

SEQUENCE LISTING

<110> Compugen Ltd

<120> C10RF32 ANTIBODIES, AND USES THEREOF FOR TREATMENT OF CANCER

<130>

<160> 103

<210> 1

<211> 254

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic polypeptide

<400> 1

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

Val Glu Leu Leu Val Leu Gly Arg Thr Gly Leu Leu Ala Asp Leu Leu

PCTIL2013050087-seq1-000001-EN

165 170 175

Pro Ser Phe Ala Val Glu Ile Met Pro Glu Trp Val Phe Val Gly Leu
180 185 190

Val Leu Leu Gly Val Phe Leu Phe Phe Val Leu Val Gly Ile Cys Trp
195 200 205

Cys Gln Cys Cys Pro His Ser Cys Cys Cys Tyr Val Arg Cys Pro Cys
210 215 220

Cys Pro Asp Ser Cys Cys Cys Pro Gln Ala Cys Glu Tyr Ser Asp Arg
225 230 235 240

Trp Gly Asp Arg Ala Ile Glu Arg Asn Val Tyr Leu Ser Thr
245 250

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<223> Synthetic polypeptide

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Thr Arg Ala Gln Ser Leu Ser Lys Arg Asn Leu Glu Trp Asp Pro Tyr
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Leu Asp Cys

<210> 3
<211> 16
<212> PRT
<213> Artificial Sequence

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<223> Synthetic polypeptide

<400> 3

Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser Val Glu Leu
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<210> 4
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<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic polypeptide

<400> 4

Met Asp Arg Val Leu Leu Arg Trp Ile Ser Leu Phe Trp Leu Thr Ala
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Met Val Glu Gly Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala
 20 25 30

Met Leu Phe Gln Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser
 35 40 45

His Gln Pro Ala Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp
 50 55 60

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

Ser Lys Arg Asn Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser
 85 90 95

Arg Arg Thr Val Arg Val Val Ala Ser Lys Gln Gly Ser Thr Val Thr
 100 105 110

Leu Gly Asp Phe Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala
 115 120 125

Asp Leu Gln Ile Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr
 130 135 140

Cys Ile Ile Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser
 145 150 155 160

Val Glu Leu Leu Val Leu Gly Arg Thr Gly Leu Leu Ala Asp Leu Leu
 165 170 175

Pro Ser Phe Ala Val Glu Ile Met Gly Ser Glu Asn Leu Tyr Phe Gln
 180 185 190

Gly Ser Gly Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys Pro Pro Cys
 195 200 205

Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val Phe Ile Phe
 210 215 220

Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser Pro Ile Val
 225 230 235 240

PCTIL2013050087-seq1-000001-EN

Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val Gln Ile
245 250 255

Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln Thr Gln Thr
260 265 270

His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser Ala Leu Pro
275 280 285

Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys Cys Lys Val
290 295 300

Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile Ser Lys Pro
305 310 315 320

Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro Pro Pro Glu
325 330 335

Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met Val Thr Asp
340 345 350

Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn Gly Lys Thr
355 360 365

Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser Asp Gly Ser
370 375 380

Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn Trp Val Glu
385 390 395 400

Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu His Asn His
405 410 415

His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
420 425

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<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

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Gln Asp Arg Met Gly Glu Ser Leu Gly Met Ser Ser Thr Arg Ala Gln
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Ser Leu Ser Lys Arg Asn Leu
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<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 6

Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser Val Glu Leu
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Cys

<210> 7
<211> 254
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 7

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Met Val Glu Gly Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala
20 25 30

Met Leu Phe Gln Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser
35 40 45

His Gln Pro Ala Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp
50 55 60

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

Ser Lys Arg Asn Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser
85 90 95

Arg Arg Thr Val Arg Val Val Ala Ser Lys Gln Gly Ser Thr Val Thr
100 105 110

PCTIL2013050087-seq1-000001-EN

Leu Gly Asp Phe Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala
115 120 125

Asp Leu Gln Ile Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr
130 135 140

Cys Ile Ile Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Gly Ser
145 150 155 160

Leu Gly Leu Leu Val Leu Gly Arg Thr Gly Leu Leu Ala Asp Leu Leu
165 170 175

Pro Ser Phe Ala Val Glu Ile Met Pro Glu Trp Val Phe Val Gly Leu
180 185 190

Val Leu Leu Gly Val Phe Leu Phe Phe Val Leu Val Gly Ile Cys Trp
195 200 205

Cys Gln Cys Cys Pro His Ser Cys Cys Cys Tyr Val Arg Cys Pro Cys
210 215 220

Cys Pro Asp Ser Cys Trp Cys Pro Gln Ala Cys Glu Tyr Ser Asp Arg
225 230 235 240

Trp Gly Asp Arg Ala Ile Glu Arg Asn Val Tyr Leu Ser Thr
245 250

<210> 8
<211> 254
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 8

Met Asp Arg Val Leu Leu Arg Trp Ile Ser Leu Phe Trp Leu Thr Ala
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Met Val Glu Gly Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala
20 25 30

Met Leu Phe Gln Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser
35 40 45

His Gln Pro Ala Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp
50 55 60

PCTIL2013050087-seq1-000001-EN

Arg Met Gly Glu Ser Leu Gly Met Ser Ser Pro Arg Ala Gln Ala Leu
65 70 75 80

Ser Lys Arg Asn Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser
85 90 95

Arg Arg Thr Val Arg Val Val Ala Ser Lys Gln Gly Ser Thr Val Thr
100 105 110

Leu Gly Asp Phe Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala
115 120 125

Asp Leu Gln Ile Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr
130 135 140

Cys Ile Ile Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser
145 150 155 160

Val Glu Leu Leu Val Leu Gly Arg Thr Gly Leu Leu Ala Asp Leu Leu
165 170 175

Pro Ser Phe Ala Val Glu Ile Met Pro Glu Trp Val Phe Val Gly Leu
180 185 190

Val Leu Leu Gly Val Phe Leu Phe Phe Val Leu Val Gly Ile Cys Trp
195 200 205

Cys Gln Cys Cys Pro His Ser Cys Cys Cys Tyr Val Arg Cys Pro Cys
210 215 220

Cys Pro Asp Ser Cys Cys Cys Pro Gln Ala Cys Glu Tyr Ser Asp Arg
225 230 235 240

Trp Gly Asp Arg Ala Ile Glu Arg Asn Val Tyr Leu Ser Thr
245 250

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

<220>
<223> Synthetic polypeptide

<400> 9

Met Asp Arg Val Leu Leu Arg Trp Ile Ser Leu Phe Trp Leu Thr Ala
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Met Val Glu Gly Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala
20 25 30

