trp Asn Ser Gly Ser Ile  
 1 5

<210> 1775  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1775  
 gcaaaatacg gcagtgggta tggcaagttt tatcattatg gactggacgt g 51

<210> 1776  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1776

Ala Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
 1 5 10 15

Val

<210> 1777  
 <211> 372  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1777  
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 cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag caagggatac 180  
 gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
 cttcaaatga actctcttag ggcagaagac acagcattgt attattgcgc aaaagacggc 300  
 agtgggttatg gcaagtttta tcattatgga ctggacgtgt ggggacaagg gacaacagtg 360  
 acagtgagta gc 372

<210> 1778

10295w002-Sequence

<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1778

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Lys 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 Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
100 105 110

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

<210> 1779  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1779

gggtttacat tgcacgatta cagc

24

<210> 1780  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1780

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1781

10295w002-Sequence

<211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1781  
 atatcatgga actcaggaag caag

24

<210> 1782  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1782

Ile Ser Trp Asn Ser Gly Ser Lys  
 1 5

<210> 1783  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1783  
 gcaaaagacg gcagtgggta tggcaagttt tatcattatg gactggacgt g

51

<210> 1784  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1784

Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
 1 5 10 15

Val

<210> 1785  
 <211> 372  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1785  
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60

agttgcgcag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct

120

10295W002-Sequence

cctggtaaag gattggaatg ggttagcggg atatcatgga actcaggaag caagggatac 180  
gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
cttcaaataga actctcttag ggcagaagac acagcattgt attattgcgc aaaatacggc 300  
agtgggttatg gcaagtttta ttattatgga ctggacgtgt ggggacaagg gacaacagtg 360  
acagtgagta gc 372

<210> 1786  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1786

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

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

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

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

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

<210> 1787  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1787

gggtttacat tcgacgatta cagc

24

<210> 1788  
<211> 8  
<212> PRT

10295w002-Sequence

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1788

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1789

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1789

atatcatgga actcaggaag caag

24

<210> 1790

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1790

Ile Ser Trp Asn Ser Gly Ser Lys  
1 5

<210> 1791

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1791

gcaaaatagc gcagtgggta tggcaagttt tattattatg gactggacgt g

51

<210> 1792

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1792

Ala Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Leu Asp  
1 5 10 15

val

<210> 1793

# 10295w002-Sequence

<211> 372  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1793  
gaagtacagc ttgtagaatc cggcggagga ctggtacaac ctggaagaag tcttagactg 60  
agttgcgcag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct 120  
cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag caagggatac 180  
gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
cttcaaataa actctcttag ggcagaagac acagcattgt attattgcgc aaaatacggc 300  
agtggttatg gcaagtttta tcattatgga atggacgtgt ggggacaagg gacaacagtg 360  
acagtgagta gc 372

<210> 1794  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1794

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Lys 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 Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Met Asp  
100 105 110

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

<210> 1795  
<211> 24  
<212> DNA

10295w002-Sequence

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1795

gggtttacat tcgacgatta cagc

24

<210> 1796

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1796

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1797

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1797

atatcatgga actcaggaag caag

24

<210> 1798

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1798

Ile Ser Trp Asn Ser Gly Ser Lys  
1 5

<210> 1799

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1799

gcaaaatacg gcagtgggta tggcaagttt tatcattatg gaatggacgt g

51

<210> 1800

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

# 10295w002-Sequence

<400> 1800

Ala Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Met Asp  
1 5 10 15

Val

<210> 1801

<211> 372

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1801

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| gaagtacagc ttgtagaatc cggcggagga ctggtacaac ctggaagaag tcttagactg  | 60  |
| agttgcgcag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct  | 120 |
| cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag catcggatac   | 180 |
| gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac  | 240 |
| cttcaaata gaactctcttag ggcagaagac acagcattgt attattgcgc aaaagacggc | 300 |
| agtgggttatg gcaagtttta tcattatgga ctggacgtgt ggggacaagg gacaacagtg | 360 |
| acagtga gta gc                                                     | 372 |

<210> 1802

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1802

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser 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



# 10295w002-Sequence

Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
100 105 110

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

<210> 1803  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1803  
gggtttacat tcgacgatta cagc

24

<210> 1804  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1804

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1805  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1805  
atatcatgga actcaggaag catc

24

<210> 1806  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1806

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 1807  
<211> 51  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

10295w002-Sequence

<400> 1807  
gcaaaagacg gcagtgggta tggcaagttt tatcattatg gactggacgt g 51

<210> 1808  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1808  
Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
1 5 10 15

Val

<210> 1809  
<211> 372  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1809  
gaagtacagc ttgtagaatc cggcggagga ctggtacaac ctggaagaag tcttagactg 60  
agttgcgcag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct 120  
cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag catcggatac 180  
gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
cttcaaata gaactctcttag ggcagaagac acagcattgt attattgcgc aaaatacggc 300  
agtgggttatg gcaagtttta ttattatgga ctggacgtgt ggggacaagg gacaacagtg 360  
acagtga gta gc 372

<210> 1810  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1810  
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg  
1 5 10 15

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

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

10295w002-Sequence

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

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

<210> 1811  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1811  
gggtttacat tcgacgatta cagc

24

<210> 1812  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1812

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1813  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1813  
atatcatgga actcaggaag catc

24

<210> 1814  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1814

10295w002-Sequence

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 1815  
<211> 51  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1815  
gcaaaatacg gcagtgggta tggcaagttt tattattatg gactggacgt g 51

<210> 1816  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1816  
Ala Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Leu Asp  
1 5 10 15

val

<210> 1817  
<211> 372  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1817  
gaagtacagc ttgtagaatc cggcggagga ctggtacaac ctggaagaag tcttagactg 60  
agttgcgcag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct 120  
cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag catcggatac 180  
gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
cttcaaata gaactctcttag ggcagaagac acagcattgt attattgcgc aaaatacggc 300  
agtgggttatg gcaagtttta tcattatgga atggacgtgt ggggacaagg gacaacagtg 360  
acagtgagta gc 372

<210> 1818  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1818

10295w002-Sequence

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser 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 Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Met Asp  
100 105 110

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

<210> 1819  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1819  
gggtttacat tcgacgatta cagc

24

<210> 1820  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1820

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1821  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1821

atatcatgga actcaggaag catc

24

<210> 1822  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1822

Ile Ser Trp Asn Ser Gly Ser Ile  
 1 5

<210> 1823  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1823

gcaaaatacg gcagtgggta tggcaagttt tatcattatg gaatggacgt g

51

<210> 1824  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1824

Ala Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Met Asp  
 1 5 10 15

Val

<210> 1825  
 <211> 372  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1825

gaagtacagc ttgtagaatc cggcggagga ctggtacaac ctggaagaag tcttagactg 60

agttgcgcag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct 120

cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag caagggatac 180

gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240

cttcaaatga actctcttag ggcagaagac acagcattgt attattgcgc aaaagacggc 300

agtggttatg gcaagtttta ttattatgga ctggacgtgt ggggacaagg gacaacagtg 360

acagtgagta gc

<210> 1826  
 <211> 124  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

&lt;400&gt; 1826

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

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

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

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

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

<210> 1827  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

&lt;400&gt; 1827

gggtttacat tcgacgatta cagc

24

<210> 1828  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

&lt;400&gt; 1828

Gly Phe Thr Phe Asp Asp Tyr Ser

10295w002-Sequence

1

5

<210> 1829  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1829  
atatcatgga actcaggaag caag

24

<210> 1830  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1830

Ile Ser Trp Asn Ser Gly Ser Lys  
1 5

<210> 1831  
<211> 51  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1831  
gcaaaagacg gcagtgggta tggcaagttt tattattatg gactggacgt g

51

<210> 1832  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1832

Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Leu Asp  
1 5 10 15

Val

<210> 1833  
<211> 372  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1833



10295w002-Sequence

gaagtacagc ttgtagaatc cggcggagga ctggtacaac ctggaagaag tcttagactg 60  
 agttgcgag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct 120  
 cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag caagggatac 180  
 gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
 cttcaaata ga actctcttag ggcagaagac acagcattgt attattgcg aaaagacggc 300  
 agtgggttatg gcaagtttta tcattatgga atggacgtgt ggggacaagg gacaacagtg 360  
 acagtgagta gc 372

<210> 1834  
 <211> 124  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1834

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Lys 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 Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Met Asp  
 100 105 110

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

<210> 1835  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1835

gggtttacat tcgacgatta cagc

24

10295w002-Sequence

<210> 1836  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1836

Gly Phe Thr Phe Asp Asp Tyr Ser  
 1 5

<210> 1837  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1837  
 atatcatgga actcaggaag caag

24

<210> 1838  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1838

Ile Ser Trp Asn Ser Gly Ser Lys  
 1 5

<210> 1839  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1839  
 gcaaaagacg gcagtgggta tggcaagttt tatcattatg gaatggacgt g

51

<210> 1840  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1840

Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Met Asp  
 1 5 10 15

Val

# 10295w002-Sequence

<210> 1841  
<211> 372  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1841  
gaagtacagc ttgtagaatc cggcggagga ctggtacaac ctggaagaag tcttagactg 60  
agttgcgcag ctagtggggt tacattcgac gattacagca tgcattgggt gaggcaagct 120  
cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag caagggatac 180  
gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
cttcaaataa actctcttag ggcagaagac acagcattgt attattgcgc aaaatacggc 300  
agtggttatg gcaagtttta ttattatgga atggacgtgt ggggacaagg gacaacagtg 360  
acagtgagta gc 372

<210> 1842  
<211> 124  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1842

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg  
1 5 10 15  
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr  
20 25 30  
Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45  
Ser Gly Ile Ser Trp Asn Ser Gly Ser Lys 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 Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
100 105 110  
Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

10295w002-Sequence

<210> 1843  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1843  
 gggtttacat tcgacgatta cagc

24

<210> 1844  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1844

Gly Phe Thr Phe Asp Asp Tyr Ser  
 1 5

<210> 1845  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1845  
 atatcatgga actcaggaag caag

24

<210> 1846  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1846

Ile Ser Trp Asn Ser Gly Ser Lys  
 1 5

<210> 1847  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1847  
 gcaaaatagc gcagtgggta tggcaagttt tattattatg gaatggacgt g

51

<210> 1848  
 <211> 17  
 <212> PRT

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1848

Ala Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
 1 5 10 15

Val

&lt;210&gt; 1849

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1849

gaagtacagc ttgtagaatc cggcggagga ctggtacaac ctggaagaag tcttagactg 60  
 agttgcgcag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct 120  
 cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag catcggatac 180  
 gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
 cttcaaataa actctcttag ggcagaagac acagcattgt attattgcgc aaaagacggc 300  
 agtgggttatg gcaagtttta ttattatgga ctggacgtgt ggggacaagg gacaacagtg 360  
 acagtgagta gc 372

&lt;210&gt; 1850

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1850

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser 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

10295w002-Sequence

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

Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Leu Asp  
100 105 110

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

<210> 1851  
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24

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Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

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<400> 1853  
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24

<210> 1854  
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<223> synthetic

<400> 1854

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 1855  
<211> 51  
<212> DNA

10295w002-Sequence

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1855

gcaaaagacg gcagtgggta tggcaagttt tattattatg gactggacgt g

51

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<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1856

Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Leu Asp  
1 5 10 15

Val

<210> 1857

<211> 372

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1857

gaagtacagc ttgtagaatc cggcggagga ctggtacaac ctggaagaag tcttagactg 60

agttgcgag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct 120

cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag catcggatac 180

gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240

cttcaaata actctcttag ggcagaagac acagcattgt attattgagc aaaagacggc 300

agtgggtatg gcaagtttta tcattatgga atggacgtgt ggggacaagg gacaacagtg 360

acagtga gta gc 372

<210> 1858

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1858

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

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

# 10295w002-Sequence

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser 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 Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Met Asp  
100 105 110

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

<210> 1859  
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<212> DNA  
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<220>  
<223> synthetic

<400> 1859  
gggtttacat tcgacgatta cagc

24

<210> 1860  
<211> 8  
<212> PRT  
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<220>  
<223> synthetic

<400> 1860

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1861  
<211> 24  
<212> DNA  
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<220>  
<223> synthetic

<400> 1861  
atatcatgga actcaggaag catc

24

<210> 1862  
<211> 8  
<212> PRT  
<213> Artificial Sequence



10295w002-Sequence

<220>  
<223> synthetic  
<400> 1862

Ile Ser Trp Asn Ser Gly Ser Ile  
1 5

<210> 1863  
<211> 51  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 1863  
gcaaaagacg gcagtgggta tggcaagttt tatcattatg gaatggacgt g 51

<210> 1864  
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<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1864  
Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Met Asp  
1 5 10 15

Val

<210> 1865  
<211> 372  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 1865  
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agttgcgag ctagtgggtt tacattcgac gattacagca tgcattgggt gaggcaagct 120  
cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag catcggatac 180  
gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240  
cttcaaatga actctcttag ggcagaagac acagcattgt attattgctc aaaatacggc 300  
agtgggttatg gcaagtttta ttattatgga atggacgtgt ggggacaagg gacaacagtg 360  
acagtgagta gc 372

<210> 1866  
<211> 124  
<212> PRT  
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10295w002-Sequence

<220>

<223> synthetic

<400> 1866

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser 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 Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
100 105 110

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

<210> 1867

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1867

gggtttacat tcgacgatta cagc

24

<210> 1868

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1868

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1869

<211> 24

<212> DNA

<213> Artificial Sequence

10295w002-Sequence

<220>  
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 <400> 1869  
 atatcatgga actcaggaag catc 24

<210> 1870  
 <211> 8  
 <212> PRT  
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<220>  
 <223> synthetic

<400> 1870

Ile Ser Trp Asn Ser Gly Ser Ile  
 1 5

<210> 1871  
 <211> 51  
 <212> DNA  
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<400> 1871  
 gcaaaatagc gcagtgggta tggcaagttt tattattatg gaatggacgt g 51

<210> 1872  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1872

Ala Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
 1 5 10 15

Val

<210> 1873  
 <211> 372  
 <212> DNA  
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<220>  
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<400> 1873  
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 cctggtaaag gattggaatg ggtagcggg atatcatgga actcaggaag caagggatac 180  
 gccgacagcg tgaaaggccg atttacaata tctagggaca acgcaaaaaa ctctctctac 240

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cttcaaata gga actctcttag ggcagaagac acagcattgt attattgctc aaaagacggc 300  
 agtgggttatg gcaagtttta ttattatgga atggacgtgt ggggacaagg gacaacagtg 360  
 acagtga gta gc 372

<210> 1874  
 <211> 124  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1874

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Lys 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 Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
 100 105 110

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

<210> 1875  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1875

gggtttacat tcgacgatta cagc 24

<210> 1876  
 <211> 8  
 <212> PRT  
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<220>  
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10295w002-Sequence

<400> 1876

Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1877

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1877

atatcatgga actcaggaag caag

24

<210> 1878

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1878

Ile Ser Trp Asn Ser Gly Ser Lys  
1 5

<210> 1879

<211> 51

<212> DNA

<213> Artificial Sequence

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<223> synthetic

<400> 1879

gcaaaagacg gcagtgggta tggcaagttt tattattatg gaatggacgt g

51

<210> 1880

<211> 17

<212> PRT

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<400> 1880

Ala Lys Asp Gly Ser Gly Tyr Gly Lys Phe Tyr Tyr Tyr Gly Met Asp  
1 5 10 15

Val

<210> 1881

<211> 372

<212> DNA

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10295w002-Sequence

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<223> synthetic

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ccaggggaagg gcctggagtg ggtctcaggt attagttgga atagtggtag caaagactat 180  
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
ctgcaaatga acagtctgag agctgaagac acggccttgt attactgtgc aaaatatgga 300  
agtggctacg ggaagttcta ccactacggt ttggacgtct ggggccaagg gaccacggtc 360  
accgtctcct ca 372

<210> 1882

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1882

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg  
1 5 10 15  
Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Thr Phe Asp Asp Tyr  
20 25 30  
Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45  
Ser Gly Ile Ser Trp Asn Ser Gly Ser Lys Asp 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 Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
100 105 110  
Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
115 120

<210> 1883

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

10295w002-Sequence

<400> 1883  
ggattcacct ttgatgatta ttcc 24

<210> 1884  
<211> 8  
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<220>  
<223> synthetic

<400> 1884  
Gly Phe Thr Phe Asp Asp Tyr Ser  
1 5

<210> 1885  
<211> 24  
<212> DNA  
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<220>  
<223> synthetic

<400> 1885  
attagttgga atagtggtag caaa 24

<210> 1886  
<211> 8  
<212> PRT  
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<220>  
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<400> 1886  
Ile Ser Trp Asn Ser Gly Ser Lys  
1 5

<210> 1887  
<211> 51  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 1887  
gcaaaatatg gaagtggtta cgggaagttc taccactacg gtttgacgt c 51

<210> 1888  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1888  
Ala Lys Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
Page 495

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1 5 10 15

val

<210> 1889  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1889  
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gggaaagccc ctaagctcct gatctatact gcatccagtt tgctaagtgg ggtcccttca 180  
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcgg tctgcaccct 240  
gaagattttg caacttactt ctgtcaacag agtttcagta cccctccgat caccttcggc 300  
caagggacac gactggacat taaa 324

<210> 1890  
<211> 108  
<212> PRT  
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<220>  
<223> synthetic

<400> 1890

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

Asp Ser Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asn Asn Tyr  
20 25 30

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

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

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

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

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

<210> 1891



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<211> 18  
<212> DNA  
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<220>  
<223> synthetic

<400> 1891  
cagagcatta acaactat

18

<210> 1892  
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<212> PRT  
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<220>  
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<400> 1892

Gln Ser Ile Asn Asn Tyr  
1 5

<210> 1893  
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<212> DNA  
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<220>  
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<400> 1893  
actgcatcc

9

<210> 1894  
<211> 3  
<212> PRT  
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<220>  
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<400> 1894

Thr Ala Ser  
1

<210> 1895  
<211> 30  
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<400> 1895  
caacagagtt tcagtacccc tccgatcacc

30

<210> 1896  
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<220>

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<400> 1896

Gln Gln Ser Phe Ser Thr Pro Pro Ile Thr  
1 5 10

<210> 1897

<211> 207

<212> PRT

<213> Artificial Sequence

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<223> synthetic

<400> 1897

Met Gln Ser Gly Thr His Trp Arg Val Leu Gly Leu Cys Leu Leu Ser  
1 5 10 15

Val Gly Val Trp Gly Gln Asp Gly Asn Glu Glu Met Gly Gly Ile Thr  
20 25 30

Gln Thr Pro Tyr Lys Val Ser Ile Ser Gly Thr Thr Val Ile Leu Thr  
35 40 45

Cys Pro Gln Tyr Pro Gly Ser Glu Ile Leu Trp Gln His Asn Asp Lys  
50 55 60

Asn Ile Gly Gly Asp Glu Asp Asp Lys Asn Ile Gly Ser Asp Glu Asp  
65 70 75 80

His Leu Ser Leu Lys Glu Phe Ser Glu Leu Glu Gln Ser Gly Tyr Tyr  
85 90 95

Val Cys Tyr Pro Arg Gly Ser Lys Pro Glu Asp Ala Asn Phe Tyr Leu  
100 105 110

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

Ser Val Ala Thr Ile Val Ile Val Asp Ile Cys Ile Thr Gly Gly Leu  
130 135 140

Leu Leu Leu Val Tyr Tyr Trp Ser Lys Asn Arg Lys Ala Lys Ala Lys  
145 150 155 160

Pro Val Thr Arg Gly Ala Gly Ala Gly Gly Arg Gln Arg Gly Gln Asn  
165 170 175

Lys Glu Arg Pro Pro Pro Val Pro Asn Pro Asp Tyr Glu Pro Ile Arg  
180 185 190

Lys Gly Gln Arg Asp Leu Tyr Ser Gly Leu Asn Gln Arg Arg Ile

195 10295w002-Sequence 200 205

<210> 1898  
 <211> 171  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1898

Met Glu His Ser Thr Phe Leu Ser Gly Leu Val Leu Ala Thr Leu Leu  
 1 5 10 15

Ser Gln Val Ser Pro Phe Lys Ile Pro Ile Glu Glu Leu Glu Asp Arg  
 20 25 30

Val Phe Val Asn Cys Asn Thr Ser Ile Thr Trp Val Glu Gly Thr Val  
 35 40 45

Gly Thr Leu Leu Ser Asp Ile Thr Arg Leu Asp Leu Gly Lys Arg Ile  
 50 55 60

Leu Asp Pro Arg Gly Ile Tyr Arg Cys Asn Gly Thr Asp Ile Tyr Lys  
 65 70 75 80

Asp Lys Glu Ser Thr Val Gln Val His Tyr Arg Met Cys Gln Ser Cys  
 85 90 95

Val Glu Leu Asp Pro Ala Thr Val Ala Gly Ile Ile Val Thr Asp Val  
 100 105 110

Ile Ala Thr Leu Leu Leu Ala Leu Gly Val Phe Cys Phe Ala Gly His  
 115 120 125

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

Asn Asp Gln Val Tyr Gln Pro Leu Arg Asp Arg Asp Asp Ala Gln Tyr  
 145 150 155 160

Ser His Leu Gly Gly Asn Trp Ala Arg Asn Lys  
 165 170

<210> 1899  
 <211> 14507  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1899

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

280

285

Ser Val Leu Asp Asn Lys Ile Ser Glu Thr Ser Ile Phe Ser Gly Gln  
290 295 300

Ser Leu Thr Ser Pro Leu Ser Pro Gly Val Pro Glu Ala Arg Ala Ser  
305 310 315 320

Thr Met Pro Asn Ser Ala Ile Pro Phe Ser Met Thr Leu Ser Asn Ala  
325 330 335

Glu Thr Ser Ala Glu Arg Val Arg Ser Thr Ile Ser Ser Leu Gly Thr  
340 345 350

Pro Ser Ile Ser Thr Lys Gln Thr Ala Glu Thr Ile Leu Thr Phe His  
355 360 365

Ala Phe Ala Glu Thr Met Asp Ile Pro Ser Thr His Ile Ala Lys Thr  
370 375 380

Leu Ala Ser Glu Trp Leu Gly Ser Pro Gly Thr Leu Gly Gly Thr Ser  
385 390 395 400

Thr Ser Ala Leu Thr Thr Thr Ser Pro Ser Thr Thr Leu Val Ser Glu  
405 410 415

Glu Thr Asn Thr His His Ser Thr Ser Gly Lys Glu Thr Glu Gly Thr  
420 425 430

Leu Asn Thr Ser Met Thr Pro Leu Glu Thr Ser Ala Pro Gly Glu Glu  
435 440 445

Ser Glu Met Thr Ala Thr Leu Val Pro Thr Leu Gly Phe Thr Thr Leu  
450 455 460

Asp Ser Lys Ile Arg Ser Pro Ser Gln Val Ser Ser Ser His Pro Thr  
465 470 475 480

Arg Glu Leu Arg Thr Thr Gly Ser Thr Ser Gly Arg Gln Ser Ser Ser  
485 490 495

Thr Ala Ala His Gly Ser Ser Asp Ile Leu Arg Ala Thr Thr Ser Ser  
500 505 510

Thr Ser Lys Ala Ser Ser Trp Thr Ser Glu Ser Thr Ala Gln Gln Phe  
515 520 525

Ser Glu Pro Gln His Thr Gln Trp Val Glu Thr Ser Pro Ser Met Lys  
530 535 540

Thr Glu Arg Pro Pro Ala Ser Thr Ser Val Ala Ala Pro Ile Thr Thr  
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## 10295w002-Sequence

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |     |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|
| 545        |            |            |            |            | 550        |            |            |            |            | 555        |            |            |            |            |            | 560 |
| Ser        | Val        | Pro        | Ser        | Val<br>565 | Val        | Ser        | Gly        | Phe        | Thr<br>570 | Thr        | Leu        | Lys        | Thr        | Ser<br>575 | Ser        |     |
| Thr        | Lys        | Gly        | Ile<br>580 | Trp        | Leu        | Glu        | Glu        | Thr<br>585 | Ser        | Ala        | Asp        | Thr        | Leu<br>590 | Ile        | Gly        |     |
| Glu        | Ser        | Thr<br>595 | Ala        | Gly        | Pro        | Thr        | Thr<br>600 | His        | Gln        | Phe        | Ala        | Val<br>605 | Pro        | Thr        | Gly        |     |
| Ile        | Ser<br>610 | Met        | Thr        | Gly        | Gly        | Ser<br>615 | Ser        | Thr        | Arg        | Gly        | Ser<br>620 | Gln        | Gly        | Thr        | Thr        |     |
| His<br>625 | Leu        | Leu        | Thr        | Arg        | Ala<br>630 | Thr        | Ala        | Ser        | Ser        | Glu<br>635 | Thr        | Ser        | Ala        | Asp        | Leu<br>640 |     |
| Thr        | Leu        | Ala        | Thr        | Asn<br>645 | Gly        | Val        | Pro        | Val        | Ser<br>650 | Val        | Ser        | Pro        | Ala        | Val<br>655 | Ser        |     |
| Lys        | Thr        | Ala        | Ala<br>660 | Gly        | Ser        | Ser        | Pro        | Pro<br>665 | Gly        | Gly        | Thr        | Lys        | Pro<br>670 | Ser        | Tyr        |     |
| Thr        | Met        | Val<br>675 | Ser        | Ser        | Val        | Ile        | Pro<br>680 | Glu        | Thr        | Ser        | Ser        | Leu<br>685 | Gln        | Ser        | Ser        |     |
| Ala        | Phe<br>690 | Arg        | Glu        | Gly        | Thr        | Ser<br>695 | Leu        | Gly        | Leu        | Thr        | Pro<br>700 | Leu        | Asn        | Thr        | Arg        |     |
| His<br>705 | Pro        | Phe        | Ser        | Ser        | Pro<br>710 | Glu        | Pro        | Asp        | Ser        | Ala<br>715 | Gly        | His        | Thr        | Lys        | Ile<br>720 |     |
| Ser        | Thr        | Ser        | Ile        | Pro<br>725 | Leu        | Leu        | Ser        | Ser        | Ala<br>730 | Ser        | Val        | Leu        | Glu        | Asp<br>735 | Lys        |     |
| Val        | Ser        | Ala        | Thr<br>740 | Ser        | Thr        | Phe        | Ser        | His<br>745 | His        | Lys        | Ala        | Thr        | Ser<br>750 | Ser        | Ile        |     |
| Thr        | Thr        | Gly<br>755 | Thr        | Pro        | Glu        | Ile        | Ser<br>760 | Thr        | Lys        | Thr        | Lys        | Pro<br>765 | Ser        | Ser        | Ala        |     |
| Val        | Leu<br>770 | Ser        | Ser        | Met        | Thr        | Leu<br>775 | Ser        | Asn        | Ala        | Ala        | Thr<br>780 | Ser        | Pro        | Glu        | Arg        |     |
| Val<br>785 | Arg        | Asn        | Ala        | Thr        | Ser<br>790 | Pro        | Leu        | Thr        | His        | Pro<br>795 | Ser        | Pro        | Ser        | Gly        | Glu<br>800 |     |
| Glu        | Thr        | Ala        | Gly        | Ser<br>805 | Val        | Leu        | Thr        | Leu        | Ser<br>810 | Thr        | Ser        | Ala        | Glu        | Thr<br>815 | Thr        |     |
| Asp        | Ser        | Pro        | Asn        | Ile        | His        | Pro        | Thr        | Gly        | Thr        | Leu        | Thr        | Ser        | Glu        | Ser        | Ser        |     |

## 830

1085 1090 1095

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|      |      |     |     |     |     |      |     |     |     |     |      |             |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-------------|
| 1340 |      |     |     |     |     | 1345 |     |     |     |     |      | 1350        |
| Pro  | Lys  | Thr | Glu | Ser | Ala | Thr  | Pro | Ala | Ala | Tyr | Ser  | Gly Ser Pro |
|      | 1355 |     |     |     |     | 1360 |     |     |     |     | 1365 |             |
| Lys  | Ile  | Ser | Ser | Ser | Pro | Asn  | Leu | Thr | Ser | Pro | Ala  | Thr Lys Ala |
|      | 1370 |     |     |     |     | 1375 |     |     |     |     | 1380 |             |
| Trp  | Thr  | Ile | Thr | Asp | Thr | Thr  | Glu | His | Ser | Thr | Gln  | Leu His Tyr |
|      | 1385 |     |     |     |     | 1390 |     |     |     |     | 1395 |             |
| Thr  | Lys  | Leu | Ala | Glu | Lys | Ser  | Ser | Gly | Phe | Glu | Thr  | Gln Ser Ala |
|      | 1400 |     |     |     |     | 1405 |     |     |     |     | 1410 |             |
| Pro  | Gly  | Pro | Val | Ser | Val | Val  | Ile | Pro | Thr | Ser | Pro  | Thr Ile Gly |
|      | 1415 |     |     |     |     | 1420 |     |     |     |     | 1425 |             |
| Ser  | Ser  | Thr | Leu | Glu | Leu | Thr  | Ser | Asp | Val | Pro | Gly  | Glu Pro Leu |
|      | 1430 |     |     |     |     | 1435 |     |     |     |     | 1440 |             |
| Val  | Leu  | Ala | Pro | Ser | Glu | Gln  | Thr | Thr | Ile | Thr | Leu  | Pro Met Ala |
|      | 1445 |     |     |     |     | 1450 |     |     |     |     | 1455 |             |
| Thr  | Trp  | Leu | Ser | Thr | Ser | Leu  | Thr | Glu | Glu | Met | Ala  | Ser Thr Asp |
|      | 1460 |     |     |     |     | 1465 |     |     |     |     | 1470 |             |
| Leu  | Asp  | Ile | Ser | Ser | Pro | Ser  | Ser | Pro | Met | Ser | Thr  | Phe Ala Ile |
|      | 1475 |     |     |     |     | 1480 |     |     |     |     | 1485 |             |
| Phe  | Pro  | Pro | Met | Ser | Thr | Pro  | Ser | His | Glu | Leu | Ser  | Lys Ser Glu |
|      | 1490 |     |     |     |     | 1495 |     |     |     |     | 1500 |             |
| Ala  | Asp  | Thr | Ser | Ala | Ile | Arg  | Asn | Thr | Asp | Ser | Thr  | Thr Leu Asp |
|      | 1505 |     |     |     |     | 1510 |     |     |     |     | 1515 |             |
| Gln  | His  | Leu | Gly | Ile | Arg | Ser  | Leu | Gly | Arg | Thr | Gly  | Asp Leu Thr |
|      | 1520 |     |     |     |     | 1525 |     |     |     |     | 1530 |             |
| Thr  | Val  | Pro | Ile | Thr | Pro | Leu  | Thr | Thr | Thr | Trp | Thr  | Ser Val Ile |
|      | 1535 |     |     |     |     | 1540 |     |     |     |     | 1545 |             |
| Glu  | His  | Ser | Thr | Gln | Ala | Gln  | Asp | Thr | Leu | Ser | Ala  | Thr Met Ser |
|      | 1550 |     |     |     |     | 1555 |     |     |     |     | 1560 |             |
| Pro  | Thr  | His | Val | Thr | Gln | Ser  | Leu | Lys | Asp | Gln | Thr  | Ser Ile Pro |
|      | 1565 |     |     |     |     | 1570 |     |     |     |     | 1575 |             |
| Ala  | Ser  | Ala | Ser | Pro | Ser | His  | Leu | Thr | Glu | Val | Tyr  | Pro Glu Leu |
|      | 1580 |     |     |     |     | 1585 |     |     |     |     | 1590 |             |
| Gly  | Thr  | Gln | Gly | Arg | Ser | Ser  | Ser | Glu | Ala | Thr | Thr  | Phe Trp Lys |

