

eolf-seq1
SEQUENCE LISTING

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<120> Cellular Targeted Active Ingredient Delivery System
<130> 976-2 PCT
<150> P412787
<151> 2015-06-22
<160> 28
<170> PatentIn version 3.5
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preferably Asn

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preferably Tyr

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Ser Glu Ala Ala Xaa Xaa Arg Gln Ile Asn Leu Glu Leu Xaa Ala Ser
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Tyr Val Tyr Leu Ser Met Ser Xaa Tyr Phe Asp Arg Asp Asp Val Ala
 20 25 30

Leu Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg
 35 40 45

Glu His Ala Glu Lys Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg
 50 55 60

Ile Xaa Leu Xaa Asp Ile Lys Lys Pro Asp Xaa Asp Asp Trp Glu Ser
 65 70 75 80

Gly Leu Asn Ala Met Glu Cys Ala Leu Xaa Leu Glu Lys Xaa Asn Gln
 85 90 95

Ser Leu Leu Glu Leu His Lys Leu Ala Thr Asp Lys Asn Asp Pro His
 100 105 110

Leu Cys Asp Phe Ile Glu Thr Xaa Tyr Leu Xaa Glu Gln Val Lys Xaa
 115 120 125

Ile Lys Glu Leu
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20 25 30

Tyr Val Tyr Leu Ser Met Ser Xaa Tyr Phe Asp Arg Asp Asp Val Ala
35 40 45

Leu Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg
50 55 60

Glu His Ala Glu Lys Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg
65 70 75 80

Ile Xaa Leu Xaa Asp Ile Lys Lys Pro Asp Xaa Asp Asp Trp Glu Ser
85 90 95

Gly Leu Asn Ala Met Glu Cys Ala Leu Xaa Leu Glu Lys Xaa Val Asn
100 105 110

Gln Ser Leu Leu Glu Leu His Lys Leu Ala Thr Asp Lys Asn Asp Pro
115 120 125

His Leu Cys Asp Phe Ile Glu Thr Xaa Tyr Leu Xaa Glu Gln Val Lys
130 135 140

Xaa Ile Lys Glu Leu Gly Asp His Val Thr Asn Leu Arg Lys Met Gly
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Ala Pro Glu Xaa Gly Xaa Ala Glu Tyr Leu Phe Asp Lys His Thr Leu
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Gly Xaa Ser Asp Xaa Xaa Xaa
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<213> Mus musculus

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Tyr Val Tyr Leu Ser Met Ser Cys Tyr Phe Asp Arg Asp Asp Val Ala
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Leu Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg
35 40 45

Glu His Ala Glu Lys Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg
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50

55

Ile Phe Leu Gln Asp Ile Lys Lys Pro Asp Arg Asp Asp Trp Glu Ser
65 70 75 80

Gly Leu Asn Ala Met Glu Cys Ala Leu His Leu Glu Lys Ser Val Asn
85 90 95

Gln Ser Leu Leu Glu Leu His Lys Leu Ala Thr Asp Lys Asn Asp Pro
100 105 110

His Leu Cys Asp Phe Ile Glu Thr Tyr Tyr Leu Ser Glu Gln Val Lys
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Ser Ile Lys Glu Leu
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Tyr Val Tyr Leu Ser Met Ser Cys Tyr Phe Asp Arg Asp Asp Val Ala
35 40 45

Leu Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg
50 55 60

Glu His Ala Glu Lys Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg
65 70 75 80

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

Gly Leu Asn Ala Met Glu Cys Ala Leu His Leu Glu Lys Ser Val Asn
100 105 110

Gln Ser Leu Leu Glu Leu His Lys Leu Ala Thr Asp Lys Asn Asp Pro
115 120 125

His Leu Cys Asp Phe Ile Glu Thr Tyr Tyr Leu Ser Glu Gln Val Lys
130 135 140

Ser Ile Lys Glu Leu Gly Asp His Val Thr Asn Leu Arg Lys Met Gly
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Ala Pro Glu Ala Gly Met Ala Glu Tyr Leu Phe Asp Lys His Thr Leu
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Gly His Gly Asp
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Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg Glu
35 40 45