Met Leu Phe Gln Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser
35 40 45

His Gln Pro Ala Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp
50 55 60

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

Ser Lys Arg Asn Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser
85 90 95

Arg Arg Thr Val Arg Val Val Ala Ser Lys Gln Gly Ser Thr Val Thr
100 105 110

Leu Gly Asp Phe Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala
115 120 125

Asp Leu Gln Ile Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr
130 135 140

Cys Ile Ile Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Gly Ser
145 150 155 160

Leu Gly Leu Leu Val Leu Glu Trp Val Phe Val Gly Leu Val Leu Leu
165 170 175

Gly Val Phe Leu Phe Phe Val Leu Val Gly Ile Cys Trp Cys Gln Cys
180 185 190

Cys Pro His Ser Cys Cys Cys Tyr Val Arg Cys Pro Cys Cys Pro Asp
195 200 205

Ser Cys Trp Cys Pro Gln Ala Cys Glu Tyr Ser Asp Arg Trp Gly Asp
210 215 220

Arg Ala Ile Glu Arg Asn Val Tyr Leu Ser Thr
225 230 235

<210> 10
<211> 166
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic polypeptide

<400> 10

Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala Met Leu Phe Gln
 1 5 10 15

Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser His Gln Pro Ala
 20 25 30

Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp Arg Met Gly Glu
 35 40 45

Ser Leu Gly Met Ser Ser Thr Arg Ala Gln Ser Leu Ser Lys Arg Asn
 50 55 60

Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser Arg Arg Thr Val
 65 70 75 80

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

Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala Asp Leu Gln Ile
 100 105 110

Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr Cys Ile Ile Thr
 115 120 125

Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Gly Ser Leu Gly Leu Leu
 130 135 140

Val Leu Gly Arg Thr Gly Leu Leu Ala Asp Leu Leu Pro Ser Phe Ala
 145 150 155 160

Val Glu Ile Met Pro Glu
 165

<210> 11

<211> 149

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic polypeptide

<400> 11

Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala Met Leu Phe Gln
 1 5 10 15

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Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser His Gln Pro Ala
20 25 30

Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp Arg Met Gly Glu
35 40 45

Ser Leu Gly Met Ser Ser Thr Arg Ala Gln Ser Leu Ser Lys Arg Asn
50 55 60

Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser Arg Arg Thr Val
65 70 75 80

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

Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala Asp Leu Gln Ile
100 105 110

Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr Cys Ile Ile Thr
115 120 125

Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Gly Ser Leu Gly Leu Leu
130 135 140

Val Leu Glu Trp Val
145

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

<220>
<223> Synthetic polypeptide

<400> 12

Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys Pro Pro Cys Lys Cys Pro
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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

PCTIL2013050087-seq1-000001-EN

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> 13
<211> 235
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 13

Met Asp Arg Val Leu Leu Arg Trp Ile Ser Leu Phe Trp Leu Thr Ala
1 5 10 15

Met Val Glu Gly Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala
20 25 30

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Met Leu Phe Gln Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser
35 40 45

His Gln Pro Ala Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp
50 55 60

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

Ser Lys Arg Asn Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser
85 90 95

Arg Arg Thr Val Arg Val Val Ala Ser Lys Gln Gly Ser Thr Val Thr
100 105 110

Leu Gly Asp Phe Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala
115 120 125

Asp Leu Gln Ile Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr
130 135 140

Cys Ile Ile Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser
145 150 155 160

Val Glu Leu Leu Val Leu Glu Trp Val Phe Val Gly Leu Val Leu Leu
165 170 175

Gly Val Phe Leu Phe Phe Val Leu Val Gly Ile Cys Trp Cys Gln Cys
180 185 190

Cys Pro His Ser Cys Cys Cys Tyr Val Arg Cys Pro Cys Cys Pro Asp
195 200 205

Ser Cys Cys Cys Pro Gln Ala Cys Glu Tyr Ser Asp Arg Trp Gly Asp
210 215 220

Arg Ala Ile Glu Arg Asn Val Tyr Leu Ser Thr
225 230 235

<210> 14
<211> 166
<212> PRT
<213> Artificial Sequence

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<223> Synthetic polypeptide

<400> 14

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Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala Met Leu Phe Gln
1 5 10 15

Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser His Gln Pro Ala
20 25 30

Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp Arg Met Gly Glu
35 40 45

Ser Leu Gly Met Ser Ser Thr Arg Ala Gln Ser Leu Ser Lys Arg Asn
50 55 60

Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser Arg Arg Thr Val
65 70 75 80

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

Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala Asp Leu Gln Ile
100 105 110

Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr Cys Ile Ile Thr
115 120 125

Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser Val Glu Leu Leu
130 135 140

Val Leu Gly Arg Thr Gly Leu Leu Ala Asp Leu Leu Pro Ser Phe Ala
145 150 155 160

Val Glu Ile Met Pro Glu
165

<210> 15
<211> 149
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 15

Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala Met Leu Phe Gln
1 5 10 15

Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser His Gln Pro Ala
20 25 30

PCTIL2013050087-seq1-000001-EN

Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp Arg Met Gly Glu
35 40 45

Ser Leu Gly Met Ser Ser Thr Arg Ala Gln Ser Leu Ser Lys Arg Asn
50 55 60

Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser Arg Arg Thr Val
65 70 75 80

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

Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala Asp Leu Gln Ile
100 105 110

Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr Cys Ile Ile Thr
115 120 125

Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser Val Glu Leu Leu
130 135 140

Val Leu Glu Trp Val
145

<210> 16
<211> 5903
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic polynucleotide

<400> 16

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PCTIL2013050087-seq1-000001-EN

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PCTIL2013050087-seq1-000001-EN