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|      |      |     |     |     |     |      |     |     |     |     |      |     |     |     |  |      |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|--|------|
| 1595 |      |     |     |     |     | 1600 |     |     |     |     |      |     |     |     |  | 1605 |
| Pro  | Ser  | Thr | Asp | Thr | Leu | Ser  | Arg | Glu | Ile | Glu | Thr  | Gly | Pro | Thr |  |      |
|      | 1610 |     |     |     |     | 1615 |     |     |     |     | 1620 |     |     |     |  |      |
| Asn  | Ile  | Gln | Ser | Thr | Pro | Pro  | Met | Asp | Asn | Thr | Thr  | Thr | Gly | Ser |  |      |
|      | 1625 |     |     |     |     | 1630 |     |     |     |     | 1635 |     |     |     |  |      |
| Ser  | Ser  | Ser | Gly | Val | Thr | Leu  | Gly | Ile | Ala | His | Leu  | Pro | Ile | Gly |  |      |
|      | 1640 |     |     |     |     | 1645 |     |     |     |     | 1650 |     |     |     |  |      |
| Thr  | Ser  | Ser | Pro | Ala | Glu | Thr  | Ser | Thr | Asn | Met | Ala  | Leu | Glu | Arg |  |      |
|      | 1655 |     |     |     |     | 1660 |     |     |     |     | 1665 |     |     |     |  |      |
| Arg  | Ser  | Ser | Thr | Ala | Thr | Val  | Ser | Met | Ala | Gly | Thr  | Met | Gly | Leu |  |      |
|      | 1670 |     |     |     |     | 1675 |     |     |     |     | 1680 |     |     |     |  |      |
| Leu  | Val  | Thr | Ser | Ala | Pro | Gly  | Arg | Ser | Ile | Ser | Gln  | Ser | Leu | Gly |  |      |
|      | 1685 |     |     |     |     | 1690 |     |     |     |     | 1695 |     |     |     |  |      |
| Arg  | Val  | Ser | Ser | Val | Leu | Ser  | Glu | Ser | Thr | Thr | Glu  | Gly | Val | Thr |  |      |
|      | 1700 |     |     |     |     | 1705 |     |     |     |     | 1710 |     |     |     |  |      |
| Asp  | Ser  | Ser | Lys | Gly | Ser | Ser  | Pro | Arg | Leu | Asn | Thr  | Gln | Gly | Asn |  |      |
|      | 1715 |     |     |     |     | 1720 |     |     |     |     | 1725 |     |     |     |  |      |
| Thr  | Ala  | Leu | Ser | Ser | Ser | Leu  | Glu | Pro | Ser | Tyr | Ala  | Glu | Gly | Ser |  |      |
|      | 1730 |     |     |     |     | 1735 |     |     |     |     | 1740 |     |     |     |  |      |
| Gln  | Met  | Ser | Thr | Ser | Ile | Pro  | Leu | Thr | Ser | Ser | Pro  | Thr | Thr | Pro |  |      |
|      | 1745 |     |     |     |     | 1750 |     |     |     |     | 1755 |     |     |     |  |      |
| Asp  | Val  | Glu | Phe | Ile | Gly | Gly  | Ser | Thr | Phe | Trp | Thr  | Lys | Glu | Val |  |      |
|      | 1760 |     |     |     |     | 1765 |     |     |     |     | 1770 |     |     |     |  |      |
| Thr  | Thr  | Val | Met | Thr | Ser | Asp  | Ile | Ser | Lys | Ser | Ser  | Ala | Arg | Thr |  |      |
|      | 1775 |     |     |     |     | 1780 |     |     |     |     | 1785 |     |     |     |  |      |
| Glu  | Ser  | Ser | Ser | Ala | Thr | Leu  | Met | Ser | Thr | Ala | Leu  | Gly | Ser | Thr |  |      |
|      | 1790 |     |     |     |     | 1795 |     |     |     |     | 1800 |     |     |     |  |      |
| Glu  | Asn  | Thr | Gly | Lys | Glu | Lys  | Leu | Arg | Thr | Ala | Ser  | Met | Asp | Leu |  |      |
|      | 1805 |     |     |     |     | 1810 |     |     |     |     | 1815 |     |     |     |  |      |
| Pro  | Ser  | Pro | Thr | Pro | Ser | Met  | Glu | Val | Thr | Pro | Trp  | Ile | Ser | Leu |  |      |
|      | 1820 |     |     |     |     | 1825 |     |     |     |     | 1830 |     |     |     |  |      |
| Thr  | Leu  | Ser | Asn | Ala | Pro | Asn  | Thr | Thr | Asp | Ser | Leu  | Asp | Leu | Ser |  |      |
|      | 1835 |     |     |     |     | 1840 |     |     |     |     | 1845 |     |     |     |  |      |
| His  | Gly  | Val | His | Thr | Ser | Ser  | Ala | Gly | Thr | Leu | Ala  | Thr | Asp | Arg |  |      |

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| 1850 |      |     |     |     |     | 1855 |     |     |     |     |      | 1860 |     |     |  |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|--|
| Ser  | Leu  | Asn | Thr | Gly | Val | Thr  | Arg | Ala | Ser | Arg | Leu  | Glu  | Asn | Gly |  |
|      | 1865 |     |     |     |     | 1870 |     |     |     |     | 1875 |      |     |     |  |
| Ser  | Asp  | Thr | Ser | Ser | Lys | Ser  | Leu | Ser | Met | Gly | Asn  | Ser  | Thr | His |  |
|      | 1880 |     |     |     |     | 1885 |     |     |     |     | 1890 |      |     |     |  |
| Thr  | Ser  | Met | Thr | Tyr | Thr | Glu  | Lys | Ser | Glu | Val | Ser  | Ser  | Ser | Ile |  |
|      | 1895 |     |     |     |     | 1900 |     |     |     |     | 1905 |      |     |     |  |
| His  | Pro  | Arg | Pro | Glu | Thr | Ser  | Ala | Pro | Gly | Ala | Glu  | Thr  | Thr | Leu |  |
|      | 1910 |     |     |     |     | 1915 |     |     |     |     | 1920 |      |     |     |  |
| Thr  | Ser  | Thr | Pro | Gly | Asn | Arg  | Ala | Ile | Ser | Leu | Thr  | Leu  | Pro | Phe |  |
|      | 1925 |     |     |     |     | 1930 |     |     |     |     | 1935 |      |     |     |  |
| Ser  | Ser  | Ile | Pro | Val | Glu | Glu  | Val | Ile | Ser | Thr | Gly  | Ile  | Thr | Ser |  |
|      | 1940 |     |     |     |     | 1945 |     |     |     |     | 1950 |      |     |     |  |
| Gly  | Pro  | Asp | Ile | Asn | Ser | Ala  | Pro | Met | Thr | His | Ser  | Pro  | Ile | Thr |  |
|      | 1955 |     |     |     |     | 1960 |     |     |     |     | 1965 |      |     |     |  |
| Pro  | Pro  | Thr | Ile | Val | Trp | Thr  | Ser | Thr | Gly | Thr | Ile  | Glu  | Gln | Ser |  |
|      | 1970 |     |     |     |     | 1975 |     |     |     |     | 1980 |      |     |     |  |
| Thr  | Gln  | Pro | Leu | His | Ala | Val  | Ser | Ser | Glu | Lys | Val  | Ser  | Val | Gln |  |
|      | 1985 |     |     |     |     | 1990 |     |     |     |     | 1995 |      |     |     |  |
| Thr  | Gln  | Ser | Thr | Pro | Tyr | Val  | Asn | Ser | Val | Ala | Val  | Ser  | Ala | Ser |  |
|      | 2000 |     |     |     |     | 2005 |     |     |     |     | 2010 |      |     |     |  |
| Pro  | Thr  | His | Glu | Asn | Ser | Val  | Ser | Ser | Gly | Ser | Ser  | Thr  | Ser | Ser |  |
|      | 2015 |     |     |     |     | 2020 |     |     |     |     | 2025 |      |     |     |  |
| Pro  | Tyr  | Ser | Ser | Ala | Ser | Leu  | Glu | Ser | Leu | Asp | Ser  | Thr  | Ile | Ser |  |
|      | 2030 |     |     |     |     | 2035 |     |     |     |     | 2040 |      |     |     |  |
| Arg  | Arg  | Asn | Ala | Ile | Thr | Ser  | Trp | Leu | Trp | Asp | Leu  | Thr  | Thr | Ser |  |
|      | 2045 |     |     |     |     | 2050 |     |     |     |     | 2055 |      |     |     |  |
| Leu  | Pro  | Thr | Thr | Thr | Trp | Pro  | Ser | Thr | Ser | Leu | Ser  | Glu  | Ala | Leu |  |
|      | 2060 |     |     |     |     | 2065 |     |     |     |     | 2070 |      |     |     |  |
| Ser  | Ser  | Gly | His | Ser | Gly | Val  | Ser | Asn | Pro | Ser | Ser  | Thr  | Thr | Thr |  |
|      | 2075 |     |     |     |     | 2080 |     |     |     |     | 2085 |      |     |     |  |
| Glu  | Phe  | Pro | Leu | Phe | Ser | Ala  | Ala | Ser | Thr | Ser | Ala  | Ala  | Lys | Gln |  |
|      | 2090 |     |     |     |     | 2095 |     |     |     |     | 2100 |      |     |     |  |
| Arg  | Asn  | Pro | Glu | Thr | Glu | Thr  | His | Gly | Pro | Gln | Asn  | Thr  | Ala | Ala |  |

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|      |      |     |     |     |     |      |     |     |     |     |      |      |     |     |  |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|--|
| 2105 |      |     |     |     |     | 2110 |     |     |     |     |      | 2115 |     |     |  |
| Ser  | Thr  | Leu | Asn | Thr | Asp | Ala  | Ser | Ser | Val | Thr | Gly  | Leu  | Ser | Glu |  |
|      | 2120 |     |     |     |     | 2125 |     |     |     |     | 2130 |      |     |     |  |
| Thr  | Pro  | Val | Gly | Ala | Ser | Ile  | Ser | Ser | Glu | Val | Pro  | Leu  | Pro | Met |  |
|      | 2135 |     |     |     |     | 2140 |     |     |     |     | 2145 |      |     |     |  |
| Ala  | Ile  | Thr | Ser | Arg | Ser | Asp  | Val | Ser | Gly | Leu | Thr  | Ser  | Glu | Ser |  |
|      | 2150 |     |     |     |     | 2155 |     |     |     |     | 2160 |      |     |     |  |
| Thr  | Ala  | Asn | Pro | Ser | Leu | Gly  | Thr | Ala | Ser | Ser | Ala  | Gly  | Thr | Lys |  |
|      | 2165 |     |     |     |     | 2170 |     |     |     |     | 2175 |      |     |     |  |
| Leu  | Thr  | Arg | Thr | Ile | Ser | Leu  | Pro | Thr | Ser | Glu | Ser  | Leu  | Val | Ser |  |
|      | 2180 |     |     |     |     | 2185 |     |     |     |     | 2190 |      |     |     |  |
| Phe  | Arg  | Met | Asn | Lys | Asp | Pro  | Trp | Thr | Val | Ser | Ile  | Pro  | Leu | Gly |  |
|      | 2195 |     |     |     |     | 2200 |     |     |     |     | 2205 |      |     |     |  |
| Ser  | His  | Pro | Thr | Thr | Asn | Thr  | Glu | Thr | Ser | Ile | Pro  | Val  | Asn | Ser |  |
|      | 2210 |     |     |     |     | 2215 |     |     |     |     | 2220 |      |     |     |  |
| Ala  | Gly  | Pro | Pro | Gly | Leu | Ser  | Thr | Val | Ala | Ser | Asp  | Val  | Ile | Asp |  |
|      | 2225 |     |     |     |     | 2230 |     |     |     |     | 2235 |      |     |     |  |
| Thr  | Pro  | Ser | Asp | Gly | Ala | Glu  | Ser | Ile | Pro | Thr | Val  | Ser  | Phe | Ser |  |
|      | 2240 |     |     |     |     | 2245 |     |     |     |     | 2250 |      |     |     |  |
| Pro  | Ser  | Pro | Asp | Thr | Glu | Val  | Thr | Thr | Ile | Ser | His  | Phe  | Pro | Glu |  |
|      | 2255 |     |     |     |     | 2260 |     |     |     |     | 2265 |      |     |     |  |
| Lys  | Thr  | Thr | His | Ser | Phe | Arg  | Thr | Ile | Ser | Ser | Leu  | Thr  | His | Glu |  |
|      | 2270 |     |     |     |     | 2275 |     |     |     |     | 2280 |      |     |     |  |
| Leu  | Thr  | Ser | Arg | Val | Thr | Pro  | Ile | Pro | Gly | Asp | Trp  | Met  | Ser | Ser |  |
|      | 2285 |     |     |     |     | 2290 |     |     |     |     | 2295 |      |     |     |  |
| Ala  | Met  | Ser | Thr | Lys | Pro | Thr  | Gly | Ala | Ser | Pro | Ser  | Ile  | Thr | Leu |  |
|      | 2300 |     |     |     |     | 2305 |     |     |     |     | 2310 |      |     |     |  |
| Gly  | Glu  | Arg | Arg | Thr | Ile | Thr  | Ser | Ala | Ala | Pro | Thr  | Thr  | Ser | Pro |  |
|      | 2315 |     |     |     |     | 2320 |     |     |     |     | 2325 |      |     |     |  |
| Ile  | Val  | Leu | Thr | Ala | Ser | Phe  | Thr | Glu | Thr | Ser | Thr  | Val  | Ser | Leu |  |
|      | 2330 |     |     |     |     | 2335 |     |     |     |     | 2340 |      |     |     |  |
| Asp  | Asn  | Glu | Thr | Thr | Val | Lys  | Thr | Ser | Asp | Ile | Leu  | Asp  | Ala | Arg |  |
|      | 2345 |     |     |     |     | 2350 |     |     |     |     | 2355 |      |     |     |  |
| Lys  | Thr  | Asn | Glu | Leu | Pro | Ser  | Asp | Ser | Ser | Ser | Ser  | Ser  | Asp | Leu |  |

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|      |      |     |     |     |     |      |     |     |     |     |      |      |     |     |  |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|--|
| 2360 |      |     |     |     |     | 2365 |     |     |     |     |      | 2370 |     |     |  |
| Ile  | Asn  | Thr | Ser | Ile | Ala | Ser  | Ser | Thr | Met | Asp | Val  | Thr  | Lys | Thr |  |
|      | 2375 |     |     |     |     | 2380 |     |     |     |     | 2385 |      |     |     |  |
| Ala  | Ser  | Ile | Ser | Pro | Thr | Ser  | Ile | Ser | Gly | Met | Thr  | Ala  | Ser | Ser |  |
|      | 2390 |     |     |     |     | 2395 |     |     |     |     | 2400 |      |     |     |  |
| Ser  | Pro  | Ser | Leu | Phe | Ser | Ser  | Asp | Arg | Pro | Gln | Val  | Pro  | Thr | Ser |  |
|      | 2405 |     |     |     |     | 2410 |     |     |     |     | 2415 |      |     |     |  |
| Thr  | Thr  | Glu | Thr | Asn | Thr | Ala  | Thr | Ser | Pro | Ser | Val  | Ser  | Ser | Asn |  |
|      | 2420 |     |     |     |     | 2425 |     |     |     |     | 2430 |      |     |     |  |
| Thr  | Tyr  | Ser | Leu | Asp | Gly | Gly  | Ser | Asn | Val | Gly | Gly  | Thr  | Pro | Ser |  |
|      | 2435 |     |     |     |     | 2440 |     |     |     |     | 2445 |      |     |     |  |
| Thr  | Leu  | Pro | Pro | Phe | Thr | Ile  | Thr | His | Pro | Val | Glu  | Thr  | Ser | Ser |  |
|      | 2450 |     |     |     |     | 2455 |     |     |     |     | 2460 |      |     |     |  |
| Ala  | Leu  | Leu | Ala | Trp | Ser | Arg  | Pro | Val | Arg | Thr | Phe  | Ser  | Thr | Met |  |
|      | 2465 |     |     |     |     | 2470 |     |     |     |     | 2475 |      |     |     |  |
| Val  | Ser  | Thr | Asp | Thr | Ala | Ser  | Gly | Glu | Asn | Pro | Thr  | Ser  | Ser | Asn |  |
|      | 2480 |     |     |     |     | 2485 |     |     |     |     | 2490 |      |     |     |  |
| Ser  | Val  | Val | Thr | Ser | Val | Pro  | Ala | Pro | Gly | Thr | Trp  | Thr  | Ser | Val |  |
|      | 2495 |     |     |     |     | 2500 |     |     |     |     | 2505 |      |     |     |  |
| Gly  | Ser  | Thr | Thr | Asp | Leu | Pro  | Ala | Met | Gly | Phe | Leu  | Lys  | Thr | Ser |  |
|      | 2510 |     |     |     |     | 2515 |     |     |     |     | 2520 |      |     |     |  |
| Pro  | Ala  | Gly | Glu | Ala | His | Ser  | Leu | Leu | Ala | Ser | Thr  | Ile  | Glu | Pro |  |
|      | 2525 |     |     |     |     | 2530 |     |     |     |     | 2535 |      |     |     |  |
| Ala  | Thr  | Ala | Phe | Thr | Pro | His  | Leu | Ser | Ala | Ala | Val  | Val  | Thr | Gly |  |
|      | 2540 |     |     |     |     | 2545 |     |     |     |     | 2550 |      |     |     |  |
| Ser  | Ser  | Ala | Thr | Ser | Glu | Ala  | Ser | Leu | Leu | Thr | Thr  | Ser  | Glu | Ser |  |
|      | 2555 |     |     |     |     | 2560 |     |     |     |     | 2565 |      |     |     |  |
| Lys  | Ala  | Ile | His | Ser | Ser | Pro  | Gln | Thr | Pro | Thr | Thr  | Pro  | Thr | Ser |  |
|      | 2570 |     |     |     |     | 2575 |     |     |     |     | 2580 |      |     |     |  |
| Gly  | Ala  | Asn | Trp | Glu | Thr | Ser  | Ala | Thr | Pro | Glu | Ser  | Leu  | Leu | Val |  |
|      | 2585 |     |     |     |     | 2590 |     |     |     |     | 2595 |      |     |     |  |
| Val  | Thr  | Glu | Thr | Ser | Asp | Thr  | Thr | Leu | Thr | Ser | Lys  | Ile  | Leu | Val |  |
|      | 2600 |     |     |     |     | 2605 |     |     |     |     | 2610 |      |     |     |  |
| Thr  | Asp  | Thr | Ile | Leu | Phe | Ser  | Thr | Val | Ser | Thr | Pro  | Pro  | Ser | Lys |  |

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|      |      |     |     |     |     |      |     |     |     |     |      |      |     |     |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|
| 2615 |      |     |     |     |     | 2620 |     |     |     |     |      | 2625 |     |     |
| Phe  | Pro  | Ser | Thr | Gly | Thr | Leu  | Ser | Gly | Ala | Ser | Phe  | Pro  | Thr | Leu |
|      | 2630 |     |     |     |     | 2635 |     |     |     |     | 2640 |      |     |     |
| Leu  | Pro  | Asp | Thr | Pro | Ala | Ile  | Pro | Leu | Thr | Ala | Thr  | Glu  | Pro | Thr |
|      | 2645 |     |     |     |     | 2650 |     |     |     |     | 2655 |      |     |     |
| Ser  | Ser  | Leu | Ala | Thr | Ser | Phe  | Asp | Ser | Thr | Pro | Leu  | Val  | Thr | Ile |
|      | 2660 |     |     |     |     | 2665 |     |     |     |     | 2670 |      |     |     |
| Ala  | Ser  | Asp | Ser | Leu | Gly | Thr  | Val | Pro | Glu | Thr | Thr  | Leu  | Thr | Met |
|      | 2675 |     |     |     |     | 2680 |     |     |     |     | 2685 |      |     |     |
| Ser  | Glu  | Thr | Ser | Asn | Gly | Asp  | Ala | Leu | Val | Leu | Lys  | Thr  | Val | Ser |
|      | 2690 |     |     |     |     | 2695 |     |     |     |     | 2700 |      |     |     |
| Asn  | Pro  | Asp | Arg | Ser | Ile | Pro  | Gly | Ile | Thr | Ile | Gln  | Gly  | Val | Thr |
|      | 2705 |     |     |     |     | 2710 |     |     |     |     | 2715 |      |     |     |
| Glu  | Ser  | Pro | Leu | His | Pro | Ser  | Ser | Thr | Ser | Pro | Ser  | Lys  | Ile | Val |
|      | 2720 |     |     |     |     | 2725 |     |     |     |     | 2730 |      |     |     |
| Ala  | Pro  | Arg | Asn | Thr | Thr | Tyr  | Glu | Gly | Ser | Ile | Thr  | Val  | Ala | Leu |
|      | 2735 |     |     |     |     | 2740 |     |     |     |     | 2745 |      |     |     |
| Ser  | Thr  | Leu | Pro | Ala | Gly | Thr  | Thr | Gly | Ser | Leu | Val  | Phe  | Ser | Gln |
|      | 2750 |     |     |     |     | 2755 |     |     |     |     | 2760 |      |     |     |
| Ser  | Ser  | Glu | Asn | Ser | Glu | Thr  | Thr | Ala | Leu | Val | Asp  | Ser  | Ser | Ala |
|      | 2765 |     |     |     |     | 2770 |     |     |     |     | 2775 |      |     |     |
| Gly  | Leu  | Glu | Arg | Ala | Ser | Val  | Met | Pro | Leu | Thr | Thr  | Gly  | Ser | Gln |
|      | 2780 |     |     |     |     | 2785 |     |     |     |     | 2790 |      |     |     |
| Gly  | Met  | Ala | Ser | Ser | Gly | Gly  | Ile | Arg | Ser | Gly | Ser  | Thr  | His | Ser |
|      | 2795 |     |     |     |     | 2800 |     |     |     |     | 2805 |      |     |     |
| Thr  | Gly  | Thr | Lys | Thr | Phe | Ser  | Ser | Leu | Pro | Leu | Thr  | Met  | Asn | Pro |
|      | 2810 |     |     |     |     | 2815 |     |     |     |     | 2820 |      |     |     |
| Gly  | Glu  | Val | Thr | Ala | Met | Ser  | Glu | Ile | Thr | Thr | Asn  | Arg  | Leu | Thr |
|      | 2825 |     |     |     |     | 2830 |     |     |     |     | 2835 |      |     |     |
| Ala  | Thr  | Gln | Ser | Thr | Ala | Pro  | Lys | Gly | Ile | Pro | Val  | Lys  | Pro | Thr |
|      | 2840 |     |     |     |     | 2845 |     |     |     |     | 2850 |      |     |     |
| Ser  | Ala  | Glu | Ser | Gly | Leu | Leu  | Thr | Pro | Val | Ser | Ala  | Ser  | Ser | Ser |
|      | 2855 |     |     |     |     | 2860 |     |     |     |     | 2865 |      |     |     |
| Pro  | Ser  | Lys | Ala | Phe | Ala | Ser  | Leu | Thr | Thr | Ala | Pro  | Pro  | Thr | Trp |

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|      |      |     |     |     |     |      |     |     |     |     |      |             |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-------------|
| 2870 |      |     |     |     |     | 2875 |     |     |     |     |      | 2880        |
| Gly  | Ile  | Pro | Gln | Ser | Thr | Leu  | Thr | Phe | Glu | Phe | Ser  | Glu Val Pro |
|      | 2885 |     |     |     |     | 2890 |     |     |     |     | 2895 |             |
| Ser  | Leu  | Asp | Thr | Lys | Ser | Ala  | Ser | Leu | Pro | Thr | Pro  | Gly Gln Ser |
|      | 2900 |     |     |     |     | 2905 |     |     |     |     | 2910 |             |
| Leu  | Asn  | Thr | Ile | Pro | Asp | Ser  | Asp | Ala | Ser | Thr | Ala  | Ser Ser Ser |
|      | 2915 |     |     |     |     | 2920 |     |     |     |     | 2925 |             |
| Leu  | Ser  | Lys | Ser | Pro | Glu | Lys  | Asn | Pro | Arg | Ala | Arg  | Met Met Thr |
|      | 2930 |     |     |     |     | 2935 |     |     |     |     | 2940 |             |
| Ser  | Thr  | Lys | Ala | Ile | Ser | Ala  | Ser | Ser | Phe | Gln | Ser  | Thr Gly Phe |
|      | 2945 |     |     |     |     | 2950 |     |     |     |     | 2955 |             |
| Thr  | Glu  | Thr | Pro | Glu | Gly | Ser  | Ala | Ser | Pro | Ser | Met  | Ala Gly His |
|      | 2960 |     |     |     |     | 2965 |     |     |     |     | 2970 |             |
| Glu  | Pro  | Arg | Val | Pro | Thr | Ser  | Gly | Thr | Gly | Asp | Pro  | Arg Tyr Ala |
|      | 2975 |     |     |     |     | 2980 |     |     |     |     | 2985 |             |
| Ser  | Glu  | Ser | Met | Ser | Tyr | Pro  | Asp | Pro | Ser | Lys | Ala  | Ser Ser Ala |
|      | 2990 |     |     |     |     | 2995 |     |     |     |     | 3000 |             |
| Met  | Thr  | Ser | Thr | Ser | Leu | Ala  | Ser | Lys | Leu | Thr | Thr  | Leu Phe Ser |
|      | 3005 |     |     |     |     | 3010 |     |     |     |     | 3015 |             |
| Thr  | Gly  | Gln | Ala | Ala | Arg | Ser  | Gly | Ser | Ser | Ser | Ser  | Pro Ile Ser |
|      | 3020 |     |     |     |     | 3025 |     |     |     |     | 3030 |             |
| Leu  | Ser  | Thr | Glu | Lys | Glu | Thr  | Ser | Phe | Leu | Ser | Pro  | Thr Ala Ser |
|      | 3035 |     |     |     |     | 3040 |     |     |     |     | 3045 |             |
| Thr  | Ser  | Arg | Lys | Thr | Ser | Leu  | Phe | Leu | Gly | Pro | Ser  | Met Ala Arg |
|      | 3050 |     |     |     |     | 3055 |     |     |     |     | 3060 |             |
| Gln  | Pro  | Asn | Ile | Leu | Val | His  | Leu | Gln | Thr | Ser | Ala  | Leu Thr Leu |
|      | 3065 |     |     |     |     | 3070 |     |     |     |     | 3075 |             |
| Ser  | Pro  | Thr | Ser | Thr | Leu | Asn  | Met | Ser | Gln | Glu | Glu  | Pro Pro Glu |
|      | 3080 |     |     |     |     | 3085 |     |     |     |     | 3090 |             |
| Leu  | Thr  | Ser | Ser | Gln | Thr | Ile  | Ala | Glu | Glu | Glu | Gly  | Thr Thr Ala |
|      | 3095 |     |     |     |     | 3100 |     |     |     |     | 3105 |             |
| Glu  | Thr  | Gln | Thr | Leu | Thr | Phe  | Thr | Pro | Ser | Glu | Thr  | Pro Thr Ser |
|      | 3110 |     |     |     |     | 3115 |     |     |     |     | 3120 |             |
| Leu  | Leu  | Pro | Val | Ser | Ser | Pro  | Thr | Glu | Pro | Thr | Ala  | Arg Arg Lys |