His Ala Glu Lys Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg Ile
50 55 60

Phe Leu Gln Asp Ile Lys Lys Pro Asp Cys Asp Asp Trp Glu Ser Gly
65 70 75 80

Leu Asn Ala Met Glu Cys Ala Leu His Leu Glu Lys Asn Val Asn Gln
85 90 95

Ser Leu Leu Glu Leu His Lys Leu Ala Thr Asp Lys Asn Asp Pro His
100 105 110

Leu Cys Asp Phe Ile Glu Thr His Tyr Leu Asn Glu Gln Val Lys Ala
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Ile Lys Glu Leu
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Ser Glu Ala Ala Asn Arg Gln Ile Asn Leu Glu Leu Tyr Ala Ser Tyr
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Val Tyr Leu Ser Met Ser Tyr Tyr Phe Asp Arg Asp Val Ala Leu
35 40 45

Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg Glu
50 55 60

His Ala Glu Lys Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg Ile
65 70 75 80

Phe Leu Gln Asp Ile Lys Lys Pro Asp Cys Asp Asp Trp Glu Ser Gly
85 90 95

Leu Asn Ala Met Glu Cys Ala Leu His Leu Glu Lys Asn Val Asn Gln
100 105 110

Ser Leu Leu Glu Leu His Lys Leu Ala Thr Asp Lys Asn Asp Pro His
115 120 125

Leu Cys Asp Phe Ile Glu Thr His Tyr Leu Asn Glu Gln Val Lys Ala
130 135 140

Ile Lys Glu Leu Gly Asp His Val Thr Asn Leu Arg Lys Met Gly Ala
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Pro Glu Ser Gly Leu Ala Glu Tyr Leu Phe Asp Lys His Thr Leu Gly
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Asp Ser Asp

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Ser Glu Ala Ala Xaa Arg Gln Ile Asn Leu Glu Leu Xaa Ala Ser Tyr
 20 25 30

Val Tyr Leu Ser Met Ser Tyr Tyr Phe Asp Arg Asp Asp Val Ala Leu
 35 40 45

Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg Glu
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His Ala Glu Lys Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg Ile
65 70 75 80

Xaa Leu Xaa Asp Ile Lys Lys Pro Asp Cys Asp Asp Trp Glu Ser Gly
85 90 95

Leu Asn Ala Met Glu Cys Ala Leu Xaa Leu Glu Lys Asn Val Asn Gln
100 105 110

Ser Leu Leu Glu Leu His Lys Leu Ala Thr Asp Lys Asn Asp Pro His
115 120 125

Leu Cys Asp Phe Ile Glu Thr His Tyr Leu Asn Glu Gln Val Lys Xaa
130 135 140

Ile Lys Glu Leu Gly Asp His Val Thr Asn Leu Arg Lys Met Gly Ala
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Pro Glu Ser Gly Leu Ala Glu Tyr Leu Phe Asp Lys His Thr Leu Gly
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Asp Ser Asp Xaa Xaa Xaa
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Xaa Leu Xaa Ala Ser Tyr Thr Tyr Leu Ser Leu Gly Xaa Xaa Phe Asp
20 25 30

Arg Asp Asp Val Ala Leu Glu Gly Val Xaa His Phe Phe Arg Glu Leu
35 40 45

Ala Glu Glu Lys Arg Glu Gly Xaa Glu Arg Leu Leu Xaa Xaa Gln Asn
50 55 60

Xaa Arg Gly Gly Arg Ala Leu Phe Gln Asp Xaa Xaa Lys Pro Xaa Xaa
65 70 75 80

Asp Glu Trp Gly Lys Thr Xaa Xaa Ala Met Xaa Ala Ala Xaa Ala Xaa
85 90 95

Glu Lys Xaa Leu Asn Gln Ala Leu Leu Asp Leu His Ala Leu Gly Ser
100 105 110

Ala Arg Xaa Asp Pro His Xaa Cys Asp Phe Leu Glu Xaa His Xaa Leu
115 120 125

Asp Xaa Glu Val Lys Leu Ile Lys Lys Met Gly Xaa His Leu Thr Asn
130 135 140

Leu Xaa Arg Xaa Ala Gly
145 150

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Val Asn Xaa Leu Val Asn Leu Xaa Leu Xaa Ala Ser Tyr Thr Tyr Leu
20          25          30