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cggtatcagc	tcactcaaag	gcggtataac	ggttatccac	agaatcaggg	gataacgcag	4080
gaaagaacat	gtgagcaaaa	ggccagcaaa	aggccaggaa	ccgtaaaaaag	gccgcgttgc	4140
tggcgTTTTT	ccataggctc	cgccccctg	acgagcatca	caaaaatcga	cgctcaagtc	4200
agaggTggcg	aaacccgaca	ggactataaa	gataaccaggc	gtttccccct	ggaagctccc	4260
tcgtgcgctc	tcctgttccg	accctgccgc	ttaccggata	cctgtccgcc	tttctccctt	4320
cgggaagcgt	ggcgctttct	caatgctcac	gctgtaggta	tctcagttcg	gtgtaggtcg	4380

PCTIL2013050087-seq1-000001-EN

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ccactggttaa caggattagc agagcgaggt atgtaggcgg tgctacagag ttcttgaagt	4560
ggtggcctaa ctacggctac actagaagga cagtatttgg tatctgcgct ctgctgaagc	4620
cagttacctt cggaaaaaga gttggtagct cttgatccgg caaacaacc accgctggta	4680
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atcctttgat cttttctacg gggctctgacg ctcagtggaa cgaaaactca cgttaaggga	4800
ttttggtcat gagattatca aaaaggatct tcacctagat ctttttaaataaaaaatgaa	4860
gttttaaatac aatctaaagt atatatgagt aaacttggtc tgacagttac caatgcttaa	4920
tcagtgaggc acctatctca gcgatctgtc tatttcgttc atccatagtt gcctgactcc	4980
ccgtcgtgta gataactacg atacgggagg gcttaccatc tggccccagt gctgcaatga	5040
taccgcgaga cccacgctca ccggctccag atttatcagc aataaaccag ccagccggaa	5100
gggccgagcg cagaagtggc cctgcaactt tatccgcctc catccagtct attaattggt	5160
gccgggaagc tagagtaagt agttcgccag ttaatagttt gcgcaacggt gttgccattg	5220
ctacaggcat cgtgggtgca cgctcgtcgt ttggtagggc ttcattcagc tccggttccc	5280
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gttcttcggg gcgaaaactc tcaaggatct taccgctgtt gagatccagt tcgatgtaac	5640
ccactcgtgc acccaactga tcttcagcat cttttacttt caccagcgtt tctgggtgag	5700
caaaaacagg aaggcaaaat gccgcaaaaa agggaataag ggcgacacgg aaatgttgaa	5760
tactcatact cttccttttt caatattatt gaagcattta tcagggttat tgtctcatga	5820
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<210> 17
 <211> 639
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic polypeptide
 <400> 17

Met Asp Arg Val Leu Leu Arg Trp Ile Ser Leu Phe Trp Leu Thr Ala
 1 5 10 15

Met Val Glu Gly Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala
 20 25 30

Met Leu Phe Gln Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser
 35 40 45

His Gln Pro Ala Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp
 50 55 60

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

Ser Lys Arg Asn Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser
 85 90 95

Arg Arg Thr Val Arg Val Val Ala Ser Lys Gln Gly Ser Thr Val Thr
 100 105 110

Leu Gly Asp Phe Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala
 115 120 125

Asp Leu Gln Ile Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr
 130 135 140

Cys Ile Ile Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser
 145 150 155 160

Val Glu Leu Leu Val Leu Gly Arg Thr Gly Leu Leu Ala Asp Leu Leu
 165 170 175

Pro Ser Phe Ala Val Glu Ile Met Pro Glu Trp Val Phe Val Gly Leu
 180 185 190

Val Leu Leu Gly Val Phe Leu Phe Phe Val Leu Val Gly Ile Cys Trp
 195 200 205

Cys Gln Cys Cys Pro His Ser Cys Cys Cys Tyr Val Arg Cys Pro Cys
 210 215 220

Cys Pro Asp Ser Cys Cys Cys Pro Gln Ala Leu Tyr Glu Ala Gly Lys
 225 230 235 240

Ala Ala Lys Ala Gly Tyr Pro Pro Ser Val Ser Gly Val Pro Gly Pro
 245 250 255

PCTIL2013050087-seq1-000001-EN

Tyr Ser Ile Pro Ser Val Pro Leu Gly Gly Ala Pro Ser Ser Gly Met
 260 265 270
 Leu Met Asp Lys Pro His Pro Pro Pro Leu Ala Pro Ser Asp Ser Thr
 275 280 285
 Gly Gly Ser His Ser Val Arg Lys Gly Tyr Arg Ile Gln Ala Asp Lys
 290 295 300
 Glu Arg Asp Ser Met Lys Val Leu Tyr Tyr Val Glu Lys Glu Leu Ala
 305 310 315 320
 Gln Phe Asp Pro Ala Arg Arg Met Arg Gly Arg Tyr Asn Asn Thr Ile
 325 330 335
 Ser Glu Leu Ser Ser Leu His Glu Glu Asp Ser Asn Phe Arg Gln Ser
 340 345 350
 Phe His Gln Met Arg Ser Lys Gln Phe Pro Val Ser Gly Asp Leu Glu
 355 360 365
 Ser Asn Pro Asp Tyr Trp Ser Gly Val Met Gly Gly Ser Ser Gly Ala
 370 375 380
 Ser Arg Gly Pro Ser Ala Met Glu Tyr Asn Lys Glu Asp Arg Glu Ser
 385 390 395 400
 Phe Arg His Ser Gln Pro Arg Ser Lys Ser Glu Met Leu Ser Arg Lys
 405 410 415
 Asn Phe Ala Thr Gly Val Pro Ala Val Ser Met Asp Glu Leu Ala Ala
 420 425 430
 Phe Ala Asp Ser Tyr Gly Gln Arg Pro Arg Arg Ala Asp Gly Asn Ser
 435 440 445
 His Glu Ala Arg Gly Gly Ser Arg Phe Glu Arg Ser Glu Ser Arg Ala
 450 455 460
 His Ser Gly Phe Tyr Gln Asp Asp Ser Leu Glu Glu Tyr Tyr Gly Gln
 465 470 475 480
 Arg Ser Arg Ser Arg Glu Pro Leu Thr Asp Ala Asp Arg Gly Trp Ala
 485 490 495
 Phe Ser Pro Ala Arg Arg Arg Pro Ala Glu Asp Ala His Leu Pro Arg
 500 505 510