## 10295w002-Sequence

|      |      |     |     |     |     |      |     |     |     |     |      |      |     |     |  |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|--|
| 3125 |      |     |     |     |     | 3130 |     |     |     |     |      | 3135 |     |     |  |
| Ser  | Ser  | Pro | Glu | Thr | Trp | Ala  | Ser | Ser | Ile | Ser | Val  | Pro  | Ala | Lys |  |
|      | 3140 |     |     |     |     | 3145 |     |     |     |     | 3150 |      |     |     |  |
| Thr  | Ser  | Leu | Val | Glu | Thr | Thr  | Asp | Gly | Thr | Leu | Val  | Thr  | Thr | Ile |  |
|      | 3155 |     |     |     |     | 3160 |     |     |     |     | 3165 |      |     |     |  |
| Lys  | Met  | Ser | Ser | Gln | Ala | Ala  | Gln | Gly | Asn | Ser | Thr  | Trp  | Pro | Ala |  |
|      | 3170 |     |     |     |     | 3175 |     |     |     |     | 3180 |      |     |     |  |
| Pro  | Ala  | Glu | Glu | Thr | Gly | Ser  | Ser | Pro | Ala | Gly | Thr  | Ser  | Pro | Gly |  |
|      | 3185 |     |     |     |     | 3190 |     |     |     |     | 3195 |      |     |     |  |
| Ser  | Pro  | Glu | Met | Ser | Thr | Thr  | Leu | Lys | Ile | Met | Ser  | Ser  | Lys | Glu |  |
|      | 3200 |     |     |     |     | 3205 |     |     |     |     | 3210 |      |     |     |  |
| Pro  | Ser  | Ile | Ser | Pro | Glu | Ile  | Arg | Ser | Thr | Val | Arg  | Asn  | Ser | Pro |  |
|      | 3215 |     |     |     |     | 3220 |     |     |     |     | 3225 |      |     |     |  |
| Trp  | Lys  | Thr | Pro | Glu | Thr | Thr  | Val | Pro | Met | Glu | Thr  | Thr  | Val | Glu |  |
|      | 3230 |     |     |     |     | 3235 |     |     |     |     | 3240 |      |     |     |  |
| Pro  | Val  | Thr | Leu | Gln | Ser | Thr  | Ala | Leu | Gly | Ser | Gly  | Ser  | Thr | Ser |  |
|      | 3245 |     |     |     |     | 3250 |     |     |     |     | 3255 |      |     |     |  |
| Ile  | Ser  | His | Leu | Pro | Thr | Gly  | Thr | Thr | Ser | Pro | Thr  | Lys  | Ser | Pro |  |
|      | 3260 |     |     |     |     | 3265 |     |     |     |     | 3270 |      |     |     |  |
| Thr  | Glu  | Asn | Met | Leu | Ala | Thr  | Glu | Arg | Val | Ser | Leu  | Ser  | Pro | Ser |  |
|      | 3275 |     |     |     |     | 3280 |     |     |     |     | 3285 |      |     |     |  |
| Pro  | Pro  | Glu | Ala | Trp | Thr | Asn  | Leu | Tyr | Ser | Gly | Thr  | Pro  | Gly | Gly |  |
|      | 3290 |     |     |     |     | 3295 |     |     |     |     | 3300 |      |     |     |  |
| Thr  | Arg  | Gln | Ser | Leu | Ala | Thr  | Met | Ser | Ser | Val | Ser  | Leu  | Glu | Ser |  |
|      | 3305 |     |     |     |     | 3310 |     |     |     |     | 3315 |      |     |     |  |
| Pro  | Thr  | Ala | Arg | Ser | Ile | Thr  | Gly | Thr | Gly | Gln | Gln  | Ser  | Ser | Pro |  |
|      | 3320 |     |     |     |     | 3325 |     |     |     |     | 3330 |      |     |     |  |
| Glu  | Leu  | Val | Ser | Lys | Thr | Thr  | Gly | Met | Glu | Phe | Ser  | Met  | Trp | His |  |
|      | 3335 |     |     |     |     | 3340 |     |     |     |     | 3345 |      |     |     |  |
| Gly  | Ser  | Thr | Gly | Gly | Thr | Thr  | Gly | Asp | Thr | His | Val  | Ser  | Leu | Ser |  |
|      | 3350 |     |     |     |     | 3355 |     |     |     |     | 3360 |      |     |     |  |
| Thr  | Ser  | Ser | Asn | Ile | Leu | Glu  | Asp | Pro | Val | Thr | Ser  | Pro  | Asn | Ser |  |
|      | 3365 |     |     |     |     | 3370 |     |     |     |     | 3375 |      |     |     |  |
| Val  | Ser  | Ser | Leu | Thr | Asp | Lys  | Ser | Lys | His | Lys | Thr  | Glu  | Thr | Trp |  |



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3380 3385 3390  
 Val Ser Thr Thr Ala Ile Pro Ser Thr Val Leu Asn Asn Lys Ile  
 3395 3400 3405  
 Met Ala Ala Glu Gln Gln Thr Ser Arg Ser Val Asp Glu Ala Tyr  
 3410 3415 3420  
 Ser Ser Thr Ser Ser Trp Ser Asp Gln Thr Ser Gly Ser Asp Ile  
 3425 3430 3435  
 Thr Leu Gly Ala Ser Pro Asp Val Thr Asn Thr Leu Tyr Ile Thr  
 3440 3445 3450  
 Ser Thr Ala Gln Thr Thr Ser Leu Val Ser Leu Pro Ser Gly Asp  
 3455 3460 3465  
 Gln Gly Ile Thr Ser Leu Thr Asn Pro Ser Gly Gly Lys Thr Ser  
 3470 3475 3480  
 Ser Ala Ser Ser Val Thr Ser Pro Ser Ile Gly Leu Glu Thr Leu  
 3485 3490 3495  
 Arg Ala Asn Val Ser Ala Val Lys Ser Asp Ile Ala Pro Thr Ala  
 3500 3505 3510  
 Gly His Leu Ser Gln Thr Ser Ser Pro Ala Glu Val Ser Ile Leu  
 3515 3520 3525  
 Asp Val Thr Thr Ala Pro Thr Pro Gly Ile Ser Thr Thr Ile Thr  
 3530 3535 3540  
 Thr Met Gly Thr Asn Ser Ile Ser Thr Thr Thr Pro Asn Pro Glu  
 3545 3550 3555  
 Val Gly Met Ser Thr Met Asp Ser Thr Pro Ala Thr Glu Arg Arg  
 3560 3565 3570  
 Thr Thr Ser Thr Glu His Pro Ser Thr Trp Ser Ser Thr Ala Ala  
 3575 3580 3585  
 Ser Asp Ser Trp Thr Val Thr Asp Met Thr Ser Asn Leu Lys Val  
 3590 3595 3600  
 Ala Arg Ser Pro Gly Thr Ile Ser Thr Met His Thr Thr Ser Phe  
 3605 3610 3615  
 Leu Ala Ser Ser Thr Glu Leu Asp Ser Met Ser Thr Pro His Gly  
 3620 3625 3630  
 Arg Ile Thr Val Ile Gly Thr Ser Leu Val Thr Pro Ser Ser Asp  
 3635 3640 3645

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|      |     |     |     |     |     |      |     |     |     |     |      |     |     |      |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|------|
| 3635 |     |     |     |     |     | 3640 |     |     |     |     |      |     |     | 3645 |
| Ala  | Ser | Ala | Val | Lys | Thr | Glu  | Thr | Ser | Thr | Ser | Glu  | Arg | Thr | Leu  |
| 3650 |     |     |     |     |     | 3655 |     |     |     |     | 3660 |     |     |      |
| Ser  | Pro | Ser | Asp | Thr | Thr | Ala  | Ser | Thr | Pro | Ile | Ser  | Thr | Phe | Ser  |
| 3665 |     |     |     |     |     | 3670 |     |     |     |     | 3675 |     |     |      |
| Arg  | Val | Gln | Arg | Met | Ser | Ile  | Ser | Val | Pro | Asp | Ile  | Leu | Ser | Thr  |
| 3680 |     |     |     |     |     | 3685 |     |     |     |     | 3690 |     |     |      |
| Ser  | Trp | Thr | Pro | Ser | Ser | Thr  | Glu | Ala | Glu | Asp | Val  | Pro | Val | Ser  |
| 3695 |     |     |     |     |     | 3700 |     |     |     |     | 3705 |     |     |      |
| Met  | Val | Ser | Thr | Asp | His | Ala  | Ser | Thr | Lys | Thr | Asp  | Pro | Asn | Thr  |
| 3710 |     |     |     |     |     | 3715 |     |     |     |     | 3720 |     |     |      |
| Pro  | Leu | Ser | Thr | Phe | Leu | Phe  | Asp | Ser | Leu | Ser | Thr  | Leu | Asp | Trp  |
| 3725 |     |     |     |     |     | 3730 |     |     |     |     | 3735 |     |     |      |
| Asp  | Thr | Gly | Arg | Ser | Leu | Ser  | Ser | Ala | Thr | Ala | Thr  | Thr | Ser | Ala  |
| 3740 |     |     |     |     |     | 3745 |     |     |     |     | 3750 |     |     |      |
| Pro  | Gln | Gly | Ala | Thr | Thr | Pro  | Gln | Glu | Leu | Thr | Leu  | Glu | Thr | Met  |
| 3755 |     |     |     |     |     | 3760 |     |     |     |     | 3765 |     |     |      |
| Ile  | Ser | Pro | Ala | Thr | Ser | Gln  | Leu | Pro | Phe | Ser | Ile  | Gly | His | Ile  |
| 3770 |     |     |     |     |     | 3775 |     |     |     |     | 3780 |     |     |      |
| Thr  | Ser | Ala | Val | Thr | Pro | Ala  | Ala | Met | Ala | Arg | Ser  | Ser | Gly | Val  |
| 3785 |     |     |     |     |     | 3790 |     |     |     |     | 3795 |     |     |      |
| Thr  | Phe | Ser | Arg | Pro | Asp | Pro  | Thr | Ser | Lys | Lys | Ala  | Glu | Gln | Thr  |
| 3800 |     |     |     |     |     | 3805 |     |     |     |     | 3810 |     |     |      |
| Ser  | Thr | Gln | Leu | Pro | Thr | Thr  | Thr | Ser | Ala | His | Pro  | Gly | Gln | Val  |
| 3815 |     |     |     |     |     | 3820 |     |     |     |     | 3825 |     |     |      |
| Pro  | Arg | Ser | Ala | Ala | Thr | Thr  | Leu | Asp | Val | Ile | Pro  | His | Thr | Ala  |
| 3830 |     |     |     |     |     | 3835 |     |     |     |     | 3840 |     |     |      |
| Lys  | Thr | Pro | Asp | Ala | Thr | Phe  | Gln | Arg | Gln | Gly | Gln  | Thr | Ala | Leu  |
| 3845 |     |     |     |     |     | 3850 |     |     |     |     | 3855 |     |     |      |
| Thr  | Thr | Glu | Ala | Arg | Ala | Thr  | Ser | Asp | Ser | Trp | Asn  | Glu | Lys | Glu  |
| 3860 |     |     |     |     |     | 3865 |     |     |     |     | 3870 |     |     |      |
| Lys  | Ser | Thr | Pro | Ser | Ala | Pro  | Trp | Ile | Thr | Glu | Met  | Met | Asn | Ser  |
| 3875 |     |     |     |     |     | 3880 |     |     |     |     | 3885 |     |     |      |
| Val  | Ser | Glu | Asp | Thr | Ile | Lys  | Glu | Val | Thr | Ser | Ser  | Ser | Ser | Val  |

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|      |      |     |     |     |     |      |     |     |     |     |      |      |     |     |  |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|--|
| 3890 |      |     |     |     |     | 3895 |     |     |     |     |      | 3900 |     |     |  |
| Leu  | Arg  | Thr | Leu | Asn | Thr | Leu  | Asp | Ile | Asn | Leu | Glu  | Ser  | Gly | Thr |  |
|      | 3905 |     |     |     |     | 3910 |     |     |     |     | 3915 |      |     |     |  |
| Thr  | Ser  | Ser | Pro | Ser | Trp | Lys  | Ser | Ser | Pro | Tyr | Glu  | Arg  | Ile | Ala |  |
|      | 3920 |     |     |     |     | 3925 |     |     |     |     | 3930 |      |     |     |  |
| Pro  | Ser  | Glu | Ser | Thr | Thr | Asp  | Lys | Glu | Ala | Ile | His  | Pro  | Ser | Thr |  |
|      | 3935 |     |     |     |     | 3940 |     |     |     |     | 3945 |      |     |     |  |
| Asn  | Thr  | Val | Glu | Thr | Thr | Gly  | Trp | Val | Thr | Ser | Ser  | Glu  | His | Ala |  |
|      | 3950 |     |     |     |     | 3955 |     |     |     |     | 3960 |      |     |     |  |
| Ser  | His  | Ser | Thr | Ile | Pro | Ala  | His | Ser | Ala | Ser | Ser  | Lys  | Leu | Thr |  |
|      | 3965 |     |     |     |     | 3970 |     |     |     |     | 3975 |      |     |     |  |
| Ser  | Pro  | Val | Val | Thr | Thr | Ser  | Thr | Arg | Glu | Gln | Ala  | Ile  | Val | Ser |  |
|      | 3980 |     |     |     |     | 3985 |     |     |     |     | 3990 |      |     |     |  |
| Met  | Ser  | Thr | Thr | Thr | Trp | Pro  | Glu | Ser | Thr | Arg | Ala  | Arg  | Thr | Glu |  |
|      | 3995 |     |     |     |     | 4000 |     |     |     |     | 4005 |      |     |     |  |
| Pro  | Asn  | Ser | Phe | Leu | Thr | Ile  | Glu | Leu | Arg | Asp | Val  | Ser  | Pro | Tyr |  |
|      | 4010 |     |     |     |     | 4015 |     |     |     |     | 4020 |      |     |     |  |
| Met  | Asp  | Thr | Ser | Ser | Thr | Thr  | Gln | Thr | Ser | Ile | Ile  | Ser  | Ser | Pro |  |
|      | 4025 |     |     |     |     | 4030 |     |     |     |     | 4035 |      |     |     |  |
| Gly  | Ser  | Thr | Ala | Ile | Thr | Lys  | Gly | Pro | Arg | Thr | Glu  | Ile  | Thr | Ser |  |
|      | 4040 |     |     |     |     | 4045 |     |     |     |     | 4050 |      |     |     |  |
| Ser  | Lys  | Arg | Ile | Ser | Ser | Ser  | Phe | Leu | Ala | Gln | Ser  | Met  | Arg | Ser |  |
|      | 4055 |     |     |     |     | 4060 |     |     |     |     | 4065 |      |     |     |  |
| Ser  | Asp  | Ser | Pro | Ser | Glu | Ala  | Ile | Thr | Arg | Leu | Ser  | Asn  | Phe | Pro |  |
|      | 4070 |     |     |     |     | 4075 |     |     |     |     | 4080 |      |     |     |  |
| Ala  | Met  | Thr | Glu | Ser | Gly | Gly  | Met | Ile | Leu | Ala | Met  | Gln  | Thr | Ser |  |
|      | 4085 |     |     |     |     | 4090 |     |     |     |     | 4095 |      |     |     |  |
| Pro  | Pro  | Gly | Ala | Thr | Ser | Leu  | Ser | Ala | Pro | Thr | Leu  | Asp  | Thr | Ser |  |
|      | 4100 |     |     |     |     | 4105 |     |     |     |     | 4110 |      |     |     |  |
| Ala  | Thr  | Ala | Ser | Trp | Thr | Gly  | Thr | Pro | Leu | Ala | Thr  | Thr  | Gln | Arg |  |
|      | 4115 |     |     |     |     | 4120 |     |     |     |     | 4125 |      |     |     |  |
| Phe  | Thr  | Tyr | Ser | Glu | Lys | Thr  | Thr | Leu | Phe | Ser | Lys  | Gly  | Pro | Glu |  |
|      | 4130 |     |     |     |     | 4135 |     |     |     |     | 4140 |      |     |     |  |
| Asp  | Thr  | Ser | Gln | Pro | Ser | Pro  | Pro | Ser | Val | Glu | Glu  | Thr  | Ser | Ser |  |

## 10295w002-Sequence

4145                      4150                      4155  
 Ser Ser Ser Leu Val Pro Ile His Ala Thr Thr Ser Pro Ser Asn  
   4160                      4165                      4170  
 Ile Leu Leu Thr Ser Gln Gly His Ser Pro Ser Ser Thr Pro Pro  
   4175                      4180                      4185  
 Val Thr Ser Val Phe Leu Ser Glu Thr Ser Gly Leu Gly Lys Thr  
   4190                      4195                      4200  
 Thr Asp Met Ser Arg Ile Ser Leu Glu Pro Gly Thr Ser Leu Pro  
   4205                      4210                      4215  
 Pro Asn Leu Ser Ser Thr Ala Gly Glu Ala Leu Ser Thr Tyr Glu  
   4220                      4225                      4230  
 Ala Ser Arg Asp Thr Lys Ala Ile His His Ser Ala Asp Thr Ala  
   4235                      4240                      4245  
 Val Thr Asn Met Glu Ala Thr Ser Ser Glu Tyr Ser Pro Ile Pro  
   4250                      4255                      4260  
 Gly His Thr Lys Pro Ser Lys Ala Thr Ser Pro Leu Val Thr Ser  
   4265                      4270                      4275  
 His Ile Met Gly Asp Ile Thr Ser Ser Thr Ser Val Phe Gly Ser  
   4280                      4285                      4290  
 Ser Glu Thr Thr Glu Ile Glu Thr Val Ser Ser Val Asn Gln Gly  
   4295                      4300                      4305  
 Leu Gln Glu Arg Ser Thr Ser Gln Val Ala Ser Ser Ala Thr Glu  
   4310                      4315                      4320  
 Thr Ser Thr Val Ile Thr His Val Ser Ser Gly Asp Ala Thr Thr  
   4325                      4330                      4335  
 His Val Thr Lys Thr Gln Ala Thr Phe Ser Ser Gly Thr Ser Ile  
   4340                      4345                      4350  
 Ser Ser Pro His Gln Phe Ile Thr Ser Thr Asn Thr Phe Thr Asp  
   4355                      4360                      4365  
 Val Ser Thr Asn Pro Ser Thr Ser Leu Ile Met Thr Glu Ser Ser  
   4370                      4375                      4380  
 Gly Val Thr Ile Thr Thr Gln Thr Gly Pro Thr Gly Ala Ala Thr  
   4385                      4390                      4395  
 Gln Gly Pro Tyr Leu Leu Asp Thr Ser Thr Met Pro Tyr Leu Thr

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|      |      |     |     |     |     |      |     |     |     |     |      |      |     |     |  |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|--|
| 4400 |      |     |     |     |     | 4405 |     |     |     |     |      | 4410 |     |     |  |
| Glu  | Thr  | Pro | Leu | Ala | Val | Thr  | Pro | Asp | Phe | Met | Gln  | Ser  | Glu | Lys |  |
|      | 4415 |     |     |     |     | 4420 |     |     |     |     | 4425 |      |     |     |  |
| Thr  | Thr  | Leu | Ile | Ser | Lys | Gly  | Pro | Lys | Asp | Val | Ser  | Trp  | Thr | Ser |  |
|      | 4430 |     |     |     |     | 4435 |     |     |     |     | 4440 |      |     |     |  |
| Pro  | Pro  | Ser | Val | Ala | Glu | Thr  | Ser | Tyr | Pro | Ser | Ser  | Leu  | Thr | Pro |  |
|      | 4445 |     |     |     |     | 4450 |     |     |     |     | 4455 |      |     |     |  |
| Phe  | Leu  | Val | Thr | Thr | Ile | Pro  | Pro | Ala | Thr | Ser | Thr  | Leu  | Gln | Gly |  |
|      | 4460 |     |     |     |     | 4465 |     |     |     |     | 4470 |      |     |     |  |
| Gln  | His  | Thr | Ser | Ser | Pro | Val  | Ser | Ala | Thr | Ser | Val  | Leu  | Thr | Ser |  |
|      | 4475 |     |     |     |     | 4480 |     |     |     |     | 4485 |      |     |     |  |
| Gly  | Leu  | Val | Lys | Thr | Thr | Asp  | Met | Leu | Asn | Thr | Ser  | Met  | Glu | Pro |  |
|      | 4490 |     |     |     |     | 4495 |     |     |     |     | 4500 |      |     |     |  |
| Val  | Thr  | Asn | Ser | Pro | Gln | Asn  | Leu | Asn | Asn | Pro | Ser  | Asn  | Glu | Ile |  |
|      | 4505 |     |     |     |     | 4510 |     |     |     |     | 4515 |      |     |     |  |
| Leu  | Ala  | Thr | Leu | Ala | Ala | Thr  | Thr | Asp | Ile | Glu | Thr  | Ile  | His | Pro |  |
|      | 4520 |     |     |     |     | 4525 |     |     |     |     | 4530 |      |     |     |  |
| Ser  | Ile  | Asn | Lys | Ala | Val | Thr  | Asn | Met | Gly | Thr | Ala  | Ser  | Ser | Ala |  |
|      | 4535 |     |     |     |     | 4540 |     |     |     |     | 4545 |      |     |     |  |
| His  | Val  | Leu | His | Ser | Thr | Leu  | Pro | Val | Ser | Ser | Glu  | Pro  | Ser | Thr |  |
|      | 4550 |     |     |     |     | 4555 |     |     |     |     | 4560 |      |     |     |  |
| Ala  | Thr  | Ser | Pro | Met | Val | Pro  | Ala | Ser | Ser | Met | Gly  | Asp  | Ala | Leu |  |
|      | 4565 |     |     |     |     | 4570 |     |     |     |     | 4575 |      |     |     |  |
| Ala  | Ser  | Ile | Ser | Ile | Pro | Gly  | Ser | Glu | Thr | Thr | Asp  | Ile  | Glu | Gly |  |
|      | 4580 |     |     |     |     | 4585 |     |     |     |     | 4590 |      |     |     |  |
| Glu  | Pro  | Thr | Ser | Ser | Leu | Thr  | Ala | Gly | Arg | Lys | Glu  | Asn  | Ser | Thr |  |
|      | 4595 |     |     |     |     | 4600 |     |     |     |     | 4605 |      |     |     |  |
| Leu  | Gln  | Glu | Met | Asn | Ser | Thr  | Thr | Glu | Ser | Asn | Ile  | Ile  | Leu | Ser |  |
|      | 4610 |     |     |     |     | 4615 |     |     |     |     | 4620 |      |     |     |  |
| Asn  | Val  | Ser | Val | Gly | Ala | Ile  | Thr | Glu | Ala | Thr | Lys  | Met  | Glu | Val |  |
|      | 4625 |     |     |     |     | 4630 |     |     |     |     | 4635 |      |     |     |  |
| Pro  | Ser  | Phe | Asp | Ala | Thr | Phe  | Ile | Pro | Thr | Pro | Ala  | Gln  | Ser | Thr |  |
|      | 4640 |     |     |     |     | 4645 |     |     |     |     | 4650 |      |     |     |  |
| Lys  | Phe  | Pro | Asp | Ile | Phe | Ser  | Val | Ala | Ser | Ser | Arg  | Leu  | Ser | Asn |  |

4655 4660 4665

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|      |     |     |     |     |     |      |     |     |     |     |      |      |     |     |  |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|--|
| 4910 |     |     |     |     |     | 4915 |     |     |     |     |      | 4920 |     |     |  |
| Thr  | Thr | Glu | Val | Ser | Arg | Thr  | Asp | Val | Thr | Ser | Ser  | Ser  | Ser | Thr |  |
| 4925 |     |     |     |     |     | 4930 |     |     |     |     | 4935 |      |     |     |  |
| Ser  | Phe | Pro | Gly | Pro | Asp | Gln  | Ser | Thr | Val | Ser | Leu  | Asp  | Ile | Ser |  |
| 4940 |     |     |     |     |     | 4945 |     |     |     |     | 4950 |      |     |     |  |
| Thr  | Glu | Thr | Asn | Thr | Arg | Leu  | Ser | Thr | Ser | Pro | Ile  | Met  | Thr | Glu |  |
| 4955 |     |     |     |     |     | 4960 |     |     |     |     | 4965 |      |     |     |  |
| Ser  | Ala | Glu | Ile | Thr | Ile | Thr  | Thr | Gln | Thr | Gly | Pro  | His  | Gly | Ala |  |
| 4970 |     |     |     |     |     | 4975 |     |     |     |     | 4980 |      |     |     |  |
| Thr  | Ser | Gln | Asp | Thr | Phe | Thr  | Met | Asp | Pro | Ser | Asn  | Thr  | Thr | Pro |  |
| 4985 |     |     |     |     |     | 4990 |     |     |     |     | 4995 |      |     |     |  |
| Gln  | Ala | Gly | Ile | His | Ser | Ala  | Met | Thr | His | Gly | Phe  | Ser  | Gln | Leu |  |
| 5000 |     |     |     |     |     | 5005 |     |     |     |     | 5010 |      |     |     |  |
| Asp  | Val | Thr | Thr | Leu | Met | Ser  | Arg | Ile | Pro | Gln | Asp  | Val  | Ser | Trp |  |
| 5015 |     |     |     |     |     | 5020 |     |     |     |     | 5025 |      |     |     |  |
| Thr  | Ser | Pro | Pro | Ser | Val | Asp  | Lys | Thr | Ser | Ser | Pro  | Ser  | Ser | Phe |  |
| 5030 |     |     |     |     |     | 5035 |     |     |     |     | 5040 |      |     |     |  |
| Leu  | Ser | Ser | Pro | Ala | Met | Thr  | Thr | Pro | Ser | Leu | Ile  | Ser  | Ser | Thr |  |
| 5045 |     |     |     |     |     | 5050 |     |     |     |     | 5055 |      |     |     |  |
| Leu  | Pro | Glu | Asp | Lys | Leu | Ser  | Ser | Pro | Met | Thr | Ser  | Leu  | Leu | Thr |  |
| 5060 |     |     |     |     |     | 5065 |     |     |     |     | 5070 |      |     |     |  |
| Ser  | Gly | Leu | Val | Lys | Ile | Thr  | Asp | Ile | Leu | Arg | Thr  | Arg  | Leu | Glu |  |
| 5075 |     |     |     |     |     | 5080 |     |     |     |     | 5085 |      |     |     |  |
| Pro  | Val | Thr | Ser | Ser | Leu | Pro  | Asn | Phe | Ser | Ser | Thr  | Ser  | Asp | Lys |  |
| 5090 |     |     |     |     |     | 5095 |     |     |     |     | 5100 |      |     |     |  |
| Ile  | Leu | Ala | Thr | Ser | Lys | Asp  | Ser | Lys | Asp | Thr | Lys  | Glu  | Ile | Phe |  |
| 5105 |     |     |     |     |     | 5110 |     |     |     |     | 5115 |      |     |     |  |
| Pro  | Ser | Ile | Asn | Thr | Glu | Glu  | Thr | Asn | Val | Lys | Ala  | Asn  | Asn | Ser |  |
| 5120 |     |     |     |     |     | 5125 |     |     |     |     | 5130 |      |     |     |  |
| Gly  | His | Glu | Ser | His | Ser | Pro  | Ala | Leu | Ala | Asp | Ser  | Glu  | Thr | Pro |  |
| 5135 |     |     |     |     |     | 5140 |     |     |     |     | 5145 |      |     |     |  |
| Lys  | Ala | Thr | Thr | Gln | Met | Val  | Ile | Thr | Thr | Thr | Val  | Gly  | Asp | Pro |  |
| 5150 |     |     |     |     |     | 5155 |     |     |     |     | 5160 |      |     |     |  |
| Ala  | Pro | Ser | Thr | Ser | Met | Pro  | Val | His | Gly | Ser | Ser  | Glu  | Thr | Thr |  |

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|      |      |     |     |     |     |      |     |     |     |     |      |     |     |      |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|------|
| 5165 |      |     |     |     |     | 5170 |     |     |     |     |      |     |     | 5175 |
| Asn  | Ile  | Lys | Arg | Glu | Pro | Thr  | Tyr | Phe | Leu | Thr | Pro  | Arg | Leu | Arg  |
|      | 5180 |     |     |     |     | 5185 |     |     |     |     | 5190 |     |     |      |
| Glu  | Thr  | Ser | Thr | Ser | Gln | Glu  | Ser | Ser | Phe | Pro | Thr  | Asp | Thr | Ser  |
|      | 5195 |     |     |     |     | 5200 |     |     |     |     | 5205 |     |     |      |
| Phe  | Leu  | Leu | Ser | Lys | Val | Pro  | Thr | Gly | Thr | Ile | Thr  | Glu | Val | Ser  |
|      | 5210 |     |     |     |     | 5215 |     |     |     |     | 5220 |     |     |      |
| Ser  | Thr  | Gly | Val | Asn | Ser | Ser  | Ser | Lys | Ile | Ser | Thr  | Pro | Asp | His  |
|      | 5225 |     |     |     |     | 5230 |     |     |     |     | 5235 |     |     |      |
| Asp  | Lys  | Ser | Thr | Val | Pro | Pro  | Asp | Thr | Phe | Thr | Gly  | Glu | Ile | Pro  |
|      | 5240 |     |     |     |     | 5245 |     |     |     |     | 5250 |     |     |      |
| Arg  | Val  | Phe | Thr | Ser | Ser | Ile  | Lys | Thr | Lys | Ser | Ala  | Glu | Met | Thr  |
|      | 5255 |     |     |     |     | 5260 |     |     |     |     | 5265 |     |     |      |
| Ile  | Thr  | Thr | Gln | Ala | Ser | Pro  | Pro | Glu | Ser | Ala | Ser  | His | Ser | Thr  |
|      | 5270 |     |     |     |     | 5275 |     |     |     |     | 5280 |     |     |      |
| Leu  | Pro  | Leu | Asp | Thr | Ser | Thr  | Thr | Leu | Ser | Gln | Gly  | Gly | Thr | His  |
|      | 5285 |     |     |     |     | 5290 |     |     |     |     | 5295 |     |     |      |
| Ser  | Thr  | Val | Thr | Gln | Gly | Phe  | Pro | Tyr | Ser | Glu | Val  | Thr | Thr | Leu  |
|      | 5300 |     |     |     |     | 5305 |     |     |     |     | 5310 |     |     |      |
| Met  | Gly  | Met | Gly | Pro | Gly | Asn  | Val | Ser | Trp | Met | Thr  | Thr | Pro | Pro  |
|      | 5315 |     |     |     |     | 5320 |     |     |     |     | 5325 |     |     |      |
| Val  | Glu  | Glu | Thr | Ser | Ser | Val  | Ser | Ser | Leu | Met | Ser  | Ser | Pro | Ala  |
|      | 5330 |     |     |     |     | 5335 |     |     |     |     | 5340 |     |     |      |
| Met  | Thr  | Ser | Pro | Ser | Pro | Val  | Ser | Ser | Thr | Ser | Pro  | Gln | Ser | Ile  |
|      | 5345 |     |     |     |     | 5350 |     |     |     |     | 5355 |     |     |      |
| Pro  | Ser  | Ser | Pro | Leu | Pro | Val  | Thr | Ala | Leu | Pro | Thr  | Ser | Val | Leu  |
|      | 5360 |     |     |     |     | 5365 |     |     |     |     | 5370 |     |     |      |
| Val  | Thr  | Thr | Thr | Asp | Val | Leu  | Gly | Thr | Thr | Ser | Pro  | Glu | Ser | Val  |
|      | 5375 |     |     |     |     | 5380 |     |     |     |     | 5385 |     |     |      |
| Thr  | Ser  | Ser | Pro | Pro | Asn | Leu  | Ser | Ser | Ile | Thr | His  | Glu | Arg | Pro  |
|      | 5390 |     |     |     |     | 5395 |     |     |     |     | 5400 |     |     |      |
| Ala  | Thr  | Tyr | Lys | Asp | Thr | Ala  | His | Thr | Glu | Ala | Ala  | Met | His | His  |
|      | 5405 |     |     |     |     | 5410 |     |     |     |     | 5415 |     |     |      |
| Ser  | Thr  | Asn | Thr | Ala | Val | Thr  | Asn | Val | Gly | Thr | Ser  | Gly | Ser | Gly  |