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eolf-seq1

Ser Leu Gly Xaa Xaa Phe Asp Arg Asp Asp Val Ala Leu Glu Gly Val
35 40 45

Xaa His Phe Phe Arg Glu Leu Ala Glu Glu Lys Arg Glu Gly Xaa Glu
50 55 60

Arg Leu Leu Xaa Xaa Gln Asn Xaa Arg Gly Gly Arg Ala Leu Phe Gln
65 70 75 80

Asp Xaa Xaa Lys Pro Xaa Xaa Asp Glu Trp Gly Lys Thr Xaa Xaa Ala
85 90 95

Met Xaa Ala Ala Xaa Ala Xaa Glu Lys Xaa Leu Asn Gln Ala Leu Leu
100 105 110

Asp Leu His Ala Leu Gly Ser Ala Arg Xaa Asp Pro His Xaa Cys Asp
115 120 125

Phe Leu Glu Xaa His Xaa Leu Asp Xaa Glu Val Lys Leu Ile Lys Lys
130 135 140

Met Gly Xaa His Leu Thr Asn Leu Xaa Arg Xaa Ala Gly Pro Gln Pro
145 150 155 160

Xaa Gln Xaa Gly Val Xaa Gln Xaa Ser Leu Gly Glu Tyr Leu Phe Glu
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Arg Leu Thr Leu Lys His Asp
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Arg Asp Asp Val Ala Leu Glu Gly Val Gly His Phe Phe Arg Glu Leu
35 40 45

Ala Glu Glu Lys Arg Glu Gly Ala Glu Arg Leu Leu Glu Phe Gln Asn
50 55 60

eo1f-seq1

Asp Arg Gly Gly Arg Ala Leu Phe Gln Asp Val Gln Lys Pro Ser Gln
65 70 75 80

Asp Glu Trp Gly Lys Thr Gln Glu Ala Met Glu Ala Ala Leu Ala Met
85 90 95

Glu Lys Asn Leu Asn Gln Ala Leu Leu Asp Leu His Ala Leu Gly Ser
100 105 110

Ala Arg Ala Asp Pro His Leu Cys Asp Phe Leu Glu Ser His Tyr Leu
115 120 125

Asp Lys Glu Val Lys Leu Ile Lys Lys Met Gly Asn His Leu Thr Asn
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Leu Arg Arg Val Ala Gly
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Arg Asp Asp Val Ala Leu Glu Gly Val Ser His Phe Phe Arg Glu Leu
35 40 45

Ala Glu Glu Lys Arg Glu Gly Tyr Glu Arg Leu Leu Lys Met Gln Asn
50 55 60

Gln Arg Gly Gly Arg Ala Leu Phe Gln Asp Ile Lys Lys Pro Ala Glu
65 70 75 80

Asp Glu Trp Gly Lys Thr Pro Asp Ala Met Lys Ala Ala Met Ala Leu
85 90 95

Glu Lys Lys Leu Asn Gln Ala Leu Leu Asp Leu His Ala Leu Gly Ser
100 105 110

Ala Arg Thr Asp Pro His Leu Cys Asp Phe Leu Glu Thr His Phe Leu
115 120 125

eo1f-seq1

Asp Glu Glu Val Lys Leu Ile Lys Lys Met Gly Asp His Leu Thr Asn
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Leu His Arg Leu Gly
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20 25 30