PCTIL2013050087-seq1-000001-EN

Leu Val Ser Arg Thr Pro Gly Thr Ala Pro Lys Tyr Asp His Ser Tyr
515 520 525

Leu Gly Ser Ala Arg Glu Arg Gln Ala Arg Pro Glu Gly Ala Ser Arg
530 535 540

Gly Gly Ser Leu Glu Thr Pro Ser Lys Arg Ser Ala Gln Leu Gly Pro
545 550 555 560

Arg Ser Ala Ser Tyr Tyr Ala Trp Ser Pro Pro Gly Thr Tyr Lys Ala
565 570 575

Gly Ser Ser Gln Asp Asp Gln Glu Asp Ala Ser Asp Asp Ala Leu Pro
580 585 590

Pro Tyr Ser Glu Leu Glu Leu Thr Arg Gly Pro Ser Tyr Arg Gly Arg
595 600 605

Asp Leu Pro Tyr His Ser Asn Ser Glu Lys Lys Arg Lys Lys Glu Pro
610 615 620

Ala Lys Lys Thr Asn Asp Phe Pro Thr Arg Met Ser Leu Val Val
625 630 635

<210> 18
<211> 408
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 18

Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala Met Leu Phe Gln
1 5 10 15

Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser His Gln Pro Ala
20 25 30

Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp Arg Met Gly Glu
35 40 45

Ser Leu Gly Met Ser Ser Thr Arg Ala Gln Ser Leu Ser Lys Arg Asn
50 55 60

Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser Arg Arg Thr Val
Page 20

PCTIL2013050087-seq1-000001-EN

Lys Lys Gln Val Thr Leu Thr Cys Met Val Thr Asp Phe Met Pro Glu
325 330 335

Asp Ile Tyr Val Glu Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr
340 345 350

Lys Asn Thr Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr
355 360 365

Ser Lys Leu Arg Val Glu Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr
370 375 380

Ser Cys Ser Val Val His Glu Gly Leu His Asn His His Thr Thr Lys
385 390 395 400

Ser Phe Ser Arg Thr Pro Gly Lys
405

<210> 19
<211> 1920
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic polynucleotide

<400> 19

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cgctgccact tctcaacatc ctcccatcag cctgcagttg tgcagtgga gttcaagtcc	180
tactgccagg atcgcatggg agaatccttg ggcattgtcct ctacccgggc ccaatctctc	240
agcaagagaa acctggaatg ggacccctac ttggattggt tggacagcag gaggactggt	300
cgagtagtag cttcaaaaca gggctcgact gtcaccctgg gagatttcta caggggcaga	360
gagatcacga ttgttcatga tgcagatctt caaattggaa agcttatgtg gggagacagc	420
ggactctatt actgtattat caccaccca gatgacctgg aggggaaaaa tgaggactca	480
gtggaactgc tgggtgttggg caggacaggg ctgcttgctg atctcttgcc cagttttgct	540
gtggagatta tgccagagtg ggtgtttgtt ggcctgggtc tcctgggctt cttcctcttc	600
ttcgtcctgg tggggatctg ctggtgccag tgctgccctc acagctgctg ctgctatgtc	660
cgctgcccac gctgcccaga ttctgtctgc tgccctcaag ccttgatga agcagggaaa	720
gcagcaaagg ccgggtaccc tccctctgtc tccggtgtcc ccggccctta ctccatcccc	780
tctgtccctt tgggaggagc cccctcatct ggcattgctga tggacaagcc gcatccacct	840

PCTIL2013050087-seq1-000001-EN

cccttggcac	caagtgactc	cactggagga	agccacagt	ttcgcaaagg	ttaccggatc	900
caggctgaca	aagagagaga	ctccatgaag	gtcctgtact	atgttgagaa	ggagctggct	960
cagtttgatc	cagccagaag	gatgagaggc	agatataaca	acaccatctc	agaactcagc	1020
tccctacatg	aggaggacag	caatttccgc	cagtctttcc	atcagatgag	aagcaagcag	1080
ttccctgtgt	ctggggactt	ggagagcaat	cctgactatt	ggtcaggtgt	catgggaggc	1140
agcagtgggg	caagccgcgg	gccctcagcc	atggagtata	acaaagagga	tcgagagagc	1200
ttcaggcaca	gccagccgcg	ctccaagtcg	gagatgctgt	cgcggaagaa	cttcgccacg	1260
ggggtgccgg	ccgtttccat	ggacgagctg	gcggccttcg	ctgactccta	cggccagcgg	1320
ccccgccggg	cagacggcaa	cagtcacgag	gcgcggggcg	ggagccgctt	cgagcgctcg	1380
gagtcgcggg	cgcacagcgg	cttctaccag	gacgactcct	tggaggagta	ctacggtcag	1440
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cgccgcagac	ccgccgagga	cgcgcacctg	ccgcggctgg	tgagccgcac	gccaggcacc	1560
gcacccaaat	acgaccactc	gtacctgggc	agcgcgcggg	agcgccaggc	gcggcccag	1620
ggcgccagcc	gcggtggcag	cctggagacg	ccatccaagc	ggagcgcgca	gctcggccccg	1680
cgagcgcct	cctactacgc	ttggtcgccg	cccggcacct	acaaggccgg	ctcgtcgcag	1740
gacgaccagg	aggacgcgtc	cgacgacgcg	ctgccgccct	acagcgagct	ggagctgacc	1800
cgcgggccgt	cctaccgcgg	ccgcgacctg	ccctaccaca	gcaactcgga	gaagaagagg	1860
aaaaaggagc	ccgccaagaa	aaccaatgac	tttccaacca	ggatgtccct	tgtggtctga	1920

<210> 20
 <211> 765
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide

<400> 20

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cgctgccact	tctcaacatc	ctcccatcag	cctgcagttg	tgacgtggaa	gttcaagtcc	180
tactgccagg	atcgcatggg	agaatccttg	ggcatgtcct	ctaccggggc	ccaatctctc	240
agcaagagaa	acctggaatg	ggacccctac	ttggattggt	tggacagcag	gaggactgtt	300
cgagtagtag	cttcaaaaaca	gggctcgact	gtcacccctg	gagatttcta	caggggcaga	360
gagatcacga	ttgttcatga	tgcagatctt	caaattggaa	agcttatgtg	gggagacagc	420
ggactctatt	actgtattat	caccacccca	gatgacctgg	aggggaaaaa	tgaggactca	480