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|      |      |     |     |     |     |      |     |     |     |     |      |     |     |      |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|------|
| 5420 |      |     |     |     |     | 5425 |     |     |     |     |      |     |     | 5430 |
| His  | Lys  | Ser | Gln | Ser | Ser | Val  | Leu | Ala | Asp | Ser | Glu  | Thr | Ser | Lys  |
|      | 5435 |     |     |     |     | 5440 |     |     |     |     | 5445 |     |     |      |
| Ala  | Thr  | Pro | Leu | Met | Ser | Thr  | Thr | Ser | Thr | Leu | Gly  | Asp | Thr | Ser  |
|      | 5450 |     |     |     |     | 5455 |     |     |     |     | 5460 |     |     |      |
| Val  | Ser  | Thr | Ser | Thr | Pro | Asn  | Ile | Ser | Gln | Thr | Asn  | Gln | Ile | Gln  |
|      | 5465 |     |     |     |     | 5470 |     |     |     |     | 5475 |     |     |      |
| Thr  | Glu  | Pro | Thr | Ala | Ser | Leu  | Ser | Pro | Arg | Leu | Arg  | Glu | Ser | Ser  |
|      | 5480 |     |     |     |     | 5485 |     |     |     |     | 5490 |     |     |      |
| Thr  | Ser  | Glu | Lys | Thr | Ser | Ser  | Thr | Thr | Glu | Thr | Asn  | Thr | Ala | Phe  |
|      | 5495 |     |     |     |     | 5500 |     |     |     |     | 5505 |     |     |      |
| Ser  | Tyr  | Val | Pro | Thr | Gly | Ala  | Ile | Thr | Gln | Ala | Ser  | Arg | Thr | Glu  |
|      | 5510 |     |     |     |     | 5515 |     |     |     |     | 5520 |     |     |      |
| Ile  | Ser  | Ser | Ser | Arg | Thr | Ser  | Ile | Ser | Asp | Leu | Asp  | Arg | Pro | Thr  |
|      | 5525 |     |     |     |     | 5530 |     |     |     |     | 5535 |     |     |      |
| Ile  | Ala  | Pro | Asp | Ile | Ser | Thr  | Gly | Met | Ile | Thr | Arg  | Leu | Phe | Thr  |
|      | 5540 |     |     |     |     | 5545 |     |     |     |     | 5550 |     |     |      |
| Ser  | Pro  | Ile | Met | Thr | Lys | Ser  | Ala | Glu | Met | Thr | Val  | Thr | Thr | Gln  |
|      | 5555 |     |     |     |     | 5560 |     |     |     |     | 5565 |     |     |      |
| Thr  | Thr  | Thr | Pro | Gly | Ala | Thr  | Ser | Gln | Gly | Ile | Leu  | Pro | Trp | Asp  |
|      | 5570 |     |     |     |     | 5575 |     |     |     |     | 5580 |     |     |      |
| Thr  | Ser  | Thr | Thr | Leu | Phe | Gln  | Gly | Gly | Thr | His | Ser  | Thr | Val | Ser  |
|      | 5585 |     |     |     |     | 5590 |     |     |     |     | 5595 |     |     |      |
| Gln  | Gly  | Phe | Pro | His | Ser | Glu  | Ile | Thr | Thr | Leu | Arg  | Ser | Arg | Thr  |
|      | 5600 |     |     |     |     | 5605 |     |     |     |     | 5610 |     |     |      |
| Pro  | Gly  | Asp | Val | Ser | Trp | Met  | Thr | Thr | Pro | Pro | Val  | Glu | Glu | Thr  |
|      | 5615 |     |     |     |     | 5620 |     |     |     |     | 5625 |     |     |      |
| Ser  | Ser  | Gly | Phe | Ser | Leu | Met  | Ser | Pro | Ser | Met | Thr  | Ser | Pro | Ser  |
|      | 5630 |     |     |     |     | 5635 |     |     |     |     | 5640 |     |     |      |
| Pro  | Val  | Ser | Ser | Thr | Ser | Pro  | Glu | Ser | Ile | Pro | Ser  | Ser | Pro | Leu  |
|      | 5645 |     |     |     |     | 5650 |     |     |     |     | 5655 |     |     |      |
| Pro  | Val  | Thr | Ala | Leu | Leu | Thr  | Ser | Val | Leu | Val | Thr  | Thr | Thr | Asn  |
|      | 5660 |     |     |     |     | 5665 |     |     |     |     | 5670 |     |     |      |
| Val  | Leu  | Gly | Thr | Thr | Ser | Pro  | Glu | Pro | Val | Thr | Ser  | Ser | Pro | Pro  |

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|      |      |     |     |     |     |      |     |     |     |     |      |     |     |      |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|------|
| 5675 |      |     |     |     |     | 5680 |     |     |     |     |      |     |     | 5685 |
| Asn  | Leu  | Ser | Ser | Pro | Thr | Gln  | Glu | Arg | Leu | Thr | Thr  | Tyr | Lys | Asp  |
|      | 5690 |     |     |     |     | 5695 |     |     |     |     | 5700 |     |     |      |
| Thr  | Ala  | His | Thr | Glu | Ala | Met  | His | Ala | Ser | Met | His  | Thr | Asn | Thr  |
|      | 5705 |     |     |     |     | 5710 |     |     |     |     | 5715 |     |     |      |
| Ala  | Val  | Ala | Asn | Val | Gly | Thr  | Ser | Ile | Ser | Gly | His  | Glu | Ser | Gln  |
|      | 5720 |     |     |     |     | 5725 |     |     |     |     | 5730 |     |     |      |
| Ser  | Ser  | Val | Pro | Ala | Asp | Ser  | His | Thr | Ser | Lys | Ala  | Thr | Ser | Pro  |
|      | 5735 |     |     |     |     | 5740 |     |     |     |     | 5745 |     |     |      |
| Met  | Gly  | Ile | Thr | Phe | Ala | Met  | Gly | Asp | Thr | Ser | Val  | Ser | Thr | Ser  |
|      | 5750 |     |     |     |     | 5755 |     |     |     |     | 5760 |     |     |      |
| Thr  | Pro  | Ala | Phe | Phe | Glu | Thr  | Arg | Ile | Gln | Thr | Glu  | Ser | Thr | Ser  |
|      | 5765 |     |     |     |     | 5770 |     |     |     |     | 5775 |     |     |      |
| Ser  | Leu  | Ile | Pro | Gly | Leu | Arg  | Asp | Thr | Arg | Thr | Ser  | Glu | Glu | Ile  |
|      | 5780 |     |     |     |     | 5785 |     |     |     |     | 5790 |     |     |      |
| Asn  | Thr  | Val | Thr | Glu | Thr | Ser  | Thr | Val | Leu | Ser | Glu  | Val | Pro | Thr  |
|      | 5795 |     |     |     |     | 5800 |     |     |     |     | 5805 |     |     |      |
| Thr  | Thr  | Thr | Thr | Glu | Val | Ser  | Arg | Thr | Glu | Val | Ile  | Thr | Ser | Ser  |
|      | 5810 |     |     |     |     | 5815 |     |     |     |     | 5820 |     |     |      |
| Arg  | Thr  | Thr | Ile | Ser | Gly | Pro  | Asp | His | Ser | Lys | Met  | Ser | Pro | Tyr  |
|      | 5825 |     |     |     |     | 5830 |     |     |     |     | 5835 |     |     |      |
| Ile  | Ser  | Thr | Glu | Thr | Ile | Thr  | Arg | Leu | Ser | Thr | Phe  | Pro | Phe | Val  |
|      | 5840 |     |     |     |     | 5845 |     |     |     |     | 5850 |     |     |      |
| Thr  | Gly  | Ser | Thr | Glu | Met | Ala  | Ile | Thr | Asn | Gln | Thr  | Gly | Pro | Ile  |
|      | 5855 |     |     |     |     | 5860 |     |     |     |     | 5865 |     |     |      |
| Gly  | Thr  | Ile | Ser | Gln | Ala | Thr  | Leu | Thr | Leu | Asp | Thr  | Ser | Ser | Thr  |
|      | 5870 |     |     |     |     | 5875 |     |     |     |     | 5880 |     |     |      |
| Ala  | Ser  | Trp | Glu | Gly | Thr | His  | Ser | Pro | Val | Thr | Gln  | Arg | Phe | Pro  |
|      | 5885 |     |     |     |     | 5890 |     |     |     |     | 5895 |     |     |      |
| His  | Ser  | Glu | Glu | Thr | Thr | Thr  | Met | Ser | Arg | Ser | Thr  | Lys | Gly | Val  |
|      | 5900 |     |     |     |     | 5905 |     |     |     |     | 5910 |     |     |      |
| Ser  | Trp  | Gln | Ser | Pro | Pro | Ser  | Val | Glu | Glu | Thr | Ser  | Ser | Pro | Ser  |
|      | 5915 |     |     |     |     | 5920 |     |     |     |     | 5925 |     |     |      |
| Ser  | Pro  | Val | Pro | Leu | Pro | Ala  | Ile | Thr | Ser | His | Ser  | Ser | Leu | Tyr  |

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|      |     |     |     |     |     |      |     |     |     |     |      |             |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-------------|
| 5930 |     |     |     |     |     | 5935 |     |     |     |     |      | 5940        |
| Ser  | Ala | Val | Ser | Gly | Ser | Ser  | Pro | Thr | Ser | Ala | Leu  | Pro Val Thr |
| 5945 |     |     |     |     |     | 5950 |     |     |     |     | 5955 |             |
| Ser  | Leu | Leu | Thr | Ser | Gly | Arg  | Arg | Lys | Thr | Ile | Asp  | Met Leu Asp |
| 5960 |     |     |     |     |     | 5965 |     |     |     |     | 5970 |             |
| Thr  | His | Ser | Glu | Leu | Val | Thr  | Ser | Ser | Leu | Pro | Ser  | Ala Ser Ser |
| 5975 |     |     |     |     |     | 5980 |     |     |     |     | 5985 |             |
| Phe  | Ser | Gly | Glu | Ile | Leu | Thr  | Ser | Glu | Ala | Ser | Thr  | Asn Thr Glu |
| 5990 |     |     |     |     |     | 5995 |     |     |     |     | 6000 |             |
| Thr  | Ile | His | Phe | Ser | Glu | Asn  | Thr | Ala | Glu | Thr | Asn  | Met Gly Thr |
| 6005 |     |     |     |     |     | 6010 |     |     |     |     | 6015 |             |
| Thr  | Asn | Ser | Met | His | Lys | Leu  | His | Ser | Ser | Val | Ser  | Ile His Ser |
| 6020 |     |     |     |     |     | 6025 |     |     |     |     | 6030 |             |
| Gln  | Pro | Ser | Gly | His | Thr | Pro  | Pro | Lys | Val | Thr | Gly  | Ser Met Met |
| 6035 |     |     |     |     |     | 6040 |     |     |     |     | 6045 |             |
| Glu  | Asp | Ala | Ile | Val | Ser | Thr  | Ser | Thr | Pro | Gly | Ser  | Pro Glu Thr |
| 6050 |     |     |     |     |     | 6055 |     |     |     |     | 6060 |             |
| Lys  | Asn | Val | Asp | Arg | Asp | Ser  | Thr | Ser | Pro | Leu | Thr  | Pro Glu Leu |
| 6065 |     |     |     |     |     | 6070 |     |     |     |     | 6075 |             |
| Lys  | Glu | Asp | Ser | Thr | Ala | Leu  | Val | Met | Asn | Ser | Thr  | Thr Glu Ser |
| 6080 |     |     |     |     |     | 6085 |     |     |     |     | 6090 |             |
| Asn  | Thr | Val | Phe | Ser | Ser | Val  | Ser | Leu | Asp | Ala | Ala  | Thr Glu Val |
| 6095 |     |     |     |     |     | 6100 |     |     |     |     | 6105 |             |
| Ser  | Arg | Ala | Glu | Val | Thr | Tyr  | Tyr | Asp | Pro | Thr | Phe  | Met Pro Ala |
| 6110 |     |     |     |     |     | 6115 |     |     |     |     | 6120 |             |
| Ser  | Ala | Gln | Ser | Thr | Lys | Ser  | Pro | Asp | Ile | Ser | Pro  | Glu Ala Ser |
| 6125 |     |     |     |     |     | 6130 |     |     |     |     | 6135 |             |
| Ser  | Ser | His | Ser | Asn | Ser | Pro  | Pro | Leu | Thr | Ile | Ser  | Thr His Lys |
| 6140 |     |     |     |     |     | 6145 |     |     |     |     | 6150 |             |
| Thr  | Ile | Ala | Thr | Gln | Thr | Gly  | Pro | Ser | Gly | Val | Thr  | Ser Leu Gly |
| 6155 |     |     |     |     |     | 6160 |     |     |     |     | 6165 |             |
| Gln  | Leu | Thr | Leu | Asp | Thr | Ser  | Thr | Ile | Ala | Thr | Ser  | Ala Gly Thr |
| 6170 |     |     |     |     |     | 6175 |     |     |     |     | 6180 |             |
| Pro  | Ser | Ala | Arg | Thr | Gln | Asp  | Phe | Val | Asp | Ser | Glu  | Thr Thr Ser |

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|      |      |     |     |     |     |      |     |     |     |     |      |     |     |     |  |      |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|--|------|
| 6185 |      |     |     |     |     | 6190 |     |     |     |     |      |     |     |     |  | 6195 |
| Val  | Met  | Asn | Asn | Asp | Leu | Asn  | Asp | Val | Leu | Lys | Thr  | Ser | Pro | Phe |  |      |
|      | 6200 |     |     |     |     | 6205 |     |     |     |     | 6210 |     |     |     |  |      |
| Ser  | Ala  | Glu | Glu | Ala | Asn | Ser  | Leu | Ser | Ser | Gln | Ala  | Pro | Leu | Leu |  |      |
|      | 6215 |     |     |     |     | 6220 |     |     |     |     | 6225 |     |     |     |  |      |
| Val  | Thr  | Thr | Ser | Pro | Ser | Pro  | Val | Thr | Ser | Thr | Leu  | Gln | Glu | His |  |      |
|      | 6230 |     |     |     |     | 6235 |     |     |     |     | 6240 |     |     |     |  |      |
| Ser  | Thr  | Ser | Ser | Leu | Val | Ser  | Val | Thr | Ser | Val | Pro  | Thr | Pro | Thr |  |      |
|      | 6245 |     |     |     |     | 6250 |     |     |     |     | 6255 |     |     |     |  |      |
| Leu  | Ala  | Lys | Ile | Thr | Asp | Met  | Asp | Thr | Asn | Leu | Glu  | Pro | Val | Thr |  |      |
|      | 6260 |     |     |     |     | 6265 |     |     |     |     | 6270 |     |     |     |  |      |
| Arg  | Ser  | Pro | Gln | Asn | Leu | Arg  | Asn | Thr | Leu | Ala | Thr  | Ser | Glu | Ala |  |      |
|      | 6275 |     |     |     |     | 6280 |     |     |     |     | 6285 |     |     |     |  |      |
| Thr  | Thr  | Asp | Thr | His | Thr | Met  | His | Pro | Ser | Ile | Asn  | Thr | Ala | Val |  |      |
|      | 6290 |     |     |     |     | 6295 |     |     |     |     | 6300 |     |     |     |  |      |
| Ala  | Asn  | Val | Gly | Thr | Thr | Ser  | Ser | Pro | Asn | Glu | Phe  | Tyr | Phe | Thr |  |      |
|      | 6305 |     |     |     |     | 6310 |     |     |     |     | 6315 |     |     |     |  |      |
| Val  | Ser  | Pro | Asp | Ser | Asp | Pro  | Tyr | Lys | Ala | Thr | Ser  | Ala | Val | Val |  |      |
|      | 6320 |     |     |     |     | 6325 |     |     |     |     | 6330 |     |     |     |  |      |
| Ile  | Thr  | Ser | Thr | Ser | Gly | Asp  | Ser | Ile | Val | Ser | Thr  | Ser | Met | Pro |  |      |
|      | 6335 |     |     |     |     | 6340 |     |     |     |     | 6345 |     |     |     |  |      |
| Arg  | Ser  | Ser | Ala | Met | Lys | Lys  | Ile | Glu | Ser | Glu | Thr  | Thr | Phe | Ser |  |      |
|      | 6350 |     |     |     |     | 6355 |     |     |     |     | 6360 |     |     |     |  |      |
| Leu  | Ile  | Phe | Arg | Leu | Arg | Glu  | Thr | Ser | Thr | Ser | Gln  | Lys | Ile | Gly |  |      |
|      | 6365 |     |     |     |     | 6370 |     |     |     |     | 6375 |     |     |     |  |      |
| Ser  | Ser  | Ser | Asp | Thr | Ser | Thr  | Val | Phe | Asp | Lys | Ala  | Phe | Thr | Ala |  |      |
|      | 6380 |     |     |     |     | 6385 |     |     |     |     | 6390 |     |     |     |  |      |
| Ala  | Thr  | Thr | Glu | Val | Ser | Arg  | Thr | Glu | Leu | Thr | Ser  | Ser | Ser | Arg |  |      |
|      | 6395 |     |     |     |     | 6400 |     |     |     |     | 6405 |     |     |     |  |      |
| Thr  | Ser  | Ile | Gln | Gly | Thr | Glu  | Lys | Pro | Thr | Met | Ser  | Pro | Asp | Thr |  |      |
|      | 6410 |     |     |     |     | 6415 |     |     |     |     | 6420 |     |     |     |  |      |
| Ser  | Thr  | Arg | Ser | Val | Thr | Met  | Leu | Ser | Thr | Phe | Ala  | Gly | Leu | Thr |  |      |
|      | 6425 |     |     |     |     | 6430 |     |     |     |     | 6435 |     |     |     |  |      |
| Lys  | Ser  | Glu | Glu | Arg | Thr | Ile  | Ala | Thr | Gln | Thr | Gly  | Pro | His | Arg |  |      |

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|      |     |     |     |     |     |      |     |     |     |     |      |     |     |     |  |      |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|--|------|
| 6440 |     |     |     |     |     | 6445 |     |     |     |     |      |     |     |     |  | 6450 |
| Ala  | Thr | Ser | Gln | Gly | Thr | Leu  | Thr | Trp | Asp | Thr | Ser  | Ile | Thr | Thr |  |      |
| 6455 |     |     |     |     |     | 6460 |     |     |     |     | 6465 |     |     |     |  |      |
| Ser  | Gln | Ala | Gly | Thr | His | Ser  | Ala | Met | Thr | His | Gly  | Phe | Ser | Gln |  |      |
| 6470 |     |     |     |     |     | 6475 |     |     |     |     | 6480 |     |     |     |  |      |
| Leu  | Asp | Leu | Ser | Thr | Leu | Thr  | Ser | Arg | Val | Pro | Glu  | Tyr | Ile | Ser |  |      |
| 6485 |     |     |     |     |     | 6490 |     |     |     |     | 6495 |     |     |     |  |      |
| Gly  | Thr | Ser | Pro | Pro | Ser | Val  | Glu | Lys | Thr | Ser | Ser  | Ser | Ser |     |  |      |
| 6500 |     |     |     |     |     | 6505 |     |     |     |     | 6510 |     |     |     |  |      |
| Leu  | Leu | Ser | Leu | Pro | Ala | Ile  | Thr | Ser | Pro | Ser | Pro  | Val | Pro | Thr |  |      |
| 6515 |     |     |     |     |     | 6520 |     |     |     |     | 6525 |     |     |     |  |      |
| Thr  | Leu | Pro | Glu | Ser | Arg | Pro  | Ser | Ser | Pro | Val | His  | Leu | Thr | Ser |  |      |
| 6530 |     |     |     |     |     | 6535 |     |     |     |     | 6540 |     |     |     |  |      |
| Leu  | Pro | Thr | Ser | Gly | Leu | Val  | Lys | Thr | Thr | Asp | Met  | Leu | Ala | Ser |  |      |
| 6545 |     |     |     |     |     | 6550 |     |     |     |     | 6555 |     |     |     |  |      |
| Val  | Ala | Ser | Leu | Pro | Pro | Asn  | Leu | Gly | Ser | Thr | Ser  | His | Lys | Ile |  |      |
| 6560 |     |     |     |     |     | 6565 |     |     |     |     | 6570 |     |     |     |  |      |
| Pro  | Thr | Thr | Ser | Glu | Asp | Ile  | Lys | Asp | Thr | Glu | Lys  | Met | Tyr | Pro |  |      |
| 6575 |     |     |     |     |     | 6580 |     |     |     |     | 6585 |     |     |     |  |      |
| Ser  | Thr | Asn | Ile | Ala | Val | Thr  | Asn | Val | Gly | Thr | Thr  | Thr | Ser | Glu |  |      |
| 6590 |     |     |     |     |     | 6595 |     |     |     |     | 6600 |     |     |     |  |      |
| Lys  | Glu | Ser | Tyr | Ser | Ser | Val  | Pro | Ala | Tyr | Ser | Glu  | Pro | Pro | Lys |  |      |
| 6605 |     |     |     |     |     | 6610 |     |     |     |     | 6615 |     |     |     |  |      |
| Val  | Thr | Ser | Pro | Met | Val | Thr  | Ser | Phe | Asn | Ile | Arg  | Asp | Thr | Ile |  |      |
| 6620 |     |     |     |     |     | 6625 |     |     |     |     | 6630 |     |     |     |  |      |
| Val  | Ser | Thr | Ser | Met | Pro | Gly  | Ser | Ser | Glu | Ile | Thr  | Arg | Ile | Glu |  |      |
| 6635 |     |     |     |     |     | 6640 |     |     |     |     | 6645 |     |     |     |  |      |
| Met  | Glu | Ser | Thr | Phe | Ser | Leu  | Ala | His | Gly | Leu | Lys  | Gly | Thr | Ser |  |      |
| 6650 |     |     |     |     |     | 6655 |     |     |     |     | 6660 |     |     |     |  |      |
| Thr  | Ser | Gln | Asp | Pro | Ile | Val  | Ser | Thr | Glu | Lys | Ser  | Ala | Val | Leu |  |      |
| 6665 |     |     |     |     |     | 6670 |     |     |     |     | 6675 |     |     |     |  |      |
| His  | Lys | Leu | Thr | Thr | Gly | Ala  | Thr | Glu | Thr | Ser | Arg  | Thr | Glu | Val |  |      |
| 6680 |     |     |     |     |     | 6685 |     |     |     |     | 6690 |     |     |     |  |      |
| Ala  | Ser | Ser | Arg | Arg | Thr | Ser  | Ile | Pro | Gly | Pro | Asp  | His | Ser | Thr |  |      |

6695 6700 6705

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|      |     |     |     |     |     |      |     |     |     |     |      |     |     |     |  |      |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|--|------|
| 6950 |     |     |     |     |     | 6955 |     |     |     |     |      |     |     |     |  | 6960 |
| Phe  | Ser | Thr | Asp | Thr | Ser | Ile  | Val | Leu | Ser | Glu | Val  | Pro | Thr | Gly |  |      |
| 6965 |     |     |     |     |     | 6970 |     |     |     |     | 6975 |     |     |     |  |      |
| Thr  | Thr | Ala | Glu | Val | Ser | Arg  | Thr | Glu | Val | Thr | Ser  | Ser | Gly | Arg |  |      |
| 6980 |     |     |     |     |     | 6985 |     |     |     |     | 6990 |     |     |     |  |      |
| Thr  | Ser | Ile | Pro | Gly | Pro | Ser  | Gln | Ser | Thr | Val | Leu  | Pro | Glu | Ile |  |      |
| 6995 |     |     |     |     |     | 7000 |     |     |     |     | 7005 |     |     |     |  |      |
| Ser  | Thr | Arg | Thr | Met | Thr | Arg  | Leu | Phe | Ala | Ser | Pro  | Thr | Met | Thr |  |      |
| 7010 |     |     |     |     |     | 7015 |     |     |     |     | 7020 |     |     |     |  |      |
| Glu  | Ser | Ala | Glu | Met | Thr | Ile  | Pro | Thr | Gln | Thr | Gly  | Pro | Ser | Gly |  |      |
| 7025 |     |     |     |     |     | 7030 |     |     |     |     | 7035 |     |     |     |  |      |
| Ser  | Thr | Ser | Gln | Asp | Thr | Leu  | Thr | Leu | Asp | Thr | Ser  | Thr | Thr | Lys |  |      |
| 7040 |     |     |     |     |     | 7045 |     |     |     |     | 7050 |     |     |     |  |      |
| Ser  | Gln | Ala | Lys | Thr | His | Ser  | Thr | Leu | Thr | Gln | Arg  | Phe | Pro | His |  |      |
| 7055 |     |     |     |     |     | 7060 |     |     |     |     | 7065 |     |     |     |  |      |
| Ser  | Glu | Met | Thr | Thr | Leu | Met  | Ser | Arg | Gly | Pro | Gly  | Asp | Met | Ser |  |      |
| 7070 |     |     |     |     |     | 7075 |     |     |     |     | 7080 |     |     |     |  |      |
| Trp  | Gln | Ser | Ser | Pro | Ser | Leu  | Glu | Asn | Pro | Ser | Ser  | Leu | Pro | Ser |  |      |
| 7085 |     |     |     |     |     | 7090 |     |     |     |     | 7095 |     |     |     |  |      |
| Leu  | Leu | Ser | Leu | Pro | Ala | Thr  | Thr | Ser | Pro | Pro | Pro  | Ile | Ser | Ser |  |      |
| 7100 |     |     |     |     |     | 7105 |     |     |     |     | 7110 |     |     |     |  |      |
| Thr  | Leu | Pro | Val | Thr | Ile | Ser  | Ser | Ser | Pro | Leu | Pro  | Val | Thr | Ser |  |      |
| 7115 |     |     |     |     |     | 7120 |     |     |     |     | 7125 |     |     |     |  |      |
| Leu  | Leu | Thr | Ser | Ser | Pro | Val  | Thr | Thr | Thr | Asp | Met  | Leu | His | Thr |  |      |
| 7130 |     |     |     |     |     | 7135 |     |     |     |     | 7140 |     |     |     |  |      |
| Ser  | Pro | Glu | Leu | Val | Thr | Ser  | Ser | Pro | Pro | Lys | Leu  | Ser | His | Thr |  |      |
| 7145 |     |     |     |     |     | 7150 |     |     |     |     | 7155 |     |     |     |  |      |
| Ser  | Asp | Glu | Arg | Leu | Thr | Thr  | Gly | Lys | Asp | Thr | Thr  | Asn | Thr | Glu |  |      |
| 7160 |     |     |     |     |     | 7165 |     |     |     |     | 7170 |     |     |     |  |      |
| Ala  | Val | His | Pro | Ser | Thr | Asn  | Thr | Ala | Ala | Ser | Asn  | Val | Glu | Ile |  |      |
| 7175 |     |     |     |     |     | 7180 |     |     |     |     | 7185 |     |     |     |  |      |
| Pro  | Ser | Ser | Gly | His | Glu | Ser  | Pro | Ser | Ser | Ala | Leu  | Ala | Asp | Ser |  |      |
| 7190 |     |     |     |     |     | 7195 |     |     |     |     | 7200 |     |     |     |  |      |
| Glu  | Thr | Ser | Lys | Ala | Thr | Ser  | Pro | Met | Phe | Ile | Thr  | Ser | Thr | Gln |  |      |