Ser Leu Gly Phe Tyr Phe Asp Arg Asp Asp Val Ala Leu Glu Gly Val
35 40 45

Ser His Phe Phe Arg Glu Leu Ala Glu Glu Lys Arg Glu Gly Tyr Glu
50 55 60

Arg Leu Leu Lys Met Gln Asn Gln Arg Gly Gly Arg Ala Leu Phe Gln
65 70 75 80

Asp Ile Lys Lys Pro Ala Glu Asp Glu Trp Gly Lys Thr Pro Asp Ala
85 90 95

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

Asp Leu His Ala Leu Gly Ser Ala Arg Thr Asp Pro His Leu Cys Asp
115 120 125

Phe Leu Glu Thr His Phe Leu Asp Glu Glu Val Lys Leu Ile Lys Lys
130 135 140

Met Gly Asp His Leu Thr Asn Leu His Arg Leu Gly Gly Pro Glu Ala
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Gly Leu Gly Glu Tyr Leu Phe Glu Arg Leu Thr Leu Lys His Asp
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Page 19

eolf-seq1

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Met Thr Ser Gln Ile Arg Gln Asn Tyr Ser Thr Glu Val Glu Ala Ala
1          5          10          15

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Val Asn Arg Leu Val Asn Leu His Leu Arg Ala Ser Tyr Thr Tyr Leu
Page 20

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eo1f-seq1

20

25

30

Ser Leu Gly Xaa Xaa Phe Asp Arg Asp Asp Val Ala Leu Glu Gly Val
35 40 45

Gly His Phe Phe Arg Glu Leu Ala Glu Glu Lys Arg Glu Gly Ala Glu
50 55 60

Arg Leu Leu Lys Leu Gln Asn Gln Arg Gly Gly Arg Ala Leu Phe Gln
65 70 75 80

Asp Val Gln Lys Pro Ala Gln Asp Glu Trp Gly Lys Thr Xaa Glu Ala
85 90 95

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

Asp Leu His Ala Leu Gly Ser Ala Arg Thr Asp Pro His Xaa Cys Asp
115 120 125

Phe Leu Glu Asn His Phe Leu Asp Xaa Glu Val Lys Leu Ile Lys Lys
130 135 140

Met Gly Xaa His Leu Thr Asn Leu Arg Arg Leu Ala Gly Pro Gln Pro
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Arg Leu Thr Leu Lys His Asp
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eolf-seq1

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eolf-seq1

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Ser His Gly Ser Ala Xaa Val Lys Xaa His Gly Lys Lys Val Ala Xaa
35 40 45

Xaa Leu Thr Asn Ala Val Xaa His Val Asp Xaa Xaa Pro Asn Ala Leu
50 55 60

Ser Ala Leu Xaa Asp Leu His Ala His Lys Leu Xaa Val Asp Xaa Val
65 70 75 80

Asn Phe Lys Leu Leu Ser His Cys Leu Xaa Xaa Thr Leu Xaa Ala His
85 90 95

Leu Pro Ala Glu Phe Xaa Pro Ala Val His Ala Xaa Leu Asp Lys Phe
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Leu Ala Ser Val Xaa
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eolf-seq1

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eolf-seq1

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1          5          10          15

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Xaa Val Gly Ala His Xaa Gly Glu Tyr Xaa Ala Glu Ala Leu Glu Xaa
          20          25          30

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eolf-seql

Met Phe Leu Ser Phe Xaa Xaa Thr Lys Thr Tyr Phe Pro His Phe Asp
 35 40 45

Leu Ser His Gly Ser Ala Xaa Val Lys Xaa His Gly Lys Lys Val Ala
 50 55 60

Xaa Xaa Leu Thr Asn Ala Val Xaa His Val Asp Xaa Xaa Pro Asn Ala
 65 70 75 80

Leu Ser Ala Leu Xaa Asp Leu His Ala His Lys Leu Xaa Val Asp Xaa
 85 90 95

Val Asn Phe Lys Leu Leu Ser His Cys Leu Xaa Xaa Thr Leu Xaa Ala
 100 105 110

His Leu Pro Ala Glu Phe Xaa Pro Ala Val His Ala Xaa Leu Asp Lys
 115 120 125

Phe Leu Ala Ser Val Xaa Thr Val Leu Thr Ser Lys Tyr Xaa
 130 135 140

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 <212> PRT
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Val Gly Ala His Ala Gly Glu Tyr Gly Ala Glu Ala Leu Glu Arg Met
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Phe Leu Ser Phe Pro Thr Thr Lys Thr Tyr Phe Pro His Phe Asp Leu
 20 25 30