PCTIL2013050087-seq1-000001-EN

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 ttcgtcctgg tggggatctg ctgggtgccag tgctgccctc acagctgctg ctgctatgtc 660
 cgctgcccac gctgcccaga ttcctgctgc tgccctcaag cctgtgagta cagtgaccgc 720
 tggggagaca gagcgatcga gagaaatgtc tacctctcta cctga 765

<210> 21
 <211> 670
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 21

Met Pro Ala Phe Pro Thr Leu Asp Leu Asp Gly Lys Leu Gly Lys Met
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Asp Arg Val Val Leu Gly Trp Thr Ala Val Phe Trp Leu Thr Ala Met
 20 25 30

Val Glu Gly Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala Met
 35 40 45

Leu Phe Gln Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser His
 50 55 60

Gln Pro Ala Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp Arg
 65 70 75 80

Met Gly Glu Ser Leu Gly Met Ser Ser Pro Arg Ala Gln Ala Leu Ser
 85 90 95

Lys Arg Asn Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser Arg
 100 105 110

Arg Thr Val Arg Val Val Ala Ser Lys Gln Gly Ser Thr Val Thr Leu
 115 120 125

Gly Asp Phe Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala Asp
 130 135 140

Leu Gln Ile Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr Cys
 145 150 155 160

Ile Ile Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser Val

165

170

175

Glu Leu Leu Val₁₈₀ Leu Gly Arg Thr Gly₁₈₅ Leu Leu Ala Asp Leu₁₉₀ Leu Pro

Ser Phe Ala Val₁₉₅ Glu Ile Met Pro₂₀₀ Glu Trp Val Phe Val₂₀₅ Gly Leu Val

Ile Leu Gly Ile Phe Leu Phe₂₁₅ Phe Val Leu Val Gly₂₂₀ Ile Cys Trp Cys

Gln Cys Cys Pro His Ser₂₃₀ Cys Cys Cys Tyr Val₂₃₅ Arg Cys Pro Cys Cys₂₄₀

Pro Asp Ser Cys Cys₂₄₅ Cys Pro Gln Ala Leu₂₅₀ Tyr Glu Ala Gly Lys₂₅₅ Ala

Ala Lys Ala Gly₂₆₀ Tyr Pro Pro Ser Val₂₆₅ Ser Gly Val Pro Gly₂₇₀ Pro Tyr

Ser Ile Pro₂₇₅ Ser Val Pro Leu Gly₂₈₀ Gly Ala Pro Ser Ser₂₈₅ Gly Met Leu

Met Asp₂₉₀ Lys Pro His Pro₂₉₅ Pro Pro Leu Ala Pro Ser₃₀₀ Asp Ser Thr Gly

Gly₃₀₅ Ser His Ser Val Arg₃₁₀ Lys Gly Tyr Arg Ile₃₁₅ Gln Ala Asp Lys Glu₃₂₀

Arg Asp Ser Met Lys₃₂₅ Val Leu Tyr Tyr Val₃₃₀ Glu Lys Glu Leu Ala Gln₃₃₅

Phe Asp Pro Ala₃₄₀ Arg Arg Met Arg Gly₃₄₅ Arg Tyr Asn Asn Thr₃₅₀ Ile Ser

Glu Leu Ser₃₅₅ Ser Leu His Asp Asp₃₆₀ Asp Ser Asn Phe Arg₃₆₅ Gln Ser Tyr

His Gln Met Arg Asn Lys Gln₃₇₅ Phe Pro Met Ser Gly₃₈₀ Asp Leu Glu Ser

Asn Pro Asp Tyr Trp Ser₃₉₀ Gly Val Met Gly Gly₃₉₅ Asn Ser Gly Thr Asn₄₀₀

Arg Gly Pro Ala Leu₄₀₅ Glu Tyr Asn Lys Glu₄₁₀ Asp Arg Glu Ser Phe₄₁₅ Arg

PCTIL2013050087-seq1-000001-EN

His Ser Gln Gln Arg Ser Lys Ser Glu Met Leu Ser Arg Lys Asn Phe
420 425 430

Ala Thr Gly Val Pro Ala Val Ser Met Asp Glu Leu Ala Ala Phe Ala
435 440 445

Asp Ser Tyr Gly Gln Arg Ser Arg Arg Ala Asn Gly Asn Ser His Glu
450 455 460

Ala Arg Ala Gly Ser Arg Phe Glu Arg Ser Glu Ser Arg Ala His Gly
465 470 475 480

Ala Phe Tyr Gln Asp Gly Ser Leu Asp Glu Tyr Tyr Gly Arg Gly Arg
485 490 495

Ser Arg Glu Pro Pro Gly Asp Gly Glu Arg Gly Trp Thr Tyr Ser Pro
500 505 510

Ala Pro Ala Arg Arg Arg Pro Pro Glu Asp Ala Pro Leu Pro Arg Leu
515 520 525

Val Ser Arg Thr Pro Gly Thr Ala Pro Lys Tyr Asp His Ser Tyr Leu
530 535 540

Ser Ser Val Leu Glu Arg Gln Ala Arg Pro Glu Ser Ser Ser Arg Gly
545 550 555 560

Gly Ser Leu Glu Thr Pro Ser Lys Leu Gly Ala Gln Leu Gly Pro Arg
565 570 575

Ser Ala Ser Tyr Tyr Ala Trp Ser Pro Pro Thr Thr Tyr Lys Ala Gly
580 585 590

Ala Ser Glu Gly Glu Asp Glu Asp Asp Ala Ala Asp Glu Asp Ala Leu
595 600 605

Pro Pro Tyr Ser Glu Leu Glu Leu Ser Arg Gly Glu Leu Ser Arg Gly
610 615 620

Pro Ser Tyr Arg Gly Arg Asp Leu Ser Phe His Ser Asn Ser Glu Lys
625 630 635 640

Arg Arg Lys Lys Glu Pro Ala Lys Lys Pro Gly Asp Phe Pro Thr Arg
645 650 655

Met Ser Leu Val Val Asp Tyr Lys Asp Asp Asp Asp Lys
660 665

<210> 22
 <211> 263
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 22

Met Asp Arg Val Leu Leu Arg Trp Ile Ser Leu Phe Trp Leu Thr Ala
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Met Val Glu Gly Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala
 20 25 30

Met Leu Phe Gln Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser
 35 40 45