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|      |      |     |     |     |     |      |     |     |     |     |      |      |     |     |  |  |  |  |  |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|--|--|--|--|--|
| 7205 |      |     |     |     |     | 7210 |     |     |     |     |      | 7215 |     |     |  |  |  |  |  |
| Glu  | Asp  | Thr | Thr | Val | Ala | Ile  | Ser | Thr | Pro | His | Phe  | Leu  | Glu | Thr |  |  |  |  |  |
|      | 7220 |     |     |     |     | 7225 |     |     |     |     | 7230 |      |     |     |  |  |  |  |  |
| Ser  | Arg  | Ile | Gln | Lys | Glu | Ser  | Ile | Ser | Ser | Leu | Ser  | Pro  | Lys | Leu |  |  |  |  |  |
|      | 7235 |     |     |     |     | 7240 |     |     |     |     | 7245 |      |     |     |  |  |  |  |  |
| Arg  | Glu  | Thr | Gly | Ser | Ser | Val  | Glu | Thr | Ser | Ser | Ala  | Ile  | Glu | Thr |  |  |  |  |  |
|      | 7250 |     |     |     |     | 7255 |     |     |     |     | 7260 |      |     |     |  |  |  |  |  |
| Ser  | Ala  | Val | Leu | Ser | Glu | Val  | Ser | Ile | Gly | Ala | Thr  | Thr  | Glu | Ile |  |  |  |  |  |
|      | 7265 |     |     |     |     | 7270 |     |     |     |     | 7275 |      |     |     |  |  |  |  |  |
| Ser  | Arg  | Thr | Glu | Val | Thr | Ser  | Ser | Ser | Arg | Thr | Ser  | Ile  | Ser | Gly |  |  |  |  |  |
|      | 7280 |     |     |     |     | 7285 |     |     |     |     | 7290 |      |     |     |  |  |  |  |  |
| Ser  | Ala  | Glu | Ser | Thr | Met | Leu  | Pro | Glu | Ile | Ser | Thr  | Thr  | Arg | Lys |  |  |  |  |  |
|      | 7295 |     |     |     |     | 7300 |     |     |     |     | 7305 |      |     |     |  |  |  |  |  |
| Ile  | Ile  | Lys | Phe | Pro | Thr | Ser  | Pro | Ile | Leu | Ala | Glu  | Ser  | Ser | Glu |  |  |  |  |  |
|      | 7310 |     |     |     |     | 7315 |     |     |     |     | 7320 |      |     |     |  |  |  |  |  |
| Met  | Thr  | Ile | Lys | Thr | Gln | Thr  | Ser | Pro | Pro | Gly | Ser  | Thr  | Ser | Glu |  |  |  |  |  |
|      | 7325 |     |     |     |     | 7330 |     |     |     |     | 7335 |      |     |     |  |  |  |  |  |
| Ser  | Thr  | Phe | Thr | Leu | Asp | Thr  | Ser | Thr | Thr | Pro | Ser  | Leu  | Val | Ile |  |  |  |  |  |
|      | 7340 |     |     |     |     | 7345 |     |     |     |     | 7350 |      |     |     |  |  |  |  |  |
| Thr  | His  | Ser | Thr | Met | Thr | Gln  | Arg | Leu | Pro | His | Ser  | Glu  | Ile | Thr |  |  |  |  |  |
|      | 7355 |     |     |     |     | 7360 |     |     |     |     | 7365 |      |     |     |  |  |  |  |  |
| Thr  | Leu  | Val | Ser | Arg | Gly | Ala  | Gly | Asp | Val | Pro | Arg  | Pro  | Ser | Ser |  |  |  |  |  |
|      | 7370 |     |     |     |     | 7375 |     |     |     |     | 7380 |      |     |     |  |  |  |  |  |
| Leu  | Pro  | Val | Glu | Glu | Thr | Ser  | Pro | Pro | Ser | Ser | Gln  | Leu  | Ser | Leu |  |  |  |  |  |
|      | 7385 |     |     |     |     | 7390 |     |     |     |     | 7395 |      |     |     |  |  |  |  |  |
| Ser  | Ala  | Met | Ile | Ser | Pro | Ser  | Pro | Val | Ser | Ser | Thr  | Leu  | Pro | Ala |  |  |  |  |  |
|      | 7400 |     |     |     |     | 7405 |     |     |     |     | 7410 |      |     |     |  |  |  |  |  |
| Ser  | Ser  | His | Ser | Ser | Ser | Ala  | Ser | Val | Thr | Ser | Leu  | Leu  | Thr | Pro |  |  |  |  |  |
|      | 7415 |     |     |     |     | 7420 |     |     |     |     | 7425 |      |     |     |  |  |  |  |  |
| Gly  | Gln  | Val | Lys | Thr | Thr | Glu  | Val | Leu | Asp | Ala | Ser  | Ala  | Glu | Pro |  |  |  |  |  |
|      | 7430 |     |     |     |     | 7435 |     |     |     |     | 7440 |      |     |     |  |  |  |  |  |
| Glu  | Thr  | Ser | Ser | Pro | Pro | Ser  | Leu | Ser | Ser | Thr | Ser  | Val  | Glu | Ile |  |  |  |  |  |
|      | 7445 |     |     |     |     | 7450 |     |     |     |     | 7455 |      |     |     |  |  |  |  |  |
| Leu  | Ala  | Thr | Ser | Glu | Val | Thr  | Thr | Asp | Thr | Glu | Lys  | Ile  | His | Pro |  |  |  |  |  |



## 10295wo02-Sequence

|      |      |     |     |     |     |      |     |     |     |     |      |     |     |     |  |      |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|--|------|
| 7460 |      |     |     |     |     | 7465 |     |     |     |     |      |     |     |     |  | 7470 |
| Phe  | Ser  | Asn | Thr | Ala | Val | Thr  | Lys | Val | Gly | Thr | Ser  | Ser | Ser | Gly |  |      |
|      | 7475 |     |     |     |     | 7480 |     |     |     |     | 7485 |     |     |     |  |      |
| His  | Glu  | Ser | Pro | Ser | Ser | Val  | Leu | Pro | Asp | Ser | Glu  | Thr | Thr | Lys |  |      |
|      | 7490 |     |     |     |     | 7495 |     |     |     |     | 7500 |     |     |     |  |      |
| Ala  | Thr  | Ser | Ala | Met | Gly | Thr  | Ile | Ser | Ile | Met | Gly  | Asp | Thr | Ser |  |      |
|      | 7505 |     |     |     |     | 7510 |     |     |     |     | 7515 |     |     |     |  |      |
| Val  | Ser  | Thr | Leu | Thr | Pro | Ala  | Leu | Ser | Asn | Thr | Arg  | Lys | Ile | Gln |  |      |
|      | 7520 |     |     |     |     | 7525 |     |     |     |     | 7530 |     |     |     |  |      |
| Ser  | Glu  | Pro | Ala | Ser | Ser | Leu  | Thr | Thr | Arg | Leu | Arg  | Glu | Thr | Ser |  |      |
|      | 7535 |     |     |     |     | 7540 |     |     |     |     | 7545 |     |     |     |  |      |
| Thr  | Ser  | Glu | Glu | Thr | Ser | Leu  | Ala | Thr | Glu | Ala | Asn  | Thr | Val | Leu |  |      |
|      | 7550 |     |     |     |     | 7555 |     |     |     |     | 7560 |     |     |     |  |      |
| Ser  | Lys  | Val | Ser | Thr | Gly | Ala  | Thr | Thr | Glu | Val | Ser  | Arg | Thr | Glu |  |      |
|      | 7565 |     |     |     |     | 7570 |     |     |     |     | 7575 |     |     |     |  |      |
| Ala  | Ile  | Ser | Phe | Ser | Arg | Thr  | Ser | Met | Ser | Gly | Pro  | Glu | Gln | Ser |  |      |
|      | 7580 |     |     |     |     | 7585 |     |     |     |     | 7590 |     |     |     |  |      |
| Thr  | Met  | Ser | Gln | Asp | Ile | Ser  | Ile | Gly | Thr | Ile | Pro  | Arg | Ile | Ser |  |      |
|      | 7595 |     |     |     |     | 7600 |     |     |     |     | 7605 |     |     |     |  |      |
| Ala  | Ser  | Ser | Val | Leu | Thr | Glu  | Ser | Ala | Lys | Met | Thr  | Ile | Thr | Thr |  |      |
|      | 7610 |     |     |     |     | 7615 |     |     |     |     | 7620 |     |     |     |  |      |
| Gln  | Thr  | Gly | Pro | Ser | Glu | Ser  | Thr | Leu | Glu | Ser | Thr  | Leu | Asn | Leu |  |      |
|      | 7625 |     |     |     |     | 7630 |     |     |     |     | 7635 |     |     |     |  |      |
| Asn  | Thr  | Ala | Thr | Thr | Pro | Ser  | Trp | Val | Glu | Thr | His  | Ser | Ile | Val |  |      |
|      | 7640 |     |     |     |     | 7645 |     |     |     |     | 7650 |     |     |     |  |      |
| Ile  | Gln  | Gly | Phe | Pro | His | Pro  | Glu | Met | Thr | Thr | Ser  | Met | Gly | Arg |  |      |
|      | 7655 |     |     |     |     | 7660 |     |     |     |     | 7665 |     |     |     |  |      |
| Gly  | Pro  | Gly | Gly | Val | Ser | Trp  | Pro | Ser | Pro | Pro | Phe  | Val | Lys | Glu |  |      |
|      | 7670 |     |     |     |     | 7675 |     |     |     |     | 7680 |     |     |     |  |      |
| Thr  | Ser  | Pro | Pro | Ser | Ser | Pro  | Leu | Ser | Leu | Pro | Ala  | Val | Thr | Ser |  |      |
|      | 7685 |     |     |     |     | 7690 |     |     |     |     | 7695 |     |     |     |  |      |
| Pro  | His  | Pro | Val | Ser | Thr | Thr  | Phe | Leu | Ala | His | Ile  | Pro | Pro | Ser |  |      |
|      | 7700 |     |     |     |     | 7705 |     |     |     |     | 7710 |     |     |     |  |      |
| Pro  | Leu  | Pro | Val | Thr | Ser | Leu  | Leu | Thr | Ser | Gly | Pro  | Ala | Thr | Thr |  |      |

7715 7720 7725

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|      |      |     |     |     |     |      |     |     |     |     |      |     |     |     |  |      |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|--|------|
| 7970 |      |     |     |     |     | 7975 |     |     |     |     |      |     |     |     |  | 7980 |
| Ser  | Pro  | Val | Ser | Ser | Thr | Leu  | Pro | Glu | Ser | Ile | Ser  | Ser | Ser | Pro |  |      |
|      | 7985 |     |     |     |     | 7990 |     |     |     |     | 7995 |     |     |     |  |      |
| Leu  | Pro  | Val | Thr | Ser | Leu | Leu  | Thr | Ser | Gly | Leu | Ala  | Lys | Thr | Thr |  |      |
|      | 8000 |     |     |     |     | 8005 |     |     |     |     | 8010 |     |     |     |  |      |
| Asp  | Met  | Leu | His | Lys | Ser | Ser  | Glu | Pro | Val | Thr | Asn  | Ser | Pro | Ala |  |      |
|      | 8015 |     |     |     |     | 8020 |     |     |     |     | 8025 |     |     |     |  |      |
| Asn  | Leu  | Ser | Ser | Thr | Ser | Val  | Glu | Ile | Leu | Ala | Thr  | Ser | Glu | Val |  |      |
|      | 8030 |     |     |     |     | 8035 |     |     |     |     | 8040 |     |     |     |  |      |
| Thr  | Thr  | Asp | Thr | Glu | Lys | Thr  | His | Pro | Ser | Ser | Asn  | Arg | Thr | Val |  |      |
|      | 8045 |     |     |     |     | 8050 |     |     |     |     | 8055 |     |     |     |  |      |
| Thr  | Asp  | Val | Gly | Thr | Ser | Ser  | Ser | Gly | His | Glu | Ser  | Thr | Ser | Phe |  |      |
|      | 8060 |     |     |     |     | 8065 |     |     |     |     | 8070 |     |     |     |  |      |
| Val  | Leu  | Ala | Asp | Ser | Gln | Thr  | Ser | Lys | Val | Thr | Ser  | Pro | Met | Val |  |      |
|      | 8075 |     |     |     |     | 8080 |     |     |     |     | 8085 |     |     |     |  |      |
| Ile  | Thr  | Ser | Thr | Met | Glu | Asp  | Thr | Ser | Val | Ser | Thr  | Ser | Thr | Pro |  |      |
|      | 8090 |     |     |     |     | 8095 |     |     |     |     | 8100 |     |     |     |  |      |
| Gly  | Phe  | Phe | Glu | Thr | Ser | Arg  | Ile | Gln | Thr | Glu | Pro  | Thr | Ser | Ser |  |      |
|      | 8105 |     |     |     |     | 8110 |     |     |     |     | 8115 |     |     |     |  |      |
| Leu  | Thr  | Leu | Gly | Leu | Arg | Lys  | Thr | Ser | Ser | Ser | Glu  | Gly | Thr | Ser |  |      |
|      | 8120 |     |     |     |     | 8125 |     |     |     |     | 8130 |     |     |     |  |      |
| Leu  | Ala  | Thr | Glu | Met | Ser | Thr  | Val | Leu | Ser | Gly | Val  | Pro | Thr | Gly |  |      |
|      | 8135 |     |     |     |     | 8140 |     |     |     |     | 8145 |     |     |     |  |      |
| Ala  | Thr  | Ala | Glu | Val | Ser | Arg  | Thr | Glu | Val | Thr | Ser  | Ser | Ser | Arg |  |      |
|      | 8150 |     |     |     |     | 8155 |     |     |     |     | 8160 |     |     |     |  |      |
| Thr  | Ser  | Ile | Ser | Gly | Phe | Ala  | Gln | Leu | Thr | Val | Ser  | Pro | Glu | Thr |  |      |
|      | 8165 |     |     |     |     | 8170 |     |     |     |     | 8175 |     |     |     |  |      |
| Ser  | Thr  | Glu | Thr | Ile | Thr | Arg  | Leu | Pro | Thr | Ser | Ser  | Ile | Met | Thr |  |      |
|      | 8180 |     |     |     |     | 8185 |     |     |     |     | 8190 |     |     |     |  |      |
| Glu  | Ser  | Ala | Glu | Met | Met | Ile  | Lys | Thr | Gln | Thr | Asp  | Pro | Pro | Gly |  |      |
|      | 8195 |     |     |     |     | 8200 |     |     |     |     | 8205 |     |     |     |  |      |
| Ser  | Thr  | Pro | Glu | Ser | Thr | His  | Thr | Val | Asp | Ile | Ser  | Thr | Thr | Pro |  |      |
|      | 8210 |     |     |     |     | 8215 |     |     |     |     | 8220 |     |     |     |  |      |
| Asn  | Trp  | Val | Glu | Thr | His | Ser  | Thr | Val | Thr | Gln | Arg  | Phe | Ser | His |  |      |

8225 8230 8235

## 10295w002-Sequence

|      |     |     |     |     |     |      |     |     |     |     |      |     |     |     |  |      |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|--|------|
| 8480 |     |     |     |     |     | 8485 |     |     |     |     |      |     |     |     |  | 8490 |
| Ala  | Ile | Thr | Ile | Glu | Thr | Gly  | Ser | Pro | Gly | Ala | Thr  | Ser | Glu | Gly |  |      |
| 8495 |     |     |     |     |     | 8500 |     |     |     |     | 8505 |     |     |     |  |      |
| Thr  | Leu | Thr | Leu | Asp | Thr | Ser  | Thr | Thr | Thr | Phe | Trp  | Ser | Gly | Thr |  |      |
| 8510 |     |     |     |     |     | 8515 |     |     |     |     | 8520 |     |     |     |  |      |
| His  | Ser | Thr | Ala | Ser | Pro | Gly  | Phe | Ser | His | Ser | Glu  | Met | Thr | Thr |  |      |
| 8525 |     |     |     |     |     | 8530 |     |     |     |     | 8535 |     |     |     |  |      |
| Leu  | Met | Ser | Arg | Thr | Pro | Gly  | Asp | Val | Pro | Trp | Pro  | Ser | Leu | Pro |  |      |
| 8540 |     |     |     |     |     | 8545 |     |     |     |     | 8550 |     |     |     |  |      |
| Ser  | Val | Glu | Glu | Ala | Ser | Ser  | Val | Ser | Ser | Ser | Leu  | Ser | Ser | Pro |  |      |
| 8555 |     |     |     |     |     | 8560 |     |     |     |     | 8565 |     |     |     |  |      |
| Ala  | Met | Thr | Ser | Thr | Ser | Phe  | Phe | Ser | Thr | Leu | Pro  | Glu | Ser | Ile |  |      |
| 8570 |     |     |     |     |     | 8575 |     |     |     |     | 8580 |     |     |     |  |      |
| Ser  | Ser | Ser | Pro | His | Pro | Val  | Thr | Ala | Leu | Leu | Thr  | Leu | Gly | Pro |  |      |
| 8585 |     |     |     |     |     | 8590 |     |     |     |     | 8595 |     |     |     |  |      |
| Val  | Lys | Thr | Thr | Asp | Met | Leu  | Arg | Thr | Ser | Ser | Glu  | Pro | Glu | Thr |  |      |
| 8600 |     |     |     |     |     | 8605 |     |     |     |     | 8610 |     |     |     |  |      |
| Ser  | Ser | Pro | Pro | Asn | Leu | Ser  | Ser | Thr | Ser | Ala | Glu  | Ile | Leu | Ala |  |      |
| 8615 |     |     |     |     |     | 8620 |     |     |     |     | 8625 |     |     |     |  |      |
| Thr  | Ser | Glu | Val | Thr | Lys | Asp  | Arg | Glu | Lys | Ile | His  | Pro | Ser | Ser |  |      |
| 8630 |     |     |     |     |     | 8635 |     |     |     |     | 8640 |     |     |     |  |      |
| Asn  | Thr | Pro | Val | Val | Asn | Val  | Gly | Thr | Val | Ile | Tyr  | Lys | His | Leu |  |      |
| 8645 |     |     |     |     |     | 8650 |     |     |     |     | 8655 |     |     |     |  |      |
| Ser  | Pro | Ser | Ser | Val | Leu | Ala  | Asp | Leu | Val | Thr | Thr  | Lys | Pro | Thr |  |      |
| 8660 |     |     |     |     |     | 8665 |     |     |     |     | 8670 |     |     |     |  |      |
| Ser  | Pro | Met | Ala | Thr | Thr | Ser  | Thr | Leu | Gly | Asn | Thr  | Ser | Val | Ser |  |      |
| 8675 |     |     |     |     |     | 8680 |     |     |     |     | 8685 |     |     |     |  |      |
| Thr  | Ser | Thr | Pro | Ala | Phe | Pro  | Glu | Thr | Met | Met | Thr  | Gln | Pro | Thr |  |      |
| 8690 |     |     |     |     |     | 8695 |     |     |     |     | 8700 |     |     |     |  |      |
| Ser  | Ser | Leu | Thr | Ser | Gly | Leu  | Arg | Glu | Ile | Ser | Thr  | Ser | Gln | Glu |  |      |
| 8705 |     |     |     |     |     | 8710 |     |     |     |     | 8715 |     |     |     |  |      |
| Thr  | Ser | Ser | Ala | Thr | Glu | Arg  | Ser | Ala | Ser | Leu | Ser  | Gly | Met | Pro |  |      |
| 8720 |     |     |     |     |     | 8725 |     |     |     |     | 8730 |     |     |     |  |      |
| Thr  | Gly | Ala | Thr | Thr | Lys | Val  | Ser | Arg | Thr | Glu | Ala  | Leu | Ser | Leu |  |      |

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|      |      |     |     |     |     |      |     |     |     |     |      |     |     |     |  |      |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|--|------|
| 8735 |      |     |     |     |     | 8740 |     |     |     |     |      |     |     |     |  | 8745 |
| Gly  | Arg  | Thr | Ser | Thr | Pro | Gly  | Pro | Ala | Gln | Ser | Thr  | Ile | Ser | Pro |  |      |
|      | 8750 |     |     |     |     | 8755 |     |     |     |     | 8760 |     |     |     |  |      |
| Glu  | Ile  | Ser | Thr | Glu | Thr | Ile  | Thr | Arg | Ile | Ser | Thr  | Pro | Leu | Thr |  |      |
|      | 8765 |     |     |     |     | 8770 |     |     |     |     | 8775 |     |     |     |  |      |
| Thr  | Thr  | Gly | Ser | Ala | Glu | Met  | Thr | Ile | Thr | Pro | Lys  | Thr | Gly | His |  |      |
|      | 8780 |     |     |     |     | 8785 |     |     |     |     | 8790 |     |     |     |  |      |
| Ser  | Gly  | Ala | Ser | Ser | Gln | Gly  | Thr | Phe | Thr | Leu | Asp  | Thr | Ser | Ser |  |      |
|      | 8795 |     |     |     |     | 8800 |     |     |     |     | 8805 |     |     |     |  |      |
| Arg  | Ala  | Ser | Trp | Pro | Gly | Thr  | His | Ser | Ala | Ala | Thr  | His | Arg | Ser |  |      |
|      | 8810 |     |     |     |     | 8815 |     |     |     |     | 8820 |     |     |     |  |      |
| Pro  | His  | Ser | Gly | Met | Thr | Thr  | Pro | Met | Ser | Arg | Gly  | Pro | Glu | Asp |  |      |
|      | 8825 |     |     |     |     | 8830 |     |     |     |     | 8835 |     |     |     |  |      |
| Val  | Ser  | Trp | Pro | Ser | Arg | Pro  | Ser | Val | Glu | Lys | Thr  | Ser | Pro | Pro |  |      |
|      | 8840 |     |     |     |     | 8845 |     |     |     |     | 8850 |     |     |     |  |      |
| Ser  | Ser  | Leu | Val | Ser | Leu | Ser  | Ala | Val | Thr | Ser | Pro  | Ser | Pro | Leu |  |      |
|      | 8855 |     |     |     |     | 8860 |     |     |     |     | 8865 |     |     |     |  |      |
| Tyr  | Ser  | Thr | Pro | Ser | Glu | Ser  | Ser | His | Ser | Ser | Pro  | Leu | Arg | Val |  |      |
|      | 8870 |     |     |     |     | 8875 |     |     |     |     | 8880 |     |     |     |  |      |
| Thr  | Ser  | Leu | Phe | Thr | Pro | Val  | Met | Met | Lys | Thr | Thr  | Asp | Met | Leu |  |      |
|      | 8885 |     |     |     |     | 8890 |     |     |     |     | 8895 |     |     |     |  |      |
| Asp  | Thr  | Ser | Leu | Glu | Pro | Val  | Thr | Thr | Ser | Pro | Pro  | Ser | Met | Asn |  |      |
|      | 8900 |     |     |     |     | 8905 |     |     |     |     | 8910 |     |     |     |  |      |
| Ile  | Thr  | Ser | Asp | Glu | Ser | Leu  | Ala | Thr | Ser | Lys | Ala  | Thr | Met | Glu |  |      |
|      | 8915 |     |     |     |     | 8920 |     |     |     |     | 8925 |     |     |     |  |      |
| Thr  | Glu  | Ala | Ile | Gln | Leu | Ser  | Glu | Asn | Thr | Ala | Val  | Thr | Gln | Met |  |      |
|      | 8930 |     |     |     |     | 8935 |     |     |     |     | 8940 |     |     |     |  |      |
| Gly  | Thr  | Ile | Ser | Ala | Arg | Gln  | Glu | Phe | Tyr | Ser | Ser  | Tyr | Pro | Gly |  |      |
|      | 8945 |     |     |     |     | 8950 |     |     |     |     | 8955 |     |     |     |  |      |
| Leu  | Pro  | Glu | Pro | Ser | Lys | Val  | Thr | Ser | Pro | Val | Val  | Thr | Ser | Ser |  |      |
|      | 8960 |     |     |     |     | 8965 |     |     |     |     | 8970 |     |     |     |  |      |
| Thr  | Ile  | Lys | Asp | Ile | Val | Ser  | Thr | Thr | Ile | Pro | Ala  | Ser | Ser | Glu |  |      |
|      | 8975 |     |     |     |     | 8980 |     |     |     |     | 8985 |     |     |     |  |      |
| Ile  | Thr  | Arg | Ile | Glu | Met | Glu  | Ser | Thr | Ser | Thr | Leu  | Thr | Pro | Thr |  |      |

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|      |      |     |     |     |     |      |     |     |     |     |      |      |     |     |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|
| 8990 |      |     |     |     |     | 8995 |     |     |     |     |      | 9000 |     |     |
| Pro  | Arg  | Glu | Thr | Ser | Thr | Ser  | Gln | Glu | Ile | His | Ser  | Ala  | Thr | Lys |
|      | 9005 |     |     |     |     | 9010 |     |     |     |     | 9015 |      |     |     |
| Pro  | Ser  | Thr | Val | Pro | Tyr | Lys  | Ala | Leu | Thr | Ser | Ala  | Thr  | Ile | Glu |
|      | 9020 |     |     |     |     | 9025 |     |     |     |     | 9030 |      |     |     |
| Asp  | Ser  | Met | Thr | Gln | Val | Met  | Ser | Ser | Ser | Arg | Gly  | Pro  | Ser | Pro |
|      | 9035 |     |     |     |     | 9040 |     |     |     |     | 9045 |      |     |     |
| Asp  | Gln  | Ser | Thr | Met | Ser | Gln  | Asp | Ile | Ser | Thr | Glu  | Val  | Ile | Thr |
|      | 9050 |     |     |     |     | 9055 |     |     |     |     | 9060 |      |     |     |
| Arg  | Leu  | Ser | Thr | Ser | Pro | Ile  | Lys | Thr | Glu | Ser | Thr  | Glu  | Met | Thr |
|      | 9065 |     |     |     |     | 9070 |     |     |     |     | 9075 |      |     |     |
| Ile  | Thr  | Thr | Gln | Thr | Gly | Ser  | Pro | Gly | Ala | Thr | Ser  | Arg  | Gly | Thr |
|      | 9080 |     |     |     |     | 9085 |     |     |     |     | 9090 |      |     |     |
| Leu  | Thr  | Leu | Asp | Thr | Ser | Thr  | Thr | Phe | Met | Ser | Gly  | Thr  | His | Ser |
|      | 9095 |     |     |     |     | 9100 |     |     |     |     | 9105 |      |     |     |
| Thr  | Ala  | Ser | Gln | Gly | Phe | Ser  | His | Ser | Gln | Met | Thr  | Ala  | Leu | Met |
|      | 9110 |     |     |     |     | 9115 |     |     |     |     | 9120 |      |     |     |
| Ser  | Arg  | Thr | Pro | Gly | Asp | Val  | Pro | Trp | Leu | Ser | His  | Pro  | Ser | Val |
|      | 9125 |     |     |     |     | 9130 |     |     |     |     | 9135 |      |     |     |
| Glu  | Glu  | Ala | Ser | Ser | Ala | Ser  | Phe | Ser | Leu | Ser | Ser  | Pro  | Val | Met |
|      | 9140 |     |     |     |     | 9145 |     |     |     |     | 9150 |      |     |     |
| Thr  | Ser  | Ser | Ser | Pro | Val | Ser  | Ser | Thr | Leu | Pro | Asp  | Ser  | Ile | His |
|      | 9155 |     |     |     |     | 9160 |     |     |     |     | 9165 |      |     |     |
| Ser  | Ser  | Ser | Leu | Pro | Val | Thr  | Ser | Leu | Leu | Thr | Ser  | Gly  | Leu | Val |
|      | 9170 |     |     |     |     | 9175 |     |     |     |     | 9180 |      |     |     |
| Lys  | Thr  | Thr | Glu | Leu | Leu | Gly  | Thr | Ser | Ser | Glu | Pro  | Glu  | Thr | Ser |
|      | 9185 |     |     |     |     | 9190 |     |     |     |     | 9195 |      |     |     |
| Ser  | Pro  | Pro | Asn | Leu | Ser | Ser  | Thr | Ser | Ala | Glu | Ile  | Leu  | Ala | Ile |
|      | 9200 |     |     |     |     | 9205 |     |     |     |     | 9210 |      |     |     |
| Thr  | Glu  | Val | Thr | Thr | Asp | Thr  | Glu | Lys | Leu | Glu | Met  | Thr  | Asn | Val |
|      | 9215 |     |     |     |     | 9220 |     |     |     |     | 9225 |      |     |     |
| Val  | Thr  | Ser | Gly | Tyr | Thr | His  | Glu | Ser | Pro | Ser | Ser  | Val  | Leu | Ala |
|      | 9230 |     |     |     |     | 9235 |     |     |     |     | 9240 |      |     |     |
| Asp  | Ser  | Val | Thr | Thr | Lys | Ala  | Thr | Ser | Ser | Met | Gly  | Ile  | Thr | Tyr |

9245 9250 9255

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|      |      |     |     |     |     |      |     |     |     |     |      |      |     |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|
| 9500 |      |     |     |     |     | 9505 |     |     |     |     |      | 9510 |     |
| Val  | Phe  | Glu | Asn | Thr | Ala | Ala  | Ser | His | Val | Glu | Thr  | Thr  | Ser |
|      | 9515 |     |     |     |     | 9520 |     |     |     |     | 9525 |      | Ala |
| Thr  | Glu  | Glu | Leu | Tyr | Ser | Ser  | Ser | Pro | Gly | Phe | Ser  | Glu  | Pro |
|      | 9530 |     |     |     |     | 9535 |     |     |     |     | 9540 |      | Thr |
| Lys  | Val  | Ile | Ser | Pro | Val | Val  | Thr | Ser | Ser | Ser | Ile  | Arg  | Asp |
|      | 9545 |     |     |     |     | 9550 |     |     |     |     | 9555 |      | Asn |
| Met  | Val  | Ser | Thr | Thr | Met | Pro  | Gly | Ser | Ser | Gly | Ile  | Thr  | Arg |
|      | 9560 |     |     |     |     | 9565 |     |     |     |     | 9570 |      | Ile |
| Glu  | Ile  | Glu | Ser | Met | Ser | Ser  | Leu | Thr | Pro | Gly | Leu  | Arg  | Glu |
|      | 9575 |     |     |     |     | 9580 |     |     |     |     | 9585 |      | Thr |
| Arg  | Thr  | Ser | Gln | Asp | Ile | Thr  | Ser | Ser | Thr | Glu | Thr  | Ser  | Thr |
|      | 9590 |     |     |     |     | 9595 |     |     |     |     | 9600 |      | Val |
| Leu  | Tyr  | Lys | Met | Pro | Ser | Gly  | Ala | Thr | Pro | Glu | Val  | Ser  | Arg |
|      | 9605 |     |     |     |     | 9610 |     |     |     |     | 9615 |      | Thr |
| Glu  | Val  | Met | Pro | Ser | Ser | Arg  | Thr | Ser | Ile | Pro | Gly  | Pro  | Ala |
|      | 9620 |     |     |     |     | 9625 |     |     |     |     | 9630 |      | Gln |
| Ser  | Thr  | Met | Ser | Leu | Asp | Ile  | Ser | Asp | Glu | Val | Val  | Thr  | Arg |
|      | 9635 |     |     |     |     | 9640 |     |     |     |     | 9645 |      | Leu |
| Ser  | Thr  | Ser | Pro | Ile | Met | Thr  | Glu | Ser | Ala | Glu | Ile  | Thr  | Ile |
|      | 9650 |     |     |     |     | 9655 |     |     |     |     | 9660 |      | Thr |
| Thr  | Gln  | Thr | Gly | Tyr | Ser | Leu  | Ala | Thr | Ser | Gln | Val  | Thr  | Leu |
|      | 9665 |     |     |     |     | 9670 |     |     |     |     | 9675 |      | Pro |
| Leu  | Gly  | Thr | Ser | Met | Thr | Phe  | Leu | Ser | Gly | Thr | His  | Ser  | Thr |
|      | 9680 |     |     |     |     | 9685 |     |     |     |     | 9690 |      | Met |
| Ser  | Gln  | Gly | Leu | Ser | His | Ser  | Glu | Met | Thr | Asn | Leu  | Met  | Ser |
|      | 9695 |     |     |     |     | 9700 |     |     |     |     | 9705 |      | Arg |
| Gly  | Pro  | Glu | Ser | Leu | Ser | Trp  | Thr | Ser | Pro | Arg | Phe  | Val  | Glu |
|      | 9710 |     |     |     |     | 9715 |     |     |     |     | 9720 |      | Thr |
| Thr  | Arg  | Ser | Ser | Ser | Ser | Leu  | Thr | Ser | Leu | Pro | Leu  | Thr  | Thr |
|      | 9725 |     |     |     |     | 9730 |     |     |     |     | 9735 |      | Ser |
| Leu  | Ser  | Pro | Val | Ser | Ser | Thr  | Leu | Leu | Asp | Ser | Ser  | Pro  | Ser |
|      | 9740 |     |     |     |     | 9745 |     |     |     |     | 9750 |      | Ser |
| Pro  | Leu  | Pro | Val | Thr | Ser | Leu  | Ile | Leu | Pro | Gly | Leu  | Val  | Lys |
|      |      |     |     |     |     |      |     |     |     |     |      |      | Thr |