Ser His Gly Ser Ala Gln Val Lys Gly His Gly Lys Lys Val Ala Asp
 35 40 45

Ala Leu Thr Asn Ala Val Ala His Val Asp Asp Met Pro Asn Ala Leu
 50 55 60

Ser Ala Leu Ser Asp Leu His Ala His Lys Leu Arg Val Asp Pro Val
 65 70 75 80

Asn Phe Lys Leu Leu Ser His Cys Leu Leu Val Thr Leu Ala Ala His
 85 90 95

Leu Pro Ala Glu Phe Thr Pro Ala Val His Ala Ser Leu Asp Lys Phe
 100 105 110

Leu Ala Ser Val Ser
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eolf-seql

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Lys Val Gly Ala His Ala Gly Glu Tyr Gly Ala Glu Ala Leu Glu Arg
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Met Phe Leu Ser Phe Pro Thr Thr Lys Thr Tyr Phe Pro His Phe Asp
 35 40 45

Leu Ser His Gly Ser Ala Gln Val Lys Gly His Gly Lys Lys Val Ala
 50 55 60

Asp Ala Leu Thr Asn Ala Val Ala His Val Asp Asp Met Pro Asn Ala
 65 70 75 80

Leu Ser Ala Leu Ser Asp Leu His Ala His Lys Leu Arg Val Asp Pro
 85 90 95

Val Asn Phe Lys Leu Leu Ser His Cys Leu Leu Val Thr Leu Ala Ala
 100 105 110

His Leu Pro Ala Glu Phe Thr Pro Ala Val His Ala Ser Leu Asp Lys
 115 120 125

Phe Leu Ala Ser Val Ser Thr Val Leu Thr Ser Lys Tyr Arg
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eolf-seq1

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eolf-seq1

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Gly Lys Val Xaa Val Asp Glu Val Xaa Xaa Glu Xaa Xaa Xaa Xaa Leu
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Leu Val Val Tyr Pro Trp Thr Gln Arg Phe Xaa Glu Ser Phe Gly Asp
 20 25 30

Leu Ser Xaa Xaa Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His
 35 40 45

Xaa Lys Lys Xaa Leu Gly Ala Phe Ser Asp Gly Leu Ala His Leu Asp
 50 55 60

Asn Xaa Lys Xaa Xaa Phe Ala Thr Leu Ser Glu Leu His Cys Asp Lys
 65 70 75 80

Leu His Val Asp Pro Xaa Asn Phe Arg Leu Leu Gly Asn Val Leu Val
 85 90 95

Cys Val Leu Ala His His Phe Gly Lys Glu Phe Thr Pro Pro Val Gln
 100 105 110

Ala Ala Tyr Gln Lys Val Val Ala Xaa Xaa Ala Asn
 115 120

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eolf-seq1

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eolf-seq1

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Asn Xaa Lys Xaa Xaa Phe Ala Thr Leu Ser Glu Leu His Cys Asp Lys
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Leu His Val Asp Pro Xaa Asn Phe Arg Leu Leu Gly Asn Val Leu Val
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Cys Val Leu Ala His His Phe Gly Lys Glu Phe Thr Pro Pro Val Gln
Page 31

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eolf-seq1

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His Glu Ala Thr Lys Cys Gln Ser Phe Xaa Asp His Met Lys Xaa Val
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eolf-seq1

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Asp Thr Pro Glu Ala Gly Tyr Phe Ala Val Ala Val Xaa Xaa Lys Ser
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eo1f-seq1

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eo1f-seq1

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<210> 27
<211> 114
<212> PRT
<213> Homo sapiens