His Gln Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Pro Ala Val Val Gln
 50 55 60

Trp Lys Phe Lys Ser Tyr Cys Gln Asp Arg Met Gly Glu Ser Leu Gly
 65 70 75 80

Met Ser Ser Thr Arg Ala Gln Ser Leu Ser Lys Arg Asn Leu Glu Trp
 85 90 95

Asp Pro Tyr Leu Asp Cys Leu Asp Ser Arg Arg Thr Val Arg Val Val
 100 105 110

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

Arg Glu Ile Thr Ile Val His Asp Ala Asp Leu Gln Ile Gly Lys Leu
 130 135 140

Met Trp Gly Asp Ser Gly Leu Tyr Tyr Cys Ile Ile Thr Thr Pro Asp
 145 150 155 160

Asp Leu Glu Gly Lys Asn Glu Asp Ser Val Glu Leu Leu Val Leu Gly
 165 170 175

Arg Thr Gly Leu Leu Ala Asp Leu Leu Pro Ser Phe Ala Val Glu Ile
 180 185 190

Met Pro Glu Trp Val Phe Val Gly Leu Val Leu Leu Gly Val Phe Leu
 195 200 205

PCTIL2013050087-seq1-000001-EN

Phe Phe Val Leu Val Gly Ile Cys Trp Cys Gln Cys Cys Pro His Ser
210 215 220

Cys Cys Cys Tyr Val Arg Cys Pro Cys Cys Pro Asp Ser Cys Cys Cys
225 230 235 240

Pro Gln Ala Cys Glu Tyr Ser Asp Arg Trp Gly Asp Arg Ala Ile Glu
245 250 255

Arg Asn Val Tyr Leu Ser Thr
260

<210> 23
<211> 416
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 23

Met Asp Arg Val Leu Leu Arg Trp Ile Ser Leu Phe Trp Leu Thr Ala
1 5 10 15

Met Val Glu Gly Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala
20 25 30

Met Leu Phe Gln Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser
35 40 45

His Gln Pro Ala Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp
50 55 60

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

Ser Lys Arg Asn Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser
85 90 95

Arg Arg Thr Val Arg Val Val Ala Ser Lys Gln Gly Ser Thr Val Thr
100 105 110

Leu Gly Asp Phe Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala
115 120 125

Asp Leu Gln Ile Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr
130 135 140

PCTIL2013050087-seq1-000001-EN

Cys Ile Ile Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser
 145 150 155 160
 Val Glu Leu Leu Val Leu Gly Arg Thr Gly Leu Leu Ala Asp Leu Leu
 165 170 175
 Pro Ser Phe Ala Val Glu Ile Met Glu Pro Lys Ser Ser Asp Lys Thr
 180 185 190
 His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
 195 200 205
 Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
 210 215 220
 Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
 225 230 235 240
 Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
 245 250 255
 Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
 260 265 270
 Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
 275 280 285
 Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
 290 295 300
 Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
 305 310 315 320
 Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
 325 330 335
 Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
 340 345 350
 Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
 355 360 365
 Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
 370 375 380
 Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
 385 390 395 400

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
405 410 415

<210> 24
<211> 417
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 24

Met Asp Arg Val Leu Leu Arg Trp Ile Ser Leu Phe Trp Leu Thr Ala
1 5 10 15

Met Val Glu Gly Leu Gln Val Thr Val Pro Asp Lys Lys Lys Val Ala
20 25 30

Met Leu Phe Gln Pro Thr Val Leu Arg Cys His Phe Ser Thr Ser Ser
35 40 45

His Gln Pro Ala Val Val Gln Trp Lys Phe Lys Ser Tyr Cys Gln Asp
50 55 60

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

Ser Lys Arg Asn Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser
85 90 95

Arg Arg Thr Val Arg Val Val Ala Ser Lys Gln Gly Ser Thr Val Thr
100 105 110

Leu Gly Asp Phe Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala
115 120 125

Asp Leu Gln Ile Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr
130 135 140

Cys Ile Ile Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser
145 150 155 160

Val Glu Leu Leu Val Leu Gly Arg Thr Gly Leu Leu Ala Asp Leu Leu
165 170 175

Pro Ser Phe Ala Val Glu Ile Met Glu Pro Arg Gly Pro Thr Ile Lys
180 185 190

PCTIL2013050087-seq1-000001-EN

Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro
195 200 205

Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser
210 215 220

Leu Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp
225 230 235 240

Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr
245 250 255

Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val
260 265 270

Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu
275 280 285

Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg
290 295 300

Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val
305 310 315 320

Leu Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr
325 330 335

Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr
340 345 350

Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu
355 360 365

Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys
370 375 380

Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu
385 390 395 400

Gly Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly
405 410 415

Lys

<210> 25
 <211> 42
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide

<400> 25

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<210> 26
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide

<400> 26

tcttgctgag agcttgggcc cggggagagg acatgcccaa g 41

<210> 27
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 <213> Artificial Sequence

<220>
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<400> 27

ctagctagcc accatggata gggctctgct gag 33

<210> 28
 <211> 53
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide

<400> 28

ctgcaggagc gtaatctgga acatcgtatg ggtactgatg ggaggatggt gag 53

<210> 29
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 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 29

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<210> 30
 <211> 765
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<220>
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<400> 30

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cgctgccact tctcaacatc ctcccatcag cctgcagttg tgcagtggaa gttcaagtcc      180
tactgccagg atcgcatggg agaatccttg ggcatgtcct ctccccgggc ccaagctctc      240
agcaagagaa acctggaatg ggacccctac ttggattggt tggacagcag gaggactgtt      300
cgagtagtag cttcaaaaaca gggctcgact gtcaccctgg gagatttcta caggggcaga      360
gagatcacga ttgttcatga tgcagatctt caaattggaa agcttatgtg gggagacagc      420
ggactctatt actgtattat caccaccca gatgacctgg aggggaaaaa tgaggactca      480
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ttcgtcctgg tggggatctg ctgggtgccag tgctgccctc acagctgctg ctgctatgtc      660
cgctgcccac gctgcccaga ttcctgctgc tgccctcaag cctgtgagta cagtgaccgc      720
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<210> 31
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide

<400> 31

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gttccagcca accgtcctga ggtgccactt tagcacaagc tcccatcagc ccgccgtggg      180
ccagtggaag ttcaaatcat actgtcagga cagaatggga gaaagcctgg ggatgtctag      240
tacaagggcc cagtctctga gtaagagaaa cctggagtgg gatccatacc tggactgcct      300
ggattctagg agaactgtga gggtggtcgc ttcaaaacag ggcagcactg tcaccctggg      360

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PCTIL2013050087-seq1-000001-EN

ggacttttat	cgaggcaggg	agatcaccat	tgtgcacgac	gccgatctgc	agatcggcaa	420
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gggaaaaaat	gaagacagcg	tggagctgct	ggtcctgggc	cggactggac	tgctggcaga	540
tctgctgccc	tccttcgccg	tggaaatcat	gcctgagtgg	gtgttcgtcg	gactggtgct	600
gctgggggtc	tttctgttct	ttgtgctggg	cggcatttgc	tggtgtcagt	gctgtcccca	660
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tagtgagctg	gaactgacca	gaggaccatc	ctaccgagga	cgagatctgc	catatcacag	1860
taattcagag	aagaaaagaa	aaaaggagcc	tgccaaaaag	actaatgact	tccccacacg	1920
gatgtccctg	gtcgtctgag	gccgcctcgg	ccgggcgc			1958

<210> 32
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide

<400> 32

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gttccagcct acagtcctga gatgccactt ttccactagc tcccatcagc cagccgtggg    180
ccagtggaaag ttcaaaagtt actgtcagga ccggatggga gaatcactgg ggatgtctag    240
taccgagacc cagtcactga gcaagaggaa cctggagtgg gatccatacc tggactgcct    300
ggattctagg agaacagtgc ggggtggcgc ttccaaacag ggctctactg tgaccctggg    360
cgacttttat cggggacgcg aaatcactat tgtgcacgac gcagatctgc agatcgaaaa    420
gctgatgtgg ggcgatagcg gactgtacta ttgtatcatt accacacccg acgatctgga    480
ggggaaaaat gaagactctg tggagctgct ggtcctgggg cgcacaggcc tgctggccga    540
tctgctgcca agtttcgctg tggaaatcat gcccagagtgg gtgttcgctc gactgggtgct    600
gctgggcgtc tttctgttct ttgtgctggg cggaatttgc tgggtgtcagt gctgtcccca    660
tagctgctgt tgctatgtgc gatgcccctg ttgccctgac tcctgttgct gtcctcaggc    720
ttgtgagtat tctgaccgct ggggggatcg ggctattgaa agaaatgtct acctgagcac    780
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<210> 33

<211> 42

<212> DNA

<213> Artificial Sequence sequence

<220>

<223> Synthetic polynucleotide

<400> 33

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<210> 34

<211> 41

<212> DNA

<213> Artificial Sequence sequence

<220>

<223> Synthetic polynucleotide

<400> 34

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<210> 35

<211> 20

<212> DNA

<213> Artificial Sequence sequence

<220>

<223> Synthetic polynucleotide

<400> 35

caggcagtc aggtatggat

20

<210> 36

<211> 20

<212> DNA

<213> Artificial Sequence sequence

<220>

<223> Synthetic polynucleotide

<400> 36

tctggctgac tgctatgggtg

20

<210> 37

<211> 20

<212> DNA

<213> Artificial Sequence sequence

<220>

<223> Synthetic polynucleotide

<400> 37

tgcccgataa aaagaagggtg

20

<210> 38

<211> 428

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic polypeptide

<400> 38

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

PCTIL2013050087-seq1-000001-EN

Ser Lys Arg Asn Leu Glu Trp Asp Pro Tyr Leu Asp Cys Leu Asp Ser
85 90 95

Arg Arg Thr Val Arg Val Val Ala Ser Lys Gln Gly Ser Thr Val Thr
100 105 110

Leu Gly Asp Phe Tyr Arg Gly Arg Glu Ile Thr Ile Val His Asp Ala
115 120 125

Asp Leu Gln Ile Gly Lys Leu Met Trp Gly Asp Ser Gly Leu Tyr Tyr
130 135 140

Cys Ile Ile Thr Thr Pro Asp Asp Leu Glu Gly Lys Asn Glu Asp Ser
145 150 155 160

Val Glu Leu Leu Val Leu Gly Arg Thr Gly Leu Leu Ala Asp Leu Leu
165 170 175

Pro Ser Phe Ala Val Glu Ile Met Gly Ser Glu Asn Leu Tyr Phe Gln
180 185 190

Gly Ser Gly Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys Pro Pro Cys
195 200 205

Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val Phe Ile Phe
210 215 220

Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser Pro Ile Val
225 230 235 240

Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val Gln Ile
245 250 255

Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln Thr Gln Thr
260 265 270

His Arg Glu Asp Tyr Ala Ser Thr Leu Arg Val Val Ser Ala Leu Pro
275 280 285

Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys Cys Lys Val
290 295 300

Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile Ser Lys Pro
305 310 315 320

Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro Pro Pro Glu
325 330 335

Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met Val Thr Asp
340 345 350

Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn Gly Lys Thr
355 360 365

Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser Asp Gly Ser
370 375 380

Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn Trp Val Glu
385 390 395 400

Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu His Asn His
405 410 415

His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
420 425

<210> 39
<211> 411
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic polynucleotide

<400> 39

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atccagttgg tgcagtctgg acctgagctg aagaagcctg gagagacagt caagatctcc	120
tgcaaggctt ctgcttatac cttcacagac tattcaatgc actgggtgaa gcaggctcca	180
ggaaagggtt taaagtggat gggctggata aacctgaga ctggtgagcc aacatatgca	240
ggtgacttca agggacggtt tgccttctct ttggaaacct ctgccagcac tgcctatttg	300
cagatcaaca acctcaaaaa tgaggacacg gctacatatt tctgtgttag agctggttac	360
tacgactact ttgactactg gggccaaggc accactctca cagtctcctc a	411

<210> 40
<211> 137
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 40

Met Ala Trp Val Trp Thr Leu Leu Phe Leu Met Ala Ala Ala Gln Ser
1 5 10 15

PCTIL2013050087-seq1-000001-EN

Ile Gln Ala Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys
20 25 30

Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Ala Tyr Thr Phe
35 40 45

Thr Asp Tyr Ser Met His Trp Val Lys Gln Ala Pro Gly Lys Gly Leu
50 55 60

Lys Trp Met Gly Trp Ile Asn Thr Glu Thr Gly Glu Pro Thr Tyr Ala
65 70 75 80

Gly Asp Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
85 90 95

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

Tyr Phe Cys Val Arg Ala Gly Tyr Tyr Asp Tyr Phe Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Thr Leu Thr Val Ser Ser
130 135