9765

10295w002-Sequence

| 10010                                                                         | 10015 | 10020 |
|-------------------------------------------------------------------------------|-------|-------|
| Leu Leu 10025 Ser Leu Pro Val Thr 10030 Thr Ser Pro Ser Val 10035 Ser Ser Thr |       |       |
| Leu Pro 10040 Gln Ser Ile Pro Ser 10045 Ser Ser Phe Ser Val 10050 Thr Ser Leu |       |       |
| Leu Thr 10055 Pro Gly Met Val Lys 10060 Thr Thr Asp Thr Ser 10065 Thr Glu Pro |       |       |
| Gly Thr 10070 Ser Leu Ser Pro Asn 10075 Leu Ser Gly Thr Ser 10080 Val Glu Ile |       |       |
| Leu Ala 10085 Ala Ser Glu Val Thr 10090 Thr Asp Thr Glu Lys 10095 Ile His Pro |       |       |
| Ser Ser 10100 Ser Met Ala Val Thr 10105 Asn Val Gly Thr Thr 10110 Ser Ser Gly |       |       |
| His Glu 10115 Leu Tyr Ser Ser Val 10120 Ser Ile His Ser Glu 10125 Pro Ser Lys |       |       |
| Ala Thr 10130 Tyr Pro Val Gly Thr 10135 Pro Ser Ser Met Ala 10140 Glu Thr Ser |       |       |
| Ile Ser 10145 Thr Ser Met Pro Ala 10150 Asn Phe Glu Thr Thr 10155 Gly Phe Glu |       |       |
| Ala Glu 10160 Pro Phe Ser His Leu 10165 Thr Ser Gly Phe Arg 10170 Lys Thr Asn |       |       |
| Met Ser 10175 Leu Asp Thr Ser Ser 10180 Val Thr Pro Thr Asn 10185 Thr Pro Ser |       |       |
| Ser Pro 10190 Gly Ser Thr His Leu 10195 Leu Gln Ser Ser Lys 10200 Thr Asp Phe |       |       |
| Thr Ser 10205 Ser Ala Lys Thr Ser 10210 Ser Pro Asp Trp Pro 10215 Pro Ala Ser |       |       |
| Gln Tyr 10220 Thr Glu Ile Pro Val 10225 Asp Ile Ile Thr Pro 10230 Phe Asn Ala |       |       |
| Ser Pro 10235 Ser Ile Thr Glu Ser 10240 Thr Gly Ile Thr Ser 10245 Phe Pro Glu |       |       |
| Ser Arg 10250 Phe Thr Met Ser Val 10255 Thr Glu Ser Thr His 10260 His Leu Ser |       |       |
| Thr Asp Leu Leu Pro Ser Ala Glu Thr Ile Ser Thr Gly Thr Val                   |       |       |

10265 10270 10275

## 10295w002-Sequence

| 10520         | 10525                     | 10530                     |
|---------------|---------------------------|---------------------------|
| Val Pro 10535 | Glu Thr Thr Ser Ser 10540 | Leu Ala Thr Ser Leu 10545 |
| Gly Ala Glu   |                           |                           |
| Thr Ser 10550 | Thr Ala Leu Pro Arg 10555 | Thr Thr Pro Ser Val 10560 |
| Phe Asn Arg   |                           |                           |
| Glu Ser 10565 | Glu Thr Thr Ala Ser 10570 | Leu Val Ser Arg Ser 10575 |
| Gly Ala Glu   |                           |                           |
| Arg Ser 10580 | Pro Val Ile Gln Thr 10585 | Leu Asp Val Ser Ser 10590 |
| Ser Glu Pro   |                           |                           |
| Asp Thr 10595 | Thr Ala Ser Trp Val 10600 | Ile His Pro Ala Glu 10605 |
| Thr Ile Pro   |                           |                           |
| Thr Val 10610 | Ser Lys Thr Thr Pro 10615 | Asn Phe Phe His Ser 10620 |
| Glu Leu Asp   |                           |                           |
| Thr Val 10625 | Ser Ser Thr Ala Thr 10630 | Ser His Gly Ala Asp 10635 |
| Val Ser Ser   |                           |                           |
| Ala Ile 10640 | Pro Thr Asn Ile Ser 10645 | Pro Ser Glu Leu Asp 10650 |
| Ala Leu Thr   |                           |                           |
| Pro Leu 10655 | Val Thr Ile Ser Gly 10660 | Thr Asp Thr Ser Thr 10665 |
| Thr Phe Pro   |                           |                           |
| Thr Leu 10670 | Thr Lys Ser Pro His 10675 | Glu Thr Glu Thr Arg 10680 |
| Thr Thr Trp   |                           |                           |
| Leu Thr 10685 | His Pro Ala Glu Thr 10690 | Ser Ser Thr Ile Pro 10695 |
| Arg Thr Ile   |                           |                           |
| Pro Asn 10700 | Phe Ser His His Glu 10705 | Ser Asp Ala Thr Pro 10710 |
| Ser Ile Ala   |                           |                           |
| Thr Ser 10715 | Pro Gly Ala Glu Thr 10720 | Ser Ser Ala Ile Pro 10725 |
| Ile Met Thr   |                           |                           |
| Val Ser 10730 | Pro Gly Ala Glu Asp 10735 | Leu Val Thr Ser Gln 10740 |
| Val Thr Ser   |                           |                           |
| Ser Gly 10745 | Thr Asp Arg Asn Met 10750 | Thr Ile Pro Thr Leu 10755 |
| Thr Leu Ser   |                           |                           |
| Pro Gly 10760 | Glu Pro Lys Thr Ile 10765 | Ala Ser Leu Val Thr 10770 |
| His Pro Glu   |                           |                           |
| Ala Gln       | Thr Ser Ser Ala Ile       | Pro Thr Ser Thr Ile       |
| Ser Pro Ala   |                           |                           |

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|       |       |     |     |     |       |       |     |     |     |       |       |     |     |     |
|-------|-------|-----|-----|-----|-------|-------|-----|-----|-----|-------|-------|-----|-----|-----|
| 10775 |       |     |     |     | 10780 |       |     |     |     | 10785 |       |     |     |     |
| Val   | Ser   | Arg | Leu | Val | Thr   | Ser   | Met | Val | Thr | Ser   | Leu   | Ala | Ala | Lys |
|       | 10790 |     |     |     |       | 10795 |     |     |     |       | 10800 |     |     |     |
| Thr   | Ser   | Thr | Thr | Asn | Arg   | Ala   | Leu | Thr | Asn | Ser   | Pro   | Gly | Glu | Pro |
|       | 10805 |     |     |     |       | 10810 |     |     |     |       | 10815 |     |     |     |
| Ala   | Thr   | Thr | Val | Ser | Leu   | Val   | Thr | His | Pro | Ala   | Gln   | Thr | Ser | Pro |
|       | 10820 |     |     |     |       | 10825 |     |     |     |       | 10830 |     |     |     |
| Thr   | Val   | Pro | Trp | Thr | Thr   | Ser   | Ile | Phe | Phe | His   | Ser   | Lys | Ser | Asp |
|       | 10835 |     |     |     |       | 10840 |     |     |     |       | 10845 |     |     |     |
| Thr   | Thr   | Pro | Ser | Met | Thr   | Thr   | Ser | His | Gly | Ala   | Glu   | Ser | Ser | Ser |
|       | 10850 |     |     |     |       | 10855 |     |     |     |       | 10860 |     |     |     |
| Ala   | Val   | Pro | Thr | Pro | Thr   | Val   | Ser | Thr | Glu | Val   | Pro   | Gly | Val | Val |
|       | 10865 |     |     |     |       | 10870 |     |     |     |       | 10875 |     |     |     |
| Thr   | Pro   | Leu | Val | Thr | Ser   | Ser   | Arg | Ala | Val | Ile   | Ser   | Thr | Thr | Ile |
|       | 10880 |     |     |     |       | 10885 |     |     |     |       | 10890 |     |     |     |
| Pro   | Ile   | Leu | Thr | Leu | Ser   | Pro   | Gly | Glu | Pro | Glu   | Thr   | Thr | Pro | Ser |
|       | 10895 |     |     |     |       | 10900 |     |     |     |       | 10905 |     |     |     |
| Met   | Ala   | Thr | Ser | His | Gly   | Glu   | Glu | Ala | Ser | Ser   | Ala   | Ile | Pro | Thr |
|       | 10910 |     |     |     |       | 10915 |     |     |     |       | 10920 |     |     |     |
| Pro   | Thr   | Val | Ser | Pro | Gly   | Val   | Pro | Gly | Val | Val   | Thr   | Ser | Leu | Val |
|       | 10925 |     |     |     |       | 10930 |     |     |     |       | 10935 |     |     |     |
| Thr   | Ser   | Ser | Arg | Ala | Val   | Thr   | Ser | Thr | Thr | Ile   | Pro   | Ile | Leu | Thr |
|       | 10940 |     |     |     |       | 10945 |     |     |     |       | 10950 |     |     |     |
| Phe   | Ser   | Leu | Gly | Glu | Pro   | Glu   | Thr | Thr | Pro | Ser   | Met   | Ala | Thr | Ser |
|       | 10955 |     |     |     |       | 10960 |     |     |     |       | 10965 |     |     |     |
| His   | Gly   | Thr | Glu | Ala | Gly   | Ser   | Ala | Val | Pro | Thr   | Val   | Leu | Pro | Glu |
|       | 10970 |     |     |     |       | 10975 |     |     |     |       | 10980 |     |     |     |
| Val   | Pro   | Gly | Met | Val | Thr   | Ser   | Leu | Val | Ala | Ser   | Ser   | Arg | Ala | Val |
|       | 10985 |     |     |     |       | 10990 |     |     |     |       | 10995 |     |     |     |
| Thr   | Ser   | Thr | Thr | Leu | Pro   | Thr   | Leu | Thr | Leu | Ser   | Pro   | Gly | Glu | Pro |
|       | 11000 |     |     |     |       | 11005 |     |     |     |       | 11010 |     |     |     |
| Glu   | Thr   | Thr | Pro | Ser | Met   | Ala   | Thr | Ser | His | Gly   | Ala   | Glu | Ala | Ser |
|       | 11015 |     |     |     |       | 11020 |     |     |     |       | 11025 |     |     |     |
| Ser   | Thr   | Val | Pro | Thr | Val   | Ser   | Pro | Glu | Val | Pro   | Gly   | Val | Val | Thr |

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| 11030 | 11035 | 11040 |     |     |     |       |     |     |     |     |       |             |
|-------|-------|-------|-----|-----|-----|-------|-----|-----|-----|-----|-------|-------------|
| Ser   | Leu   | Val   | Thr | Ser | Ser | Ser   | Gly | Val | Asn | Ser | Thr   | Ser Ile Pro |
| 11045 |       |       |     |     |     | 11050 |     |     |     |     | 11055 |             |
| Thr   | Leu   | Ile   | Leu | Ser | Pro | Gly   | Glu | Leu | Glu | Thr | Thr   | Pro Ser Met |
| 11060 |       |       |     |     |     | 11065 |     |     |     |     | 11070 |             |
| Ala   | Thr   | Ser   | His | Gly | Ala | Glu   | Ala | Ser | Ser | Ala | Val   | Pro Thr Pro |
| 11075 |       |       |     |     |     | 11080 |     |     |     |     | 11085 |             |
| Thr   | Val   | Ser   | Pro | Gly | Val | Ser   | Gly | Val | Val | Thr | Pro   | Leu Val Thr |
| 11090 |       |       |     |     |     | 11095 |     |     |     |     | 11100 |             |
| Ser   | Ser   | Arg   | Ala | Val | Thr | Ser   | Thr | Thr | Ile | Pro | Ile   | Leu Thr Leu |
| 11105 |       |       |     |     |     | 11110 |     |     |     |     | 11115 |             |
| Ser   | Ser   | Ser   | Glu | Pro | Glu | Thr   | Thr | Pro | Ser | Met | Ala   | Thr Ser His |
| 11120 |       |       |     |     |     | 11125 |     |     |     |     | 11130 |             |
| Gly   | Val   | Glu   | Ala | Ser | Ser | Ala   | Val | Leu | Thr | Val | Ser   | Pro Glu Val |
| 11135 |       |       |     |     |     | 11140 |     |     |     |     | 11145 |             |
| Pro   | Gly   | Met   | Val | Thr | Ser | Leu   | Val | Thr | Ser | Ser | Arg   | Ala Val Thr |
| 11150 |       |       |     |     |     | 11155 |     |     |     |     | 11160 |             |
| Ser   | Thr   | Thr   | Ile | Pro | Thr | Leu   | Thr | Ile | Ser | Ser | Asp   | Glu Pro Glu |
| 11165 |       |       |     |     |     | 11170 |     |     |     |     | 11175 |             |
| Thr   | Thr   | Thr   | Ser | Leu | Val | Thr   | His | Ser | Glu | Ala | Lys   | Met Ile Ser |
| 11180 |       |       |     |     |     | 11185 |     |     |     |     | 11190 |             |
| Ala   | Ile   | Pro   | Thr | Leu | Ala | Val   | Ser | Pro | Thr | Val | Gln   | Gly Leu Val |
| 11195 |       |       |     |     |     | 11200 |     |     |     |     | 11205 |             |
| Thr   | Ser   | Leu   | Val | Thr | Ser | Ser   | Gly | Ser | Glu | Thr | Ser   | Ala Phe Ser |
| 11210 |       |       |     |     |     | 11215 |     |     |     |     | 11220 |             |
| Asn   | Leu   | Thr   | Val | Ala | Ser | Ser   | Gln | Pro | Glu | Thr | Ile   | Asp Ser Trp |
| 11225 |       |       |     |     |     | 11230 |     |     |     |     | 11235 |             |
| Val   | Ala   | His   | Pro | Gly | Thr | Glu   | Ala | Ser | Ser | Val | Val   | Pro Thr Leu |
| 11240 |       |       |     |     |     | 11245 |     |     |     |     | 11250 |             |
| Thr   | Val   | Ser   | Thr | Gly | Glu | Pro   | Phe | Thr | Asn | Ile | Ser   | Leu Val Thr |
| 11255 |       |       |     |     |     | 11260 |     |     |     |     | 11265 |             |
| His   | Pro   | Ala   | Glu | Ser | Ser | Ser   | Thr | Leu | Pro | Arg | Thr   | Thr Ser Arg |
| 11270 |       |       |     |     |     | 11275 |     |     |     |     | 11280 |             |
| Phe   | Ser   | His   | Ser | Glu | Leu | Asp   | Thr | Met | Pro | Ser | Thr   | Val Thr Ser |

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| 11285         | 11290                     | 11295                     |
|---------------|---------------------------|---------------------------|
| Pro Glu 11300 | Ala Glu Ser Ser Ser 11305 | Ala Ile Ser Thr Thr 11310 |
| Gly Ile 11315 | Pro Gly Val Leu Thr 11320 | Ser Leu Val Thr Ser 11325 |
| Asp Ile 11330 | Ser Ala Thr Phe Pro 11335 | Thr Val Pro Glu Ser 11340 |
| Ser Glu 11345 | Ala Thr Ala Ser Trp 11350 | Val Thr His Pro Ala 11355 |
| Thr Thr 11360 | Val Pro Arg Thr Thr 11365 | Pro Asn Tyr Ser His 11370 |
| Asp Thr 11375 | Thr Pro Ser Ile Ala 11380 | Thr Ser Pro Gly Ala 11385 |
| Ser Asp 11390 | Phe Pro Thr Ile Thr 11395 | Val Ser Pro Asp Val 11400 |
| Val Thr 11405 | Ser Gln Val Thr Ser 11410 | Ser Gly Thr Asp Thr 11415 |
| Ile Pro 11420 | Thr Leu Thr Leu Ser 11425 | Ser Gly Glu Pro Glu 11430 |
| Ser Phe 11435 | Ile Thr Tyr Ser Glu 11440 | Thr His Thr Ser Ser 11445 |
| Thr Leu 11450 | Pro Val Ser Pro Gly 11455 | Ala Ser Lys Met Leu 11460 |
| Val Ile 11465 | Ser Ser Gly Thr Asp 11470 | Ser Thr Thr Thr Phe 11475 |
| Thr Glu 11480 | Thr Pro Tyr Glu Pro 11485 | Glu Thr Thr Ala Ile 11490 |
| His Pro 11495 | Ala Glu Thr Asn Thr 11500 | Met Val Pro Arg Thr 11505 |
| Phe Ser 11510 | His Ser Lys Ser Asp 11515 | Thr Thr Leu Pro Val 11520 |
| Ser Pro 11525 | Gly Pro Glu Ala Ser 11530 | Ser Ala Val Ser Thr 11535 |
| Ser Pro       | Asp Met Ser Asp Leu       | Val Thr Ser Leu Val       |



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|               |                     |                     |                           |             |
|---------------|---------------------|---------------------|---------------------------|-------------|
| 11540         |                     | 11545               |                           | 11550       |
| Gly Thr 11555 | Asp Thr Ser Thr     | Thr 11560           | Phe Pro Thr Leu Ser 11565 | Glu Thr Pro |
| Tyr Glu 11570 | Pro Glu Thr Thr     | Ala 11575           | Thr Trp Leu Thr His 11580 | Pro Ala Glu |
| Thr Ser 11585 | Thr Thr Val Ser     | Gly 11590           | Thr Ile Pro Asn Phe 11595 | Ser His Arg |
| Gly Ser 11600 | Asp Thr Ala Pro     | Ser 11605           | Met Val Thr Ser Pro 11610 | Gly Val Asp |
| Thr Arg 11615 | Ser Gly Val Pro     | Thr 11620           | Thr Thr Ile Pro Pro 11625 | Ser Ile Pro |
| Gly Val 11630 | Val Thr Ser Gln     | Val 11635           | Thr Ser Ser Ala Thr 11640 | Asp Thr Ser |
| Thr Ala 11645 | Ile Pro Thr Leu     | Thr 11650           | Pro Ser Pro Gly Glu 11655 | Pro Glu Thr |
| Thr Ala 11660 | Ser Ser Ala Thr     | His 11665           | Pro Gly Thr Gln Thr 11670 | Gly Phe Thr |
| Val Pro 11675 | Ile Arg Thr Val     | Pro 11680           | Ser Ser Glu Pro Asp 11685 | Thr Met Ala |
| Ser Trp 11690 | Val Thr His Pro     | Pro 11695           | Gln Thr Ser Thr Pro 11700 | Val Ser Arg |
| Thr Thr 11705 | Ser Ser Phe Ser     | His 11710           | Ser Ser Pro Asp Ala 11715 | Thr Pro Val |
| Met Ala 11720 | Thr Ser Pro Arg     | Thr 11725           | Glu Ala Ser Ser Ala 11730 | Val Leu Thr |
| Thr Ile 11735 | Ser Pro Gly Ala     | Pro 11740           | Glu Met Val Thr Ser 11745 | Gln Ile Thr |
| Ser Ser 11750 | Gly Ala Ala Thr     | Ser 11755           | Thr Thr Val Pro Thr 11760 | Leu Thr His |
| Ser Pro 11765 | Gly Met Pro Glu     | Thr 11770           | Thr Ala Leu Leu Ser 11775 | Thr His Pro |
| Arg Thr 11780 | Glu Thr Ser Lys     | Thr 11785           | Phe Pro Ala Ser Thr 11790 | Val Phe Pro |
| Gln Val       | Ser Glu Thr Thr Ala | Ser Leu Thr Ile Arg | Pro Gly Ala               |             |

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| 11795         | 11800                     | 11805                     |
|---------------|---------------------------|---------------------------|
| Glu Thr 11810 | Ser Thr Ala Leu Pro 11815 | Thr Gln Thr Thr Ser 11820 |
| Thr Leu 11825 | Leu Val Thr Gly Thr 11830 | Ser Arg Val Asp Leu 11835 |
| Ala Ser 11840 | Pro Gly Val Ser Ala 11845 | Lys Thr Ala Pro Leu 11850 |
| Pro Gly 11855 | Thr Glu Thr Ser Thr 11860 | Met Ile Pro Thr Ser 11865 |
| Leu Gly 11870 | Leu Leu Glu Thr Thr 11875 | Gly Leu Leu Ala Thr 11880 |
| Ala Glu 11885 | Thr Ser Thr Ser Thr 11890 | Leu Thr Leu Thr Val 11895 |
| Val Ser 11900 | Gly Leu Ser Ser Ala 11905 | Ser Ile Thr Thr Asp 11910 |
| Thr Val 11915 | Thr Ser Trp Asn Thr 11920 | Glu Thr Ser Pro Ser 11925 |
| Val Gly 11930 | Pro Pro Glu Phe Ser 11935 | Arg Thr Val Thr Gly 11940 |
| Thr Leu 11945 | Ile Pro Ser Glu Met 11950 | Pro Thr Pro Pro Lys 11955 |
| Gly Glu 11960 | Gly Val Ser Pro Thr 11965 | Thr Ile Leu Arg Thr 11970 |
| Glu Ala 11975 | Thr Asn Leu Ala Thr 11980 | Thr Gly Ser Ser Pro 11985 |
| Lys Thr 11990 | Thr Thr Thr Phe Asn 11995 | Thr Leu Ala Gly Ser 12000 |
| Pro Leu 12005 | Thr Thr Pro Gly Met 12010 | Ser Thr Leu Ala Ser 12015 |
| Thr Ser 12020 | Arg Thr Ser Tyr Asn 12025 | His Arg Ser Trp Ile 12030 |
| Ser Ser 12035 | Tyr Asn Arg Arg Tyr 12040 | Trp Thr Pro Ala Thr 12045 |
| Val Thr       | Ser Thr Phe Ser Pro       | Gly Ile Ser Thr Ser       |

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| 12050                                                       | 12055 | 12060 |
|-------------------------------------------------------------|-------|-------|
| Ser Ser Thr Ala Ala Thr Val Pro Phe Met Val Pro Phe Thr Leu | 12065 | 12070 |
| Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His | 12080 | 12085 |
| Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Glu Leu Gln Gly | 12095 | 12100 |
| Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr | 12110 | 12115 |
| Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser | 12125 | 12130 |
| Ala Thr Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu | 12140 | 12145 |
| Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn | 12155 | 12160 |
| Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg | 12170 | 12175 |
| Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro | 12185 | 12190 |
| Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser | 12200 | 12205 |
| Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu | 12215 | 12220 |
| Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr | 12230 | 12235 |
| Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met | 12245 | 12250 |
| Glu Ser Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr | 12260 | 12265 |
| Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg | 12275 | 12280 |
| Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr | 12290 | 12295 |
| His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu |       |       |

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|       |       |     |     |     |     |       |     |     |     |     |       |       |     |     |
|-------|-------|-----|-----|-----|-----|-------|-----|-----|-----|-----|-------|-------|-----|-----|
| 12305 |       |     |     |     |     | 12310 |     |     |     |     |       | 12315 |     |     |
| Tyr   | Trp   | Glu | Leu | Ser | Lys | Leu   | Thr | Asn | Asp | Ile | Glu   | Glu   | Leu | Gly |
|       | 12320 |     |     |     |     | 12325 |     |     |     |     | 12330 |       |     |     |
| Pro   | Tyr   | Thr | Leu | Asp | Arg | Asn   | Ser | Leu | Tyr | Val | Asn   | Gly   | Phe | Thr |
|       | 12335 |     |     |     |     | 12340 |     |     |     |     | 12345 |       |     |     |
| His   | Gln   | Ser | Ser | Val | Ser | Thr   | Thr | Ser | Thr | Pro | Gly   | Thr   | Ser | Thr |
|       | 12350 |     |     |     |     | 12355 |     |     |     |     | 12360 |       |     |     |
| Val   | Asp   | Leu | Arg | Thr | Ser | Gly   | Thr | Pro | Ser | Ser | Leu   | Ser   | Ser | Pro |
|       | 12365 |     |     |     |     | 12370 |     |     |     |     | 12375 |       |     |     |
| Thr   | Ile   | Met | Ala | Ala | Gly | Pro   | Leu | Leu | Val | Pro | Phe   | Thr   | Leu | Asn |
|       | 12380 |     |     |     |     | 12385 |     |     |     |     | 12390 |       |     |     |
| Phe   | Thr   | Ile | Thr | Asn | Leu | Gln   | Tyr | Gly | Glu | Asp | Met   | Gly   | His | Pro |
|       | 12395 |     |     |     |     | 12400 |     |     |     |     | 12405 |       |     |     |
| Gly   | Ser   | Arg | Lys | Phe | Asn | Thr   | Thr | Glu | Arg | Val | Leu   | Gln   | Gly | Leu |
|       | 12410 |     |     |     |     | 12415 |     |     |     |     | 12420 |       |     |     |
| Leu   | Gly   | Pro | Ile | Phe | Lys | Asn   | Thr | Ser | Val | Gly | Pro   | Leu   | Tyr | Ser |
|       | 12425 |     |     |     |     | 12430 |     |     |     |     | 12435 |       |     |     |
| Gly   | Cys   | Arg | Leu | Thr | Ser | Leu   | Arg | Ser | Glu | Lys | Asp   | Gly   | Ala | Ala |
|       | 12440 |     |     |     |     | 12445 |     |     |     |     | 12450 |       |     |     |
| Thr   | Gly   | Val | Asp | Ala | Ile | Cys   | Ile | His | His | Leu | Asp   | Pro   | Lys | Ser |
|       | 12455 |     |     |     |     | 12460 |     |     |     |     | 12465 |       |     |     |
| Pro   | Gly   | Leu | Asn | Arg | Glu | Arg   | Leu | Tyr | Trp | Glu | Leu   | Ser   | Gln | Leu |
|       | 12470 |     |     |     |     | 12475 |     |     |     |     | 12480 |       |     |     |
| Thr   | Asn   | Gly | Ile | Lys | Glu | Leu   | Gly | Pro | Tyr | Thr | Leu   | Asp   | Arg | Asn |
|       | 12485 |     |     |     |     | 12490 |     |     |     |     | 12495 |       |     |     |
| Ser   | Leu   | Tyr | Val | Asn | Gly | Phe   | Thr | His | Arg | Thr | Ser   | Val   | Pro | Thr |
|       | 12500 |     |     |     |     | 12505 |     |     |     |     | 12510 |       |     |     |
| Ser   | Ser   | Thr | Pro | Gly | Thr | Ser   | Thr | Val | Asp | Leu | Gly   | Thr   | Ser | Gly |
|       | 12515 |     |     |     |     | 12520 |     |     |     |     | 12525 |       |     |     |
| Thr   | Pro   | Phe | Ser | Leu | Pro | Ser   | Pro | Ala | Thr | Ala | Gly   | Pro   | Leu | Leu |
|       | 12530 |     |     |     |     | 12535 |     |     |     |     | 12540 |       |     |     |
| Val   | Leu   | Phe | Thr | Leu | Asn | Phe   | Thr | Ile | Thr | Asn | Leu   | Lys   | Tyr | Glu |
|       | 12545 |     |     |     |     | 12550 |     |     |     |     | 12555 |       |     |     |
| Glu   | Asp   | Met | His | Arg | Pro | Gly   | Ser | Arg | Lys | Phe | Asn   | Thr   | Thr | Glu |