<400> 27

Glu Thr Thr Glu Asp Cys Ile Ala Lys Ile Met Asn Gly Glu Ala Asp
1 5 10 15

Ala Met Ser Leu Asp Gly Gly Phe Val Tyr Ile Ala Gly Lys Cys Gly
20 25 30

Leu Val Pro Val Leu Ala Glu Asn Tyr Asn Lys Ser Asp Asn Cys Glu
35 40 45

Asp Thr Pro Glu Ala Gly Tyr Phe Ala Val Ala Val Val Lys Lys Ser
50 55 60

self-seq1

Ala Ser Asp Leu Thr Trp Asp Asn Leu Lys Gly Lys Lys Ser Cys His
65 70 75 80

Thr Ala Val Gly Arg Thr Ala Gly Trp Asn Ile Pro Met Gly Leu Leu
85 90 95

Tyr Asn Lys Ile Asn His Cys Arg Phe Asp Glu Phe Phe Ser Glu Gly
100 105 110

Cys Ala

<210> 28
<211> 698
<212> PRT
<213> Homo sapiens

<400> 28

Met Arg Leu Ala Val Gly Ala Leu Leu Val Cys Ala Val Leu Gly Leu
1 5 10 15

Cys Leu Ala Val Pro Asp Lys Thr Val Arg Trp Cys Ala Val Ser Glu
20 25 30

His Glu Ala Thr Lys Cys Gln Ser Phe Arg Asp His Met Lys Ser Val
35 40 45

Ile Pro Ser Asp Gly Pro Ser Val Ala Cys Val Lys Lys Ala Ser Tyr
50 55 60

Leu Asp Cys Ile Arg Ala Ile Ala Ala Asn Glu Ala Asp Ala Val Thr
65 70 75 80

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

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

Phe Tyr Tyr Ala Val Ala Val Val Lys Lys Asp Ser Gly Phe Gln Met
115 120 125

Asn Gln Leu Arg Gly Lys Lys Ser Cys His Thr Gly Leu Gly Arg Ser
130 135 140

Ala Gly Trp Asn Ile Pro Ile Gly Leu Leu Tyr Cys Asp Leu Pro Glu
145 150 155 160

Pro Arg Lys Pro Leu Glu Lys Ala Val Ala Asn Phe Phe Ser Gly Ser
165 170 175

Cys Ala Pro Cys Ala Asp Gly Thr Asp Phe Pro Gln Leu Cys Gln Leu

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180	185	190																		
Cys	Pro	Gly ₁₉₅	Cys	Gly	Cys	Ser	Thr ₂₀₀	Leu	Asn	Gln	Tyr	Phe ₂₀₅	Gly	Tyr	Ser					
Gly	Ala ₂₁₀	Phe	Lys	Cys	Leu	Lys ₂₁₅	Asp	Gly	Ala	Gly	Asp ₂₂₀	Val	Ala	Phe	Val					
Lys ₂₂₅	His	Ser	Thr	Ile	Phe ₂₃₀	Glu	Asn	Leu	Ala	Asn ₂₃₅	Lys	Ala	Asp	Arg	Asp ₂₄₀					
Gln	Tyr	Glu	Leu	Leu ₂₄₅	Cys	Leu	Asp	Asn	Thr ₂₅₀	Arg	Lys	Pro	Val	Asp ₂₅₅	Glu					
Tyr	Lys	Asp	Cys ₂₆₀	His	Leu	Ala	Gln	Val ₂₆₅	Pro	Ser	His	Thr	Val ₂₇₀	Val	Ala					
Arg	Ser	Met ₂₇₅	Gly	Gly	Lys	Glu	Asp ₂₈₀	Leu	Ile	Trp	Glu	Leu ₂₈₅	Leu	Asn	Gln					