<210> 41
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic polynucleotide

<400> 41

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atcacctgca aggccagtca ggatgtggtt actgctgtag cctggatatca acagaaacca	180
ggtcaatctc ctaaactact gatttactgg gcatctaacc ggcacactgg agtccctgat	240
cgcttcacag gcagtggatc tgggacagat ttcactctca ccattaccaa tgtgcagtct	300
gaagacttgg cagattatit ctgtcagcaa tatagcagct atcctctcac gttcggaggg	360
gggaccaagc tggaaataaa a	381

<210> 42
<211> 127
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic polypeptide

<400> 42

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

<210> 43

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic polynucleotide

<400> 43

gcttatacct tcacagacta ttcaatgcac

30

<210> 44

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic polynucleotide

<400> 44

tggataaaca ctgagactgg tgagccaaca tatgcaggtg acttcaaggg a

51

<210> 45
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide

<400> 45

gctgggttact acgactactt tgactac

27

<210> 46
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 46

Ala Tyr Thr Phe Thr Asp Tyr Ser Met His
 1 5 10

<210> 47
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 47

Trp Ile Asn Thr Glu Thr Gly Glu Pro Thr Tyr Ala Gly Asp Phe Lys
 1 5 10 15

Gly

<210> 48
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 48

Ala Gly Tyr Tyr Asp Tyr Phe Asp Tyr
 1 5

<210> 49
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide
 <400> 49
 aaggccagtc aggatgtggt tactgctgta gcc 33

<210> 50
 <211> 21
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic polynucleotide
 <400> 50
 tgggcatcta accggcacac t 21

<210> 51
 <211> 27
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic polynucleotide
 <400> 51
 cagcaatata gcagctatcc tctcacg 27

<210> 52
 <211> 11
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic polypeptide
 <400> 52
 Lys Ala Ser Gln Asp Val Val Thr Ala Val Ala
 1 5 10

<210> 53
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic polypeptide
 <400> 53
 Trp Ala Ser Asn Arg His Thr
 1 5

<210> 54
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 54

Gln Gln Tyr Ser Ser Tyr Pro Leu Thr
 1 5

<210> 55
 <211> 420
 <212> DNA
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<220>
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<400> 55

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tgtgcaacct ctggattcac tttcagtgac tattacatgt attgggttcg ccagactcca	180
gagaagaggc tggagtgggt cgcatacatt agtaatgggt gtggtagcac ctattatcca	240
gacactgtaa agggccgatt caccatctcc agagacaatg ccaagaacac cctgtacctg	300
caaatgagcc gtctgaagtc tgaggacaca gccatgtatt actgtgcaag acaagggtat	360
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<210> 56
 <211> 140
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 56

Met Asn Leu Gly Leu Ser Leu Ile Phe Leu Val Leu Val Leu Lys Gly
 1 5 10 15

Val Gln Cys Glu Val Lys Met Val Glu Ser Gly Gly Gly Leu Val Gln
 20 25 30

Pro Gly Gly Ser Leu Lys Leu Ser Cys Ala Thr Ser Gly Phe Thr Phe
 35 40 45

Ser Asp Tyr Tyr Met Tyr Trp Val Arg Gln Thr Pro Glu Lys Arg Leu
 50 55 60

PCTIL2013050087-seq1-000001-EN

Glu Trp Val Ala Tyr Ile Ser Asn Gly Gly Gly Ser Thr Tyr Tyr Pro
65 70 75 80

Asp Thr Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn
85 90 95

Thr Leu Tyr Leu Gln Met Ser Arg Leu Lys Ser Glu Asp Thr Ala Met
100 105 110

Tyr Tyr Cys Ala Arg Gln Gly Tyr Tyr Tyr Gly Ser Ser Pro Phe Ala
115 120 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala
130 135 140

<210> 57
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic polynucleotide

<400> 57

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atcacctgca aggccagtca ggatgtgagt actgctgtag cctggatatca acagaaacca	180
ggacaatctc ctaaactatt gatttactcg gcatcctacc ggtacactgg agtccctgat	240
cgcttcactg gcagtggtatc tgggacggat ttactttca ccatcagcag tgtgcaggct	300
gaagacctgg cagtttatta ctgtcagcaa cattatagta ctccgtacac gtccggaggg	360
gggaccaagc tggaaataaa a	381

<210> 58
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 58

Met Glu Ser Gln Ile Gln Val Phe Val Phe Val Phe Leu Trp Leu Ser
1 5 10 15

Gly Val Asp Gly Asp Ile Val Met Thr Gln Ser His Lys Phe Met Ser
20 25 30

PCTIL2013050087-seq1-000001-EN

Thr Ser Val Gly Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp
35 40 45

Val Ser Thr Ala Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro
50 55 60

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

Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser
85 90 95

Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln His Tyr
100 105 110

Ser Thr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
115 120 125

<210> 59
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic polynucleotide

<400> 59

ggattcactt tcagtgacta ttacatgtat 30

<210> 60
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic polynucleotide

<400> 60

tacattagta atggtggtgg tagcacctat tatccagaca ctgtaaaggg c 51

<210> 61
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic polynucleotide

<400> 61

caagggtatt actacggtag tagcccccttt gcttac 36

<210> 62
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 62

Gly Phe Thr Phe Ser Asp Tyr Tyr Met Tyr
 1 5 10

<210> 63
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 63

Tyr Ile Ser Asn Gly Gly Gly Ser Thr Tyr Tyr Pro Asp Thr Val Lys
 1 5 10 15

Gly

<210> 64
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 64

Gln Gly Tyr Tyr Tyr Gly Ser Ser Pro Phe Ala Tyr
 1 5 10

<210> 65
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide

<400> 65

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33

<210> 66
 <211> 21

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide

<400> 66

tcggcatcct accggtacac t

21

<210> 67
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic polynucleotide

<400> 67

cagcaacatt atagtactcc gtacacg

27

<210> 68
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 68

Lys Ala Ser Gln Asp