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|       |       |     |     |     |     |       |     |     |     |     |       |             |
|-------|-------|-----|-----|-----|-----|-------|-----|-----|-----|-----|-------|-------------|
| 12560 |       |     |     |     |     | 12565 |     |     |     |     |       | 12570       |
| Arg   | Val   | Leu | Gln | Thr | Leu | Leu   | Gly | Pro | Met | Phe | Lys   | Asn Thr Ser |
|       | 12575 |     |     |     |     | 12580 |     |     |     |     | 12585 |             |
| Val   | Gly   | Leu | Leu | Tyr | Ser | Gly   | Cys | Arg | Leu | Thr | Leu   | Leu Arg Ser |
|       | 12590 |     |     |     |     | 12595 |     |     |     |     | 12600 |             |
| Glu   | Lys   | Asp | Gly | Ala | Ala | Thr   | Gly | Val | Asp | Ala | Ile   | Cys Thr His |
|       | 12605 |     |     |     |     | 12610 |     |     |     |     | 12615 |             |
| Arg   | Leu   | Asp | Pro | Lys | Ser | Pro   | Gly | Val | Asp | Arg | Glu   | Gln Leu Tyr |
|       | 12620 |     |     |     |     | 12625 |     |     |     |     | 12630 |             |
| Trp   | Glu   | Leu | Ser | Gln | Leu | Thr   | Asn | Gly | Ile | Lys | Glu   | Leu Gly Pro |
|       | 12635 |     |     |     |     | 12640 |     |     |     |     | 12645 |             |
| Tyr   | Thr   | Leu | Asp | Arg | Asn | Ser   | Leu | Tyr | Val | Asn | Gly   | Phe Thr His |
|       | 12650 |     |     |     |     | 12655 |     |     |     |     | 12660 |             |
| Trp   | Ile   | Pro | Val | Pro | Thr | Ser   | Ser | Thr | Pro | Gly | Thr   | Ser Thr Val |
|       | 12665 |     |     |     |     | 12670 |     |     |     |     | 12675 |             |
| Asp   | Leu   | Gly | Ser | Gly | Thr | Pro   | Ser | Ser | Leu | Pro | Ser   | Pro Thr Thr |
|       | 12680 |     |     |     |     | 12685 |     |     |     |     | 12690 |             |
| Ala   | Gly   | Pro | Leu | Leu | Val | Pro   | Phe | Thr | Leu | Asn | Phe   | Thr Ile Thr |
|       | 12695 |     |     |     |     | 12700 |     |     |     |     | 12705 |             |
| Asn   | Leu   | Lys | Tyr | Glu | Glu | Asp   | Met | His | Cys | Pro | Gly   | Ser Arg Lys |
|       | 12710 |     |     |     |     | 12715 |     |     |     |     | 12720 |             |
| Phe   | Asn   | Thr | Thr | Glu | Arg | Val   | Leu | Gln | Ser | Leu | Leu   | Gly Pro Met |
|       | 12725 |     |     |     |     | 12730 |     |     |     |     | 12735 |             |
| Phe   | Lys   | Asn | Thr | Ser | Val | Gly   | Pro | Leu | Tyr | Ser | Gly   | Cys Arg Leu |
|       | 12740 |     |     |     |     | 12745 |     |     |     |     | 12750 |             |
| Thr   | Leu   | Leu | Arg | Ser | Glu | Lys   | Asp | Gly | Ala | Ala | Thr   | Gly Val Asp |
|       | 12755 |     |     |     |     | 12760 |     |     |     |     | 12765 |             |
| Ala   | Ile   | Cys | Thr | His | Arg | Leu   | Asp | Pro | Lys | Ser | Pro   | Gly Val Asp |
|       | 12770 |     |     |     |     | 12775 |     |     |     |     | 12780 |             |
| Arg   | Glu   | Gln | Leu | Tyr | Trp | Glu   | Leu | Ser | Gln | Leu | Thr   | Asn Gly Ile |
|       | 12785 |     |     |     |     | 12790 |     |     |     |     | 12795 |             |
| Lys   | Glu   | Leu | Gly | Pro | Tyr | Thr   | Leu | Asp | Arg | Asn | Ser   | Leu Tyr Val |
|       | 12800 |     |     |     |     | 12805 |     |     |     |     | 12810 |             |
| Asn   | Gly   | Phe | Thr | His | Gln | Thr   | Ser | Ala | Pro | Asn | Thr   | Ser Thr Pro |

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|       |     |     |     |     |       |       |     |     |     |       |
|-------|-----|-----|-----|-----|-------|-------|-----|-----|-----|-------|
| 12815 |     |     |     |     | 12820 |       |     |     |     | 12825 |
| Gly   | Thr | Ser | Thr | Val | Asp   | Leu   | Gly | Thr | Ser | Gly   |
| 12830 |     |     |     |     |       | 12835 |     |     |     | 12840 |
|       |     |     |     |     |       |       |     |     |     |       |
| Leu   | Pro | Ser | Pro | Thr | Ser   | Ala   | Gly | Pro | Leu | Leu   |
| 12845 |     |     |     |     |       | 12850 |     |     |     | Val   |
|       |     |     |     |     |       |       |     |     |     | 12855 |
|       |     |     |     |     |       |       |     |     |     |       |
| Leu   | Asn | Phe | Thr | Ile | Thr   | Asn   | Leu | Gln | Tyr | Glu   |
| 12860 |     |     |     |     |       | 12865 |     |     |     | Glu   |
|       |     |     |     |     |       |       |     |     |     | 12870 |
|       |     |     |     |     |       |       |     |     |     |       |
| His   | Pro | Gly | Ser | Arg | Lys   | Phe   | Asn | Thr | Thr | Glu   |
| 12875 |     |     |     |     |       | 12880 |     |     |     | Arg   |
|       |     |     |     |     |       |       |     |     |     | 12885 |
|       |     |     |     |     |       |       |     |     |     |       |
| Gly   | Leu | Leu | Gly | Pro | Met   | Phe   | Lys | Asn | Thr | Ser   |
| 12890 |     |     |     |     |       | 12895 |     |     |     | Val   |
|       |     |     |     |     |       |       |     |     |     | 12900 |
|       |     |     |     |     |       |       |     |     |     |       |
| Tyr   | Ser | Gly | Cys | Arg | Leu   | Thr   | Leu | Leu | Arg | Pro   |
| 12905 |     |     |     |     |       | 12910 |     |     |     | Glu   |
|       |     |     |     |     |       |       |     |     |     | 12915 |
|       |     |     |     |     |       |       |     |     |     |       |
| Ala   | Ala | Thr | Gly | Met | Asp   | Ala   | Ile | Cys | Ser | His   |
| 12920 |     |     |     |     |       | 12925 |     |     |     | Arg   |
|       |     |     |     |     |       |       |     |     |     | 12930 |
|       |     |     |     |     |       |       |     |     |     |       |
| Lys   | Ser | Pro | Gly | Leu | Asn   | Arg   | Glu | Gln | Leu | Tyr   |
| 12935 |     |     |     |     |       | 12940 |     |     |     | Trp   |
|       |     |     |     |     |       |       |     |     |     | 12945 |
|       |     |     |     |     |       |       |     |     |     |       |
| Gln   | Leu | Thr | His | Gly | Ile   | Lys   | Glu | Leu | Gly | Pro   |
| 12950 |     |     |     |     |       | 12955 |     |     |     | Tyr   |
|       |     |     |     |     |       |       |     |     |     | 12960 |
|       |     |     |     |     |       |       |     |     |     |       |
| Arg   | Asn | Ser | Leu | Tyr | Val   | Asn   | Gly | Phe | Thr | His   |
| 12965 |     |     |     |     |       | 12970 |     |     |     | Arg   |
|       |     |     |     |     |       |       |     |     |     | 12975 |
|       |     |     |     |     |       |       |     |     |     |       |
| Ala   | Pro | Thr | Ser | Thr | Pro   | Gly   | Thr | Ser | Thr | Val   |
| 12980 |     |     |     |     |       | 12985 |     |     |     | Asp   |
|       |     |     |     |     |       |       |     |     |     | 12990 |
|       |     |     |     |     |       |       |     |     |     |       |
| Ser   | Gly | Thr | Pro | Ser | Ser   | Leu   | Pro | Ser | Pro | Thr   |
| 12995 |     |     |     |     |       | 13000 |     |     |     | Thr   |
|       |     |     |     |     |       |       |     |     |     | 13005 |
|       |     |     |     |     |       |       |     |     |     |       |
| Leu   | Leu | Val | Pro | Phe | Thr   | Leu   | Asn | Phe | Thr | Ile   |
| 13010 |     |     |     |     |       | 13015 |     |     |     | Thr   |
|       |     |     |     |     |       |       |     |     |     | 13020 |
|       |     |     |     |     |       |       |     |     |     |       |
| Tyr   | Gly | Glu | Asp | Met | Arg   | His   | Pro | Gly | Ser | Arg   |
| 13025 |     |     |     |     |       | 13030 |     |     |     | Lys   |
|       |     |     |     |     |       |       |     |     |     | 13035 |
|       |     |     |     |     |       |       |     |     |     |       |
| Thr   | Glu | Arg | Val | Leu | Gln   | Gly   | Leu | Leu | Gly | Pro   |
| 13040 |     |     |     |     |       | 13045 |     |     |     | Leu   |
|       |     |     |     |     |       |       |     |     |     | 13050 |
|       |     |     |     |     |       |       |     |     |     |       |
| Ser   | Ser | Val | Gly | Pro | Leu   | Tyr   | Ser | Gly | Cys | Arg   |
| 13055 |     |     |     |     |       | 13060 |     |     |     | Leu   |
|       |     |     |     |     |       |       |     |     |     | 13065 |
|       |     |     |     |     |       |       |     |     |     |       |
| Arg   | Ser | Glu | Lys | Asp | Gly   | Ala   | Ala | Thr | Gly | Val   |
|       |     |     |     |     |       |       |     |     |     | Asp   |
|       |     |     |     |     |       |       |     |     |     | 13070 |
|       |     |     |     |     |       |       |     |     |     |       |

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|       |       |     |     |     |     |       |     |     |     |     |       |             |
|-------|-------|-----|-----|-----|-----|-------|-----|-----|-----|-----|-------|-------------|
| 13070 |       |     |     |     |     | 13075 |     |     |     |     |       | 13080       |
| Thr   | His   | His | Leu | Asn | Pro | Gln   | Ser | Pro | Gly | Leu | Asp   | Arg Glu Gln |
|       | 13085 |     |     |     |     | 13090 |     |     |     |     | 13095 |             |
| Leu   | Tyr   | Trp | Gln | Leu | Ser | Gln   | Met | Thr | Asn | Gly | Ile   | Lys Glu Leu |
|       | 13100 |     |     |     |     | 13105 |     |     |     |     | 13110 |             |
| Gly   | Pro   | Tyr | Thr | Leu | Asp | Arg   | Asn | Ser | Leu | Tyr | Val   | Asn Gly Phe |
|       | 13115 |     |     |     |     | 13120 |     |     |     |     | 13125 |             |
| Thr   | His   | Arg | Ser | Ser | Gly | Leu   | Thr | Thr | Ser | Thr | Pro   | Trp Thr Ser |
|       | 13130 |     |     |     |     | 13135 |     |     |     |     | 13140 |             |
| Thr   | Val   | Asp | Leu | Gly | Thr | Ser   | Gly | Thr | Pro | Ser | Pro   | Val Pro Ser |
|       | 13145 |     |     |     |     | 13150 |     |     |     |     | 13155 |             |
| Pro   | Thr   | Thr | Thr | Gly | Pro | Leu   | Leu | Val | Pro | Phe | Thr   | Leu Asn Phe |
|       | 13160 |     |     |     |     | 13165 |     |     |     |     | 13170 |             |
| Thr   | Ile   | Thr | Asn | Leu | Gln | Tyr   | Glu | Glu | Asn | Met | Gly   | His Pro Gly |
|       | 13175 |     |     |     |     | 13180 |     |     |     |     | 13185 |             |
| Ser   | Arg   | Lys | Phe | Asn | Ile | Thr   | Glu | Ser | Val | Leu | Gln   | Gly Leu Leu |
|       | 13190 |     |     |     |     | 13195 |     |     |     |     | 13200 |             |
| Lys   | Pro   | Leu | Phe | Lys | Ser | Thr   | Ser | Val | Gly | Pro | Leu   | Tyr Ser Gly |
|       | 13205 |     |     |     |     | 13210 |     |     |     |     | 13215 |             |
| Cys   | Arg   | Leu | Thr | Leu | Leu | Arg   | Pro | Glu | Lys | Asp | Gly   | Val Ala Thr |
|       | 13220 |     |     |     |     | 13225 |     |     |     |     | 13230 |             |
| Arg   | Val   | Asp | Ala | Ile | Cys | Thr   | His | Arg | Pro | Asp | Pro   | Lys Ile Pro |
|       | 13235 |     |     |     |     | 13240 |     |     |     |     | 13245 |             |
| Gly   | Leu   | Asp | Arg | Gln | Gln | Leu   | Tyr | Trp | Glu | Leu | Ser   | Gln Leu Thr |
|       | 13250 |     |     |     |     | 13255 |     |     |     |     | 13260 |             |
| His   | Ser   | Ile | Thr | Glu | Leu | Gly   | Pro | Tyr | Thr | Leu | Asp   | Arg Asp Ser |
|       | 13265 |     |     |     |     | 13270 |     |     |     |     | 13275 |             |
| Leu   | Tyr   | Val | Asn | Gly | Phe | Thr   | Gln | Arg | Ser | Ser | Val   | Pro Thr Thr |
|       | 13280 |     |     |     |     | 13285 |     |     |     |     | 13290 |             |
| Ser   | Thr   | Pro | Gly | Thr | Phe | Thr   | Val | Gln | Pro | Glu | Thr   | Ser Glu Thr |
|       | 13295 |     |     |     |     | 13300 |     |     |     |     | 13305 |             |
| Pro   | Ser   | Ser | Leu | Pro | Gly | Pro   | Thr | Ala | Thr | Gly | Pro   | Val Leu Leu |
|       | 13310 |     |     |     |     | 13315 |     |     |     |     | 13320 |             |
| Pro   | Phe   | Thr | Leu | Asn | Phe | Thr   | Ile | Thr | Asn | Leu | Gln   | Tyr Glu Glu |

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|       |       |     |     |     |     |       |     |     |     |     |       |             |
|-------|-------|-----|-----|-----|-----|-------|-----|-----|-----|-----|-------|-------------|
| 13325 |       |     |     |     |     | 13330 |     |     |     |     |       | 13335       |
| Asp   | Met   | Arg | Arg | Pro | Gly | Ser   | Arg | Lys | Phe | Asn | Thr   | Thr Glu Arg |
|       | 13340 |     |     |     |     | 13345 |     |     |     |     | 13350 |             |
| Val   | Leu   | Gln | Gly | Leu | Leu | Met   | Pro | Leu | Phe | Lys | Asn   | Thr Ser Val |
|       | 13355 |     |     |     |     | 13360 |     |     |     |     | 13365 |             |
| Ser   | Ser   | Leu | Tyr | Ser | Gly | Cys   | Arg | Leu | Thr | Leu | Leu   | Arg Pro Glu |
|       | 13370 |     |     |     |     | 13375 |     |     |     |     | 13380 |             |
| Lys   | Asp   | Gly | Ala | Ala | Thr | Arg   | Val | Asp | Ala | Val | Cys   | Thr His Arg |
|       | 13385 |     |     |     |     | 13390 |     |     |     |     | 13395 |             |
| Pro   | Asp   | Pro | Lys | Ser | Pro | Gly   | Leu | Asp | Arg | Glu | Arg   | Leu Tyr Trp |
|       | 13400 |     |     |     |     | 13405 |     |     |     |     | 13410 |             |
| Lys   | Leu   | Ser | Gln | Leu | Thr | His   | Gly | Ile | Thr | Glu | Leu   | Gly Pro Tyr |
|       | 13415 |     |     |     |     | 13420 |     |     |     |     | 13425 |             |
| Thr   | Leu   | Asp | Arg | His | Ser | Leu   | Tyr | Val | Asn | Gly | Phe   | Thr His Gln |
|       | 13430 |     |     |     |     | 13435 |     |     |     |     | 13440 |             |
| Ser   | Ser   | Met | Thr | Thr | Thr | Arg   | Thr | Pro | Asp | Thr | Ser   | Thr Met His |
|       | 13445 |     |     |     |     | 13450 |     |     |     |     | 13455 |             |
| Leu   | Ala   | Thr | Ser | Arg | Thr | Pro   | Ala | Ser | Leu | Ser | Gly   | Pro Met Thr |
|       | 13460 |     |     |     |     | 13465 |     |     |     |     | 13470 |             |
| Ala   | Ser   | Pro | Leu | Leu | Val | Leu   | Phe | Thr | Ile | Asn | Phe   | Thr Ile Thr |
|       | 13475 |     |     |     |     | 13480 |     |     |     |     | 13485 |             |
| Asn   | Leu   | Arg | Tyr | Glu | Glu | Asn   | Met | His | His | Pro | Gly   | Ser Arg Lys |
|       | 13490 |     |     |     |     | 13495 |     |     |     |     | 13500 |             |
| Phe   | Asn   | Thr | Thr | Glu | Arg | Val   | Leu | Gln | Gly | Leu | Leu   | Arg Pro Val |
|       | 13505 |     |     |     |     | 13510 |     |     |     |     | 13515 |             |
| Phe   | Lys   | Asn | Thr | Ser | Val | Gly   | Pro | Leu | Tyr | Ser | Gly   | Cys Arg Leu |
|       | 13520 |     |     |     |     | 13525 |     |     |     |     | 13530 |             |
| Thr   | Leu   | Leu | Arg | Pro | Lys | Lys   | Asp | Gly | Ala | Ala | Thr   | Lys Val Asp |
|       | 13535 |     |     |     |     | 13540 |     |     |     |     | 13545 |             |
| Ala   | Ile   | Cys | Thr | Tyr | Arg | Pro   | Asp | Pro | Lys | Ser | Pro   | Gly Leu Asp |
|       | 13550 |     |     |     |     | 13555 |     |     |     |     | 13560 |             |
| Arg   | Glu   | Gln | Leu | Tyr | Trp | Glu   | Leu | Ser | Gln | Leu | Thr   | His Ser Ile |
|       | 13565 |     |     |     |     | 13570 |     |     |     |     | 13575 |             |
| Thr   | Glu   | Leu | Gly | Pro | Tyr | Thr   | Leu | Asp | Arg | Asp | Ser   | Leu Tyr Val |



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|       |       |     |     |     |     |       |     |     |     |     |       |       |
|-------|-------|-----|-----|-----|-----|-------|-----|-----|-----|-----|-------|-------|
| 13580 |       |     |     |     |     | 13585 |     |     |     |     |       | 13590 |
| Asn   | Gly   | Phe | Thr | Gln | Arg | Ser   | Ser | Val | Pro | Thr | Thr   | Ser   |
|       | 13595 |     |     |     |     | 13600 |     |     |     |     | 13605 | Ile   |
|       |       |     |     |     |     |       |     |     |     |     |       | Pro   |
| Gly   | Thr   | Pro | Thr | Val | Asp | Leu   | Gly | Thr | Ser | Gly | Thr   | Pro   |
|       | 13610 |     |     |     |     | 13615 |     |     |     |     | 13620 | Val   |
|       |       |     |     |     |     |       |     |     |     |     |       | Ser   |
| Lys   | Pro   | Gly | Pro | Ser | Ala | Ala   | Ser | Pro | Leu | Leu | Val   | Leu   |
|       | 13625 |     |     |     |     | 13630 |     |     |     |     | 13635 | Phe   |
|       |       |     |     |     |     |       |     |     |     |     |       | Thr   |
| Leu   | Asn   | Phe | Thr | Ile | Thr | Asn   | Leu | Arg | Tyr | Glu | Glu   | Asn   |
|       | 13640 |     |     |     |     | 13645 |     |     |     |     | 13650 | Met   |
|       |       |     |     |     |     |       |     |     |     |     |       | Gln   |
| His   | Pro   | Gly | Ser | Arg | Lys | Phe   | Asn | Thr | Thr | Glu | Arg   | Val   |
|       | 13655 |     |     |     |     | 13660 |     |     |     |     | 13665 | Leu   |
|       |       |     |     |     |     |       |     |     |     |     |       | Gln   |
| Gly   | Leu   | Leu | Arg | Ser | Leu | Phe   | Lys | Ser | Thr | Ser | Val   | Gly   |
|       | 13670 |     |     |     |     | 13675 |     |     |     |     | 13680 | Pro   |
|       |       |     |     |     |     |       |     |     |     |     |       | Leu   |
| Tyr   | Ser   | Gly | Cys | Arg | Leu | Thr   | Leu | Leu | Arg | Pro | Glu   | Lys   |
|       | 13685 |     |     |     |     | 13690 |     |     |     |     | 13695 | Asp   |
|       |       |     |     |     |     |       |     |     |     |     |       | Gly   |
| Thr   | Ala   | Thr | Gly | Val | Asp | Ala   | Ile | Cys | Thr | His | His   | Pro   |
|       | 13700 |     |     |     |     | 13705 |     |     |     |     | 13710 | Asp   |
|       |       |     |     |     |     |       |     |     |     |     |       | Pro   |
| Lys   | Ser   | Pro | Arg | Leu | Asp | Arg   | Glu | Gln | Leu | Tyr | Trp   | Glu   |
|       | 13715 |     |     |     |     | 13720 |     |     |     |     | 13725 | Leu   |
|       |       |     |     |     |     |       |     |     |     |     |       | Ser   |
| Gln   | Leu   | Thr | His | Asn | Ile | Thr   | Glu | Leu | Gly | Pro | Tyr   | Ala   |
|       | 13730 |     |     |     |     | 13735 |     |     |     |     | 13740 | Leu   |
|       |       |     |     |     |     |       |     |     |     |     |       | Asp   |
| Asn   | Asp   | Ser | Leu | Phe | Val | Asn   | Gly | Phe | Thr | His | Arg   | Ser   |
|       | 13745 |     |     |     |     | 13750 |     |     |     |     | 13755 | Ser   |
|       |       |     |     |     |     |       |     |     |     |     |       | Val   |
| Ser   | Thr   | Thr | Ser | Thr | Pro | Gly   | Thr | Pro | Thr | Val | Tyr   | Leu   |
|       | 13760 |     |     |     |     | 13765 |     |     |     |     | 13770 | Gly   |
|       |       |     |     |     |     |       |     |     |     |     |       | Ala   |
| Ser   | Lys   | Thr | Pro | Ala | Ser | Ile   | Phe | Gly | Pro | Ser | Ala   | Ala   |
|       | 13775 |     |     |     |     | 13780 |     |     |     |     | 13785 | Ser   |
|       |       |     |     |     |     |       |     |     |     |     |       | His   |
| Leu   | Leu   | Ile | Leu | Phe | Thr | Leu   | Asn | Phe | Thr | Ile | Thr   | Asn   |
|       | 13790 |     |     |     |     | 13795 |     |     |     |     | 13800 | Leu   |
|       |       |     |     |     |     |       |     |     |     |     |       | Arg   |
| Tyr   | Glu   | Glu | Asn | Met | Trp | Pro   | Gly | Ser | Arg | Lys | Phe   | Asn   |
|       | 13805 |     |     |     |     | 13810 |     |     |     |     | 13815 | Thr   |
|       |       |     |     |     |     |       |     |     |     |     |       | Thr   |
| Glu   | Arg   | Val | Leu | Gln | Gly | Leu   | Leu | Arg | Pro | Leu | Phe   | Lys   |
|       | 13820 |     |     |     |     | 13825 |     |     |     |     | 13830 | Asn   |
|       |       |     |     |     |     |       |     |     |     |     |       | Thr   |
| Ser   | Val   | Gly | Pro | Leu | Tyr | Ser   | Gly | Cys | Arg | Leu | Thr   | Leu   |
|       |       |     |     |     |     |       |     |     |     |     |       | Leu   |
|       |       |     |     |     |     |       |     |     |     |     |       | Arg   |

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|       |     |     |     |     |     |       |     |     |     |     |       |         |
|-------|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-------|---------|
| 13835 |     |     |     |     |     | 13840 |     |     |     |     |       | 13845   |
| Pro   | Glu | Lys | Asp | Gly | Glu | Ala   | Thr | Gly | Val | Asp | Ala   | Ile     |
| 13850 |     |     |     |     |     | 13855 |     |     |     |     | 13860 | Cys Thr |
| His   | Arg | Pro | Asp | Pro | Thr | Gly   | Pro | Gly | Leu | Asp | Arg   | Glu     |
| 13865 |     |     |     |     |     | 13870 |     |     |     |     | 13875 | Gln Leu |
| Tyr   | Leu | Glu | Leu | Ser | Gln | Leu   | Thr | His | Ser | Ile | Thr   | Glu     |
| 13880 |     |     |     |     |     | 13885 |     |     |     |     | 13890 | Leu Gly |
| Pro   | Tyr | Thr | Leu | Asp | Arg | Asp   | Ser | Leu | Tyr | Val | Asn   | Gly     |
| 13895 |     |     |     |     |     | 13900 |     |     |     |     | 13905 | Phe Thr |
| His   | Arg | Ser | Ser | Val | Pro | Thr   | Thr | Ser | Thr | Gly | Val   | Val     |
| 13910 |     |     |     |     |     | 13915 |     |     |     |     | 13920 | Ser Glu |
| Glu   | Pro | Phe | Thr | Leu | Asn | Phe   | Thr | Ile | Asn | Asn | Leu   | Arg     |
| 13925 |     |     |     |     |     | 13930 |     |     |     |     | 13935 | Tyr Met |
| Ala   | Asp | Met | Gly | Gln | Pro | Gly   | Ser | Leu | Lys | Phe | Asn   | Ile     |
| 13940 |     |     |     |     |     | 13945 |     |     |     |     | 13950 | Thr Asp |
| Asn   | Val | Met | Gln | His | Leu | Leu   | Ser | Pro | Leu | Phe | Gln   | Arg     |
| 13955 |     |     |     |     |     | 13960 |     |     |     |     | 13965 | Ser Ser |
| Leu   | Gly | Ala | Arg | Tyr | Thr | Gly   | Cys | Arg | Val | Ile | Ala   | Leu     |
| 13970 |     |     |     |     |     | 13975 |     |     |     |     | 13980 | Arg Ser |
| Val   | Lys | Asn | Gly | Ala | Glu | Thr   | Arg | Val | Asp | Leu | Leu   | Cys     |
| 13985 |     |     |     |     |     | 13990 |     |     |     |     | 13995 | Thr Tyr |
| Leu   | Gln | Pro | Leu | Ser | Gly | Pro   | Gly | Leu | Pro | Ile | Lys   | Gln     |
| 14000 |     |     |     |     |     | 14005 |     |     |     |     | 14010 | Val Phe |
| His   | Glu | Leu | Ser | Gln | Gln | Thr   | His | Gly | Ile | Thr | Arg   | Leu     |
| 14015 |     |     |     |     |     | 14020 |     |     |     |     | 14025 | Gly Pro |
| Tyr   | Ser | Leu | Asp | Lys | Asp | Ser   | Leu | Tyr | Leu | Asn | Gly   | Tyr     |
| 14030 |     |     |     |     |     | 14035 |     |     |     |     | 14040 | Asn Glu |
| Pro   | Gly | Pro | Asp | Glu | Pro | Pro   | Thr | Thr | Pro | Lys | Pro   | Ala     |
| 14045 |     |     |     |     |     | 14050 |     |     |     |     | 14055 | Thr Thr |
| Phe   | Leu | Pro | Pro | Leu | Ser | Glu   | Ala | Thr | Thr | Ala | Met   | Gly     |
| 14060 |     |     |     |     |     | 14065 |     |     |     |     | 14070 | Tyr His |
| Leu   | Lys | Thr | Leu | Thr | Leu | Asn   | Phe | Thr | Ile | Ser | Asn   | Leu     |
| 14075 |     |     |     |     |     | 14080 |     |     |     |     | 14085 | Gln Tyr |
| Ser   | Pro | Asp | Met | Gly | Lys | Gly   | Ser | Ala | Thr | Phe | Asn   | Ser     |
|       |     |     |     |     |     |       |     |     |     |     |       | Thr Glu |

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|         |                 |                     |                 |                 |  |       |  |  |  |  |  |       |
|---------|-----------------|---------------------|-----------------|-----------------|--|-------|--|--|--|--|--|-------|
| 14090   |                 |                     |                 |                 |  | 14095 |  |  |  |  |  | 14100 |
| Gly Val | Leu Gln His     | Leu Leu             | Arg Pro Leu Phe | Gln Lys Ser Ser |  |       |  |  |  |  |  |       |
| 14105   |                 | 14110               |                 | 14115           |  |       |  |  |  |  |  |       |
| Met Gly | Pro Phe Tyr Leu | Gly Cys Gln Leu Ile | Ser Leu Arg Pro |                 |  |       |  |  |  |  |  |       |
| 14120   |                 | 14125               |                 | 14130           |  |       |  |  |  |  |  |       |
| Glu Lys | Asp Gly Ala Ala | Thr Gly Val Asp Thr | Thr Cys Thr Tyr |                 |  |       |  |  |  |  |  |       |
| 14135   |                 | 14140               |                 | 14145           |  |       |  |  |  |  |  |       |
| His Pro | Asp Pro Val Gly | Pro Gly Leu Asp Ile | Gln Gln Leu Tyr |                 |  |       |  |  |  |  |  |       |
| 14150   |                 | 14155               |                 | 14160           |  |       |  |  |  |  |  |       |
| Trp Glu | Leu Ser Gln Leu | Thr His Gly Val Thr | Gln Leu Gly Phe |                 |  |       |  |  |  |  |  |       |
| 14165   |                 | 14170               |                 | 14175           |  |       |  |  |  |  |  |       |
| Tyr Val | Leu Asp Arg Asp | Ser Leu Phe Ile Asn | Gly Tyr Ala Pro |                 |  |       |  |  |  |  |  |       |
| 14180   |                 | 14185               |                 | 14190           |  |       |  |  |  |  |  |       |
| Gln Asn | Leu Ser Ile Arg | Gly Glu Tyr Gln Ile | Asn Phe His Ile |                 |  |       |  |  |  |  |  |       |
| 14195   |                 | 14200               |                 | 14205           |  |       |  |  |  |  |  |       |
| Val Asn | Trp Asn Leu Ser | Asn Pro Asp Pro Thr | Ser Ser Glu Tyr |                 |  |       |  |  |  |  |  |       |
| 14210   |                 | 14215               |                 | 14220           |  |       |  |  |  |  |  |       |
| Ile Thr | Leu Leu Arg Asp | Ile Gln Asp Lys Val | Thr Thr Leu Tyr |                 |  |       |  |  |  |  |  |       |
| 14225   |                 | 14230               |                 | 14235           |  |       |  |  |  |  |  |       |
| Lys Gly | Ser Gln Leu His | Asp Thr Phe Arg Phe | Cys Leu Val Thr |                 |  |       |  |  |  |  |  |       |
| 14240   |                 | 14245               |                 | 14250           |  |       |  |  |  |  |  |       |
| Asn Leu | Thr Met Asp Ser | Val Leu Val Thr Val | Lys Ala Leu Phe |                 |  |       |  |  |  |  |  |       |
| 14255   |                 | 14260               |                 | 14265           |  |       |  |  |  |  |  |       |
| Ser Ser | Asn Leu Asp Pro | Ser Leu Val Glu Gln | Val Phe Leu Asp |                 |  |       |  |  |  |  |  |       |
| 14270   |                 | 14275               |                 | 14280           |  |       |  |  |  |  |  |       |
| Lys Thr | Leu Asn Ala Ser | Phe His Trp Leu Gly | Ser Thr Tyr Gln |                 |  |       |  |  |  |  |  |       |
| 14285   |                 | 14290               |                 | 14295           |  |       |  |  |  |  |  |       |
| Leu Val | Asp Ile His Val | Thr Glu Met Glu Ser | Ser Val Tyr Gln |                 |  |       |  |  |  |  |  |       |
| 14300   |                 | 14305               |                 | 14310           |  |       |  |  |  |  |  |       |
| Pro Thr | Ser Ser Ser Ser | Thr Gln His Phe Tyr | Leu Asn Phe Thr |                 |  |       |  |  |  |  |  |       |
| 14315   |                 | 14320               |                 | 14325           |  |       |  |  |  |  |  |       |
| Ile Thr | Asn Leu Pro Tyr | Ser Gln Asp Lys Ala | Gln Pro Gly Thr |                 |  |       |  |  |  |  |  |       |
| 14330   |                 | 14335               |                 | 14340           |  |       |  |  |  |  |  |       |
| Thr Asn | Tyr Gln Arg Asn | Lys Arg Asn Ile Glu | Asp Ala Leu Asn |                 |  |       |  |  |  |  |  |       |