Ala	Gln ₂₉₀	Glu	His	Phe	Gly	Lys ₂₉₅	Asp	Lys	Ser	Lys	Glu ₃₀₀	Phe	Gln	Leu	Phe					
Ser ₃₀₅	Ser	Pro	His	Gly	Lys ₃₁₀	Asp	Leu	Leu	Phe	Lys ₃₁₅	Asp	Ser	Ala	His	Gly ₃₂₀					
Phe	Leu	Lys	Val	Pro ₃₂₅	Pro	Arg	Met	Asp	Ala ₃₃₀	Lys	Met	Tyr	Leu	Gly ₃₃₅	Tyr					
Glu	Tyr	Val	Thr ₃₄₀	Ala	Ile	Arg	Asn	Leu ₃₄₅	Arg	Glu	Gly	Thr	Cys ₃₅₀	Pro	Glu					
Ala	Pro	Thr ₃₅₅	Asp	Glu	Cys	Lys	Pro ₃₆₀	Val	Lys	Trp	Cys	Ala ₃₆₅	Leu	Ser	His					
His	Glu ₃₇₀	Arg	Leu	Lys	Cys	Asp ₃₇₅	Glu	Trp	Ser	Val	Asn ₃₈₀	Ser	Val	Gly	Lys					
Ile ₃₈₅	Glu	Cys	Val	Ser	Ala ₃₉₀	Glu	Thr	Thr	Glu	Asp ₃₉₅	Cys	Ile	Ala	Lys	Ile ₄₀₀					
Met	Asn	Gly	Glu	Ala ₄₀₅	Asp	Ala	Met	Ser	Leu ₄₁₀	Asp	Gly	Gly	Phe	Val ₄₁₅	Tyr					
Ile	Ala	Gly	Lys ₄₂₀	Cys	Gly	Leu	Val	Pro ₄₂₅	Val	Leu	Ala	Glu	Asn ₄₃₀	Tyr	Asn					
Lys	Ser	Asp ₄₃₅	Asn	Cys	Glu	Asp	Thr ₄₄₀	Pro	Glu	Ala	Gly	Tyr ₄₄₅	Phe	Ala	Val					
Ala	Val	Val	Lys	Lys	Ser	Ala	Ser	Asp	Leu	Thr	Trp	Asp	Asn	Leu	Lys					

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450 455 460

Gly Lys Lys Ser Cys His Thr Ala Val Gly Arg Thr Ala Gly Trp Asn
465 470 475 480

Ile Pro Met Gly Leu Leu Tyr Asn Lys Ile Asn His Cys Arg Phe Asp
 485 490 495

Glu Phe Phe Ser Glu Gly Cys Ala Pro Gly Ser Lys Lys Asp Ser Ser
 500 505 510

Leu Cys Lys Leu Cys Met Gly Ser Gly Leu Asn Leu Cys Glu Pro Asn
 515 520 525

Asn Lys Glu Gly Tyr Tyr Gly Tyr Thr Gly Ala Phe Arg Cys Leu Val
530 535 540

Glu Lys Gly Asp Val Ala Phe Val Lys His Gln Thr Val Pro Gln Asn
545 550 555 560

Thr Gly Gly Lys Asn Pro Asp Pro Trp Ala Lys Asn Leu Asn Glu Lys
 565 570 575

Asp Tyr Glu Leu Leu Cys Leu Asp Gly Thr Arg Lys Pro Val Glu Glu
 580 585 590

Tyr Ala Asn Cys His Leu Ala Arg Ala Pro Asn His Ala Val Val Thr
 595 600 605

Arg Lys Asp Lys Glu Ala Cys Val His Lys Ile Leu Arg Gln Gln Gln
610 615 620

His Leu Phe Gly Ser Asn Val Thr Asp Cys Ser Gly Asn Phe Cys Leu
625 630 635 640

Phe Arg Ser Glu Thr Lys Asp Leu Leu Phe Arg Asp Asp Thr Val Cys
 645 650 655

Leu Ala Lys Leu His Asp Arg Asn Thr Tyr Glu Lys Tyr Leu Gly Glu
 660 665 670

Glu Tyr Val Lys Ala Val Gly Asn Leu Arg Lys Cys Ser Thr Ser Ser
675 680 685

Leu Leu Glu Ala Cys Thr Phe Arg Arg Pro
690 695