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14345

14350

14355

Gln Leu Phe Arg Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys  
 14360 14365 14370

Gln Val Ser Thr Phe Arg Ser Val Pro Asn Arg His His Thr Gly  
 14375 14380 14385

Val Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala Arg Arg Val Asp  
 14390 14395 14400

Arg Val Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr Arg Asn Gly  
 14405 14410 14415

Thr Gln Leu Gln Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val  
 14420 14425 14430

Asp Gly Tyr Ser Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser  
 14435 14440 14445

Asp Leu Pro Phe Trp Ala Val Ile Leu Ile Gly Leu Ala Gly Leu  
 14450 14455 14460

Leu Gly Val Ile Thr Cys Leu Ile Cys Gly Val Leu Val Thr Thr  
 14465 14470 14475

Arg Arg Arg Lys Lys Glu Gly Glu Tyr Asn Val Gln Gln Gln Cys  
 14480 14485 14490

Pro Gly Tyr Tyr Gln Ser His Leu Asp Leu Glu Asp Leu Gln  
 14495 14500 14505

&lt;210&gt; 1900

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1900

Met Gln Ser Gly Thr His Trp Arg Val Leu Gly Leu Cys Leu Leu Ser  
 1 5 10 15

Val Gly Val Trp Gly Gln Asp Gly Asn Glu Glu Met Gly Gly Ile Thr  
 20 25 30

Gln Thr Pro Tyr Lys Val Ser Ile Ser Gly Thr Thr Val Ile Leu Thr  
 35 40 45

Cys Pro Gln Tyr Pro Gly Ser Glu Ile Leu Trp Gln His Asn Asp Lys  
 50 55 60

# 10295w002-Sequence

Asn Ile Gly Gly Asp Glu Asp Asp Lys Asn Ile Gly Ser Asp Glu Asp  
65 70 75 80

His Leu Ser Leu Lys Glu Phe Ser Glu Leu Glu Gln Ser Gly Tyr Tyr  
85 90 95

Val Cys Tyr Pro Arg Gly Ser Lys Pro Glu Asp Ala Asn Phe Tyr Leu  
100 105 110

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

Ser Val Ala Thr Ile Val Ile Val Asp Ile Cys Ile Thr Gly Gly Leu  
130 135 140

Leu Leu Leu Val Tyr Tyr Trp Ser Lys Asn Arg Lys Ala Lys Ala Lys  
145 150 155 160

Pro Val Thr Arg Gly Ala Gly Ala Gly Gly Arg Gln Arg Gly Gln Asn  
165 170 175

Lys Glu Arg Pro Pro Pro Val Pro Asn Pro Asp Tyr Glu Pro Ile Arg  
180 185 190

Lys Gly Gln Arg Asp Leu Tyr Ser Gly Leu Asn Gln Arg Arg Ile  
195 200 205

<210> 1901  
<211> 171  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1901

Met Glu His Ser Thr Phe Leu Ser Gly Leu Val Leu Ala Thr Leu Leu  
1 5 10 15

Ser Gln Val Ser Pro Phe Lys Ile Pro Ile Glu Glu Leu Glu Asp Arg  
20 25 30

Val Phe Val Asn Cys Asn Thr Ser Ile Thr Trp Val Glu Gly Thr Val  
35 40 45

Gly Thr Leu Leu Ser Asp Ile Thr Arg Leu Asp Leu Gly Lys Arg Ile  
50 55 60

Leu Asp Pro Arg Gly Ile Tyr Arg Cys Asn Gly Thr Asp Ile Tyr Lys  
65 70 75 80

Asp Lys Glu Ser Thr Val Gln Val His Tyr Arg Met Cys Gln Ser Cys  
Page 557

10295w002-Sequence

85

90

95

Val Glu Leu Asp<sub>100</sub> Pro Ala Thr Val Ala<sub>105</sub> Gly Ile Ile Val Thr<sub>110</sub> Asp Val

Ile Ala Thr<sub>115</sub> Leu Leu Leu Ala<sub>120</sub> Gly Val Phe Cys Phe<sub>125</sub> Ala Gly His

Glu Thr<sub>130</sub> Gly Arg Leu Ser Gly<sub>135</sub> Ala Ala Asp Thr Gln<sub>140</sub> Ala Leu Leu Arg

Asn Asp Gln Val Tyr Gln<sub>150</sub> Pro Leu Arg Asp Arg<sub>155</sub> Asp Asp Ala Gln Tyr<sub>160</sub>

Ser His Leu Gly Gly<sub>165</sub> Asn Trp Ala Arg Asn<sub>170</sub> Lys

<210> 1902

<211> 670

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1902

Pro Gly Ser Arg Lys<sub>5</sub> Phe Asn Thr Thr Glu<sub>10</sub> Arg Val Leu Gln Gly<sub>15</sub> Leu

Leu Arg Pro Leu<sub>20</sub> Phe Lys Asn Thr Ser<sub>25</sub> Val Gly Pro Leu Tyr<sub>30</sub> Ser Gly

Cys Arg Leu<sub>35</sub> Thr Leu Leu Arg Pro<sub>40</sub> Glu Lys Asp Gly Glu<sub>45</sub> Ala Thr Gly

Val Asp Ala Ile Cys Thr His<sub>55</sub> Arg Pro Asp Pro Thr<sub>60</sub> Gly Pro Gly Leu

Asp Arg Glu Gln Leu Tyr<sub>70</sub> Leu Glu Leu Ser Gln<sub>75</sub> Leu Thr His Ser Ile<sub>80</sub>

Thr Glu Leu Gly Pro<sub>85</sub> Tyr Thr Leu Asp Arg<sub>90</sub> Asp Ser Leu Tyr Val<sub>95</sub> Asn

Gly Phe Thr His<sub>100</sub> Arg Ser Ser Val Pro<sub>105</sub> Thr Thr Ser Thr Gly<sub>110</sub> Val Val

Ser Glu Glu<sub>115</sub> Pro Phe Thr Leu Asn<sub>120</sub> Phe Thr Ile Asn<sub>125</sub> Asn Leu Arg Tyr

Met Ala Asp Met Gly Gln Pro<sub>135</sub> Gly Ser Leu Lys Phe<sub>140</sub> Asn Ile Thr Asp

# 10295w002-Sequence

Asn Val Met Gln His Leu Leu Ser Pro Leu Phe Gln Arg Ser Ser Leu  
 145 150 155 160  
 Gly Ala Arg Tyr Thr Gly Cys Arg Val Ile Ala Leu Arg Ser Val Lys  
 165 170 175  
 Asn Gly Ala Glu Thr Arg Val Asp Leu Leu Cys Thr Tyr Leu Gln Pro  
 180 185 190  
 Leu Ser Gly Pro Gly Leu Pro Ile Lys Gln Val Phe His Glu Leu Ser  
 195 200 205  
 Gln Gln Thr His Gly Ile Thr Arg Leu Gly Pro Tyr Ser Leu Asp Lys  
 210 215 220  
 Asp Ser Leu Tyr Leu Asn Gly Tyr Asn Glu Pro Gly Pro Asp Glu Pro  
 225 230 235 240  
 Pro Thr Thr Pro Lys Pro Ala Thr Thr Phe Leu Pro Pro Leu Ser Glu  
 245 250 255  
 Ala Thr Thr Ala Met Gly Tyr His Leu Lys Thr Leu Thr Leu Asn Phe  
 260 265 270  
 Thr Ile Ser Asn Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala  
 275 280 285  
 Thr Phe Asn Ser Thr Glu Gly Val Leu Gln His Leu Leu Arg Pro Leu  
 290 295 300  
 Phe Gln Lys Ser Ser Met Gly Pro Phe Tyr Leu Gly Cys Gln Leu Ile  
 305 310 315 320  
 Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr  
 325 330 335  
 Cys Thr Tyr His Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln  
 340 345 350  
 Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly  
 355 360 365  
 Phe Tyr Val Leu Asp Arg Asp Ser Leu Phe Ile Asn Gly Tyr Ala Pro  
 370 375 380  
 Gln Asn Leu Ser Ile Arg Gly Glu Tyr Gln Ile Asn Phe His Ile Val  
 385 390 395 400  
 Asn Trp Asn Leu Ser Asn Pro Asp Pro Thr Ser Ser Glu Tyr Ile Thr  
 405 410 415

# 10295w002-Sequence

Leu Leu Arg Asp Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys Gly Ser  
420 425 430

Gln Leu His Asp Thr Phe Arg Phe Cys Leu Val Thr Asn Leu Thr Met  
435 440 445

Asp Ser Val Leu Val Thr Val Lys Ala Leu Phe Ser Ser Asn Leu Asp  
450 455 460

Pro Ser Leu Val Glu Gln Val Phe Leu Asp Lys Thr Leu Asn Ala Ser  
465 470 475 480

Phe His Trp Leu Gly Ser Thr Tyr Gln Leu Val Asp Ile His Val Thr  
485 490 495

Glu Met Glu Ser Ser Val Tyr Gln Pro Thr Ser Ser Ser Ser Thr Gln  
500 505 510

His Phe Tyr Leu Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser Gln Asp  
515 520 525

Lys Ala Gln Pro Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg Asn Ile  
530 535 540

Glu Asp Ala Leu Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys Ser Tyr  
545 550 555 560

Phe Ser Asp Cys Gln Val Ser Thr Phe Arg Ser Val Pro Asn Arg His  
565 570 575

His Thr Gly Val Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala Arg Arg  
580 585 590

Val Asp Arg Val Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr Arg Asn  
595 600 605

Gly Thr Gln Leu Gln Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val  
610 615 620

Asp Gly Tyr Ser Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser Asp  
625 630 635 640

Leu Pro Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Gly Gly Glu Gln  
645 650 655

Lys Leu Ile Ser Glu Glu Asp Leu His His His His His His  
660 665 670

<210> 1903

<211> 25

<212> PRT



10295w002-Sequence

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1903

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser  
20 25

<210> 1904

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1904

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

Gly

<210> 1905

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1905

Gly Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn  
1 5 10 15

Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp  
20 25 30

Thr Ala Leu Tyr Tyr Cys  
35

<210> 1906

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1906

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
1 5 10

10295w002-Sequence

<210> 1907  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<220>  
 <221> VARIANT  
 <222> (8)..(8)  
 <223> Xaa = Any Amino Acid

<400> 1907

Gly Phe Thr Phe Asp Asp Tyr Xaa  
 1 5

<210> 1908  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<220>  
 <221> VARIANT  
 <222> (8)..(8)  
 <223> Xaa = Any Amino Acid

<400> 1908

Ile Ser Trp Asn Ser Gly Ser Xaa  
 1 5

<210> 1909  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<220>  
 <221> VARIANT  
 <222> (3)..(3)  
 <223> Xaa = Any Amino Acid

<220>  
 <221> VARIANT  
 <222> (12)..(12)  
 <223> Xaa = Any Amino Acid

<220>  
 <221> VARIANT  
 <222> (15)..(15)  
 <223> Xaa = Any Amino Acid

<400> 1909

Ala Lys Xaa Gly Ser Gly Tyr Gly Lys Phe Tyr Xaa Tyr Gly Xaa Asp  
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10295w002-Sequence

1 5 10 15

Val

<210> 1910  
 <211> 125  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1910

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp 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 Gly Ile Ser Trp Asn Ser Gly Ser 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 Gly Tyr Ser Gly Tyr Gly Tyr Phe Tyr Tyr Tyr Gly Met  
 100 105 110

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

<210> 1911  
 <211> 330  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1911

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  
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## 10295w002-Sequence

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

Lys 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 Asp Glu  
 225 230 235 240

Leu 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  
 Page 564

10295w002-Sequence

305                  310                  315                  320

|       |                     |
|-------|---------------------|
| <210> | 1912                |
| <211> | 330                 |
| <212> | PRT                 |
| <213> | Artificial Sequence |

<220>  
<223> synthetic

<400> 1912

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

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

Lys 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

10295w002-Sequence

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 Asp Glu  
 225 230 235 240

Leu 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 Arg Phe Thr  
 305 310 315 320

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

<210> 1913  
 <211> 326  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1913

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

Ser Thr Ser Glu Ser 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 Asn Phe Gly Thr Gln Thr  
 65 70 75 80

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

Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro

## 10295w002-Sequence

100

105

110

Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  
 115 120 125

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

Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly  
 145 150 155 160

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn  
 165 170 175

Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp  
 180 185 190

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro  
 195 200 205

Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu  
 210 215 220

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

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile  
 245 250 255

Ser Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr  
 260 265 270

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

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

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu  
 305 310 315 320

Ser Leu Ser Pro Gly Lys  
 325

<210> 1914

<211> 326

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1914

# 10295w002-Sequence

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

Ser Thr Ser Glu Ser 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 Asn Phe Gly Thr Gln Thr  
65 70 75 80

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

Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro  
100 105 110

Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  
115 120 125

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

Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly  
145 150 155 160

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn  
165 170 175

Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp  
180 185 190

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro  
195 200 205

Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu  
210 215 220

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

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile  
245 250 255

Ser Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr  
260 265 270



# 10295w002-Sequence

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

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

Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu  
305 310 315 320

Ser Leu Ser Pro Gly Lys  
325

<210> 1915

<211> 327

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1915

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

Ser Thr Ser Glu Ser 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 Lys Thr  
65 70 75 80

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

Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro  
100 105 110

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

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

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp  
145 150 155 160

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe  
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## 10295w002-Sequence

165

170

175

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp  
 180 185 190

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

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg  
 210 215 220

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

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

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

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

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

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

Leu Ser Leu Ser Leu Gly Lys  
 325

<210> 1916

<211> 327

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1916

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

Ser Thr Ser Glu Ser 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

10295w002-Sequence

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

# 10295w002-Sequence

<210> 1917  
 <211> 329  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1917

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

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

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

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

Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr  
 145 150 155 160

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

Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His  
 180 185 190

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

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

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu  
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## 10295w002-Sequence

225                      230                      235                      240  
 Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro  
                                  245                      250                      255  
 Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn  
                                  260                      265                      270  
 Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu  
                                  275                      280                      285  
 Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val  
                                  290                      295                      300  
 Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln  
 305                                   310                      315                      320  
 Lys Ser Leu Ser Leu Ser Pro Gly Lys  
                                          325

<210> 1918  
 <211> 329  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1918

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  
 Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys  
                                  100                      105                      110  
 Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys  
                                  115                      120                      125

# 10295W002-Sequence

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

Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr  
145 150 155 160

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

Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His  
180 185 190

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

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

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

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

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

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

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

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

Lys Ser Leu Ser Leu Ser Pro Gly Lys  
325

<210> 1919  
<211> 326  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1919

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

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr  
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10295w002-Sequence

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 Lys Thr  
65 70 75 80

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

Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro  
100 105 110

Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  
115 120 125

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

Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly  
145 150 155 160

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn  
165 170 175

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp  
180 185 190

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro  
195 200 205

Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu  
210 215 220

Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn  
225 230 235 240

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile  
245 250 255

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr  
260 265 270

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

Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys

## 10295w002-Sequence

290

295

300

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu  
 305 310 315 320

Ser Leu Ser Leu Gly Lys  
 325

&lt;210&gt; 1920

&lt;211&gt; 326

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1920

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

Ser Thr Ser Glu Ser 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 Lys Thr  
 65 70 75 80

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

Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro  
 100 105 110

Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  
 115 120 125

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

Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly  
 145 150 155 160

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn  
 165 170 175

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp  
 180 185 190



# 10295w002-Sequence

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro  
195 200 205

Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu  
210 215 220

Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn  
225 230 235 240

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile  
245 250 255

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr  
260 265 270

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

Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys  
290 295 300

Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu  
305 310 315 320

Ser Leu Ser Leu Gly Lys  
325

<210> 1921  
<211> 232  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1921

Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala  
1 5 10 15

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro  
20 25 30

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val  
35 40 45

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val  
50 55 60

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln  
65 70 75 80

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln  
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85

90

95

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala  
100 105 110

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro  
115 120 125

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

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser  
145 150 155 160

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr  
165 170 175

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr  
180 185 190

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe  
195 200 205

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys  
210 215 220

Ser Leu Ser Leu Ser Pro Gly Lys  
225 230

<210> 1922  
<211> 232  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1922

Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala  
1 5 10 15

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro  
20 25 30

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val  
35 40 45

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val  
50 55 60

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln  
65 70 75 80

# 10295w002-Sequence

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln  
85 90 95

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala  
100 105 110

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro  
115 120 125

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

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser  
145 150 155 160

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr  
165 170 175

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr  
180 185 190

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe  
195 200 205

Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys  
210 215 220

Ser Leu Ser Leu Ser Pro Gly Lys  
225 230

<210> 1923

<211> 228

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1923

Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val  
1 5 10 15

Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu  
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser  
35 40 45

His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu  
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr  
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| 10295w002-Sequence |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 65                 |                    |                    |                    | 70                 |                    |                    |                    | 75                 |                    |                    |                    | 80                 |                    |                    |                    |
| Phe                | Arg                | Val                | Val                | Ser <sub>85</sub>  | Val                | Leu                | Thr                | Val                | Val <sub>90</sub>  | His                | Gln                | Asp                | Trp                | Leu <sub>95</sub>  | Asn                |
| Gly                | Lys                | Glu                | Tyr <sub>100</sub> | Lys                | Cys                | Lys                | Val                | Ser <sub>105</sub> | Asn                | Lys                | Gly                | Leu                | Pro <sub>110</sub> | Ala                | Pro                |
| Ile                | Glu                | Lys <sub>115</sub> | Thr                | Ile                | Ser                | Lys                | Thr <sub>120</sub> | Lys                | Gly                | Gln                | Pro                | Arg <sub>125</sub> | Glu                | Pro                | Gln                |
| Val                | Tyr <sub>130</sub> | Thr                | Leu                | Pro                | Pro                | Ser <sub>135</sub> | Arg                | Glu                | Glu                | Met                | Thr <sub>140</sub> | Lys                | Asn                | Gln                | Val                |
| Ser <sub>145</sub> | Leu                | Thr                | Cys                | Leu                | Val <sub>150</sub> | Lys                | Gly                | Phe                | Tyr                | Pro <sub>155</sub> | Ser                | Asp                | Ile                | Ser                | Val <sub>160</sub> |
| Glu                | Trp                | Glu                | Ser                | Asn <sub>165</sub> | Gly                | Gln                | Pro                | Glu                | Asn <sub>170</sub> | Asn                | Tyr                | Lys                | Thr                | Thr <sub>175</sub> | Pro                |
| Pro                | Met                | Leu                | Asp <sub>180</sub> | Ser                | Asp                | Gly                | Ser                | Phe <sub>185</sub> | Phe                | Leu                | Tyr                | Ser                | Lys <sub>190</sub> | Leu                | Thr                |
| Val                | Asp                | Lys <sub>195</sub> | Ser                | Arg                | Trp                | Gln                | Gln <sub>200</sub> | Gly                | Asn                | Val                | Phe                | Ser <sub>205</sub> | Cys                | Ser                | Val                |
| Met                | His <sub>210</sub> | Glu                | Ala                | Leu                | His                | Asn <sub>215</sub> | His                | Tyr                | Thr                | Gln                | Lys <sub>220</sub> | Ser                | Leu                | Ser                | Leu                |
| Ser <sub>225</sub> | Pro                | Gly                | Lys                |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |

|       |                     |
|-------|---------------------|
| <210> | 1924                |
| <211> | 228                 |
| <212> | PRT                 |
| <213> | Artificial Sequence |

<220>  
<223> synthetic

<400> 1924

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

# 10295w002-Sequence

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr  
65 70 75 80

Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn  
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro  
100 105 110

Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln  
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val  
130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ser Val  
145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro  
165 170 175

Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr  
180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val  
195 200 205

Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu  
210 215 220

Ser Pro Gly Lys  
225

<210> 1925  
<211> 229  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1925

Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro Glu Phe  
1 5 10 15

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr  
20 25 30

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val  
35 40 45

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val  
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## 10295w002-Sequence

50

55

60

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser  
65 70 75 80

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu  
85 90 95

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser  
100 105 110

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro  
115 120 125

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln  
130 135 140

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala  
145 150 155 160

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr  
165 170 175

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu  
180 185 190

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser  
195 200 205

Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser  
210 215 220

Leu Ser Leu Gly Lys  
225

<210> 1926

<211> 229

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1926

Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro Glu Phe  
1 5 10 15

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr  
20 25 30

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val  
35 40 45

10295w002-Sequence

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val  
50 55 60

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser  
65 70 75 80

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu  
85 90 95

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser  
100 105 110

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro  
115 120 125

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln  
130 135 140

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala  
145 150 155 160

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr  
165 170 175

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu  
180 185 190

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser  
195 200 205

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser  
210 215 220

Leu Ser Leu Gly Lys  
225

<210> 1927  
<211> 231  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1927

Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala  
1 5 10 15

Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys  
20 25 30

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val  
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10295w002-Sequence

35

40

45

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp  
50 55 60

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

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp  
85 90 95

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu  
100 105 110

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg  
115 120 125

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

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp  
145 150 155 160

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys  
165 170 175

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser  
180 185 190

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser  
195 200 205

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser  
210 215 220

Leu Ser Leu Ser Pro Gly Lys  
225 230

<210> 1928

<211> 231

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic

<400> 1928

Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala  
1 5 10 15

Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys  
20 25 30



# 10295w002-Sequence

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val  
35 40 45

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp  
50 55 60

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

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp  
85 90 95

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu  
100 105 110

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg  
115 120 125

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

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp  
145 150 155 160

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys  
165 170 175

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser  
180 185 190

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser  
195 200 205

Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser  
210 215 220

Leu Ser Leu Ser Pro Gly Lys  
225 230

<210> 1929  
<211> 228  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1929

Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Pro Val  
1 5 10 15

Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu  
Page 585

10295w002-Sequence

20

25

30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser  
35 40 45

Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu  
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr  
65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn  
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser  
100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln  
115 120 125

Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val  
130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val  
145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro  
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr  
180 185 190

Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val  
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu  
210 215 220

Ser Leu Gly Lys  
225

<210> 1930  
<211> 228  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1930

Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Pro Val  
1 5 10 15

# 10295w002-Sequence

Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu  
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser  
35 40 45

Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu  
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr  
65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn  
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser  
100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln  
115 120 125

Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val  
130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val  
145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro  
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr  
180 185 190

Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val  
195 200 205

Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu  
210 215 220

Ser Leu Gly Lys  
225

<210> 1931  
<211> 227  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic

<400> 1931

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly  
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10295w002-Sequence

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

<210> 1932  
 <211> 227  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1932

# 10295w002-Sequence

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly  
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met  
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His  
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val  
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr  
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly  
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile  
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val  
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser  
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu  
145 150 155 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro  
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val  
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met  
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser  
210 215 220

Pro Gly Lys  
225

<210> 1933  
<211> 233  
<212> PRT  
<213> Artificial sequence

<220>  
<223> synthetic

10295w002-Sequence

<400> 1933

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

<210> 1934

<211> 233

<212> PRT

<213> Artificial Sequence

10295w002-Sequence

<220>

<223> synthetic

<400> 1934

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

<210> 1935

<211> 324

<212> DNA

## 10295w002-Sequence

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1935

gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgtg ttactgtcag cagtatggta gctcaccttg gacgttcggc 300

caagggacca aggtggaaat caaa 324

&lt;210&gt; 1936

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1936

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

&lt;210&gt; 1937

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic

&lt;400&gt; 1937

cagagtgtta gcagcagcta c

21



10295w002-Sequence

<210> 1938  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1938

Gln Ser Val Ser Ser Ser Tyr  
 1 5

<210> 1939  
 <211> 9  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1939  
 ggtgcatcc

9

<210> 1940  
 <211> 3  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1940

Gly Ala Ser  
 1

<210> 1941  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1941  
 cagcagtatg gtagctcacc ttggacg

27

<210> 1942  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 1942

Gln Gln Tyr Gly Ser Ser Pro Trp Thr  
 1 5

<210> 1943

## 10295w002-Sequence

<211> 357  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1943  
 caggtgcagc tacagcagtg gggcgagga ctgttgaagc cctcggagac cctgtccctc 60  
 acctgcgctg tctatggtgg gtccttcagt ggtttctact ggagctggat ccgccagtcc 120  
 ccagggaagg ggctggagtg gataggggaa atcaatcgtg gtggaagcac caactccaac 180  
 ccgtccctca agagtcgagt caccatgtca ctagacacgt ccaaaaccca gttctccctg 240  
 aagctgaggt ctgtgaccgc cgcggacacg gctatatatt attgtgagag aagtctggaa 300  
 ctagactctg atggttttga tatctggggc caagggacaa tggtcaccgt ctcttca 357

<210> 1944  
 <211> 119  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1944  
 Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu  
                   5                  10                  15  
 Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Phe  
                   20                  25                  30  
 Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile  
                   35                  40                  45  
 Gly Glu Ile Asn Arg Gly Gly Ser Thr Asn Ser Asn Pro Ser Leu Lys  
                   50                  55                  60  
 Ser Arg Val Thr Met Ser Leu Asp Thr Ser Lys Thr Gln Phe Ser Leu  
                   65                  70                  75                  80  
 Lys Leu Arg Ser Val Thr Ala Ala Asp Thr Ala Ile Tyr Tyr Cys Ala  
                   85                  90                  95  
 Arg Ser Leu Glu Leu Asp Ser Asp Gly Phe Asp Ile Trp Gly Gln Gly  
                   100                  105                  110  
 Thr Met Val Thr Val Ser Ser  
                   115

<210> 1945  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

10295w002-Sequence

<220>  
 <223> Synthetic  
 <400> 1945  
 ggtgggtcct tcagtgggtt ctac 24

<210> 1946  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1946

Gly Gly Ser Phe Ser Gly Phe Tyr  
 1 5

<210> 1947  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1947  
 atcaatcgtg gtggaagcac c 21

<210> 1948  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1948

Ile Asn Arg Gly Gly Ser Thr  
 1 5

<210> 1949  
 <211> 39  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1949  
 gcgagaagtc tggaactaga ctctgatggt ttgatatc 39

<210> 1950  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

## 10295w002-Sequence

&lt;400&gt; 1950

Ala Arg Ser Leu Glu Leu Asp Ser Asp Gly Phe Asp Ile  
 1 5 10

&lt;210&gt; 1951

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 1951

gaaactgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60  
 ctctcctgca gggccagtca gagtgttagc agcagctacg tagcctggta ccagcagaaa 120  
 cctggccagg ctcccaggcg cctcatctat ggtgcatcca gcagggccac tggcatccca 180  
 ggcaggttca gtggcagtgg gtctgggaca gactttactc tcaccatcag cagactggag 240  
 cctgaagatt ttgcagtgta ttactgtcag cagtatggta gttcaccttg gacgttcggc 300  
 caagggacca aggtggaaat caaa 324

&lt;210&gt; 1952

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic

&lt;400&gt; 1952

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

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

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

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Gly 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 Pro  
 85 90 95

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

&lt;210&gt; 1953

10295w002-Sequence

<211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1953  
 cagagtgtta gcagcagcta c

21

<210> 1954  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1954

Gln Ser Val Ser Ser Ser Tyr  
 1 5

<210> 1955  
 <211> 9  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1955  
 ggtgcatcc

9

<210> 1956  
 <211> 3  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1956

Gly Ala Ser  
 1

<210> 1957  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic

<400> 1957  
 cagagtgtta gcagcagcta c

21

<210> 1958  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

10295wo02-Sequence

<220>

<223> Synthetic

<400> 1958

Gln Gln Tyr Gly Ser Ser Pro Trp Thr  
1 5

<210> 1959

<211> 443

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 1959

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

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

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

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

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

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

Val Lys Asp Arg Gly Gly Tyr Ser Pro Tyr Trp Gly Gln Gly Thr Leu  
100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu  
115 120 125

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys  
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser  
145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser  
165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser  
180 185 190

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn  
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10295w002-Sequence

195

200

205

Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro  
 210 215 220  
 Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro  
 225 230 235 240  
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr  
 245 250 255  
 Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn  
 260 265 270  
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg  
 275 280 285  
 Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val  
 290 295 300  
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser  
 305 310 315 320  
 Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys  
 325 330 335  
 Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu  
 340 345 350  
 Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe  
 355 360 365  
 Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu  
 370 375 380  
 Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe  
 385 390 395 400  
 Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly  
 405 410 415  
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr  
 420 425 430  
 Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys  
 435 440

<210> 1960  
 <211> 215  
 <212> PRT  
 <213> Artificial Sequence

10295w002-Sequence

<220>

<223> Synthetic

<400> 1960

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Thr Tyr  
20 25 30

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

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

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

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

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg Thr Val Ala  
100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser  
115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu  
130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser  
145 150 155 160

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu  
165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val  
180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys  
195 200 205

Ser Phe Asn Arg Gly Glu Cys  
210 215

<210> 1961

<211> 450

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic



10295w002-Sequence

<400> 1961

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

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

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

Ser Gly Ile Ser Trp Asn Ser Gly Ser Lys 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 Tyr Gly Ser Gly Tyr Gly Lys Phe Tyr His Tyr Gly Leu Asp  
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys  
115 120 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu  
130 135 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro  
145 150 155 160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr  
165 170 175

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val  
180 185 190

Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn  
195 200 205

Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser  
210 215 220

Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly  
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile  
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu

## 10295w002-Sequence

260

265

270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His  
 275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg  
 290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys  
 305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu  
 325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr  
 340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu  
 355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp  
 370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val  
 385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp  
 405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His  
 420 425 430

Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu Ser Pro  
 435 440 445

Gly Lys  
 450

<210> 1962

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 1962

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

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

# 10295w002-Sequence

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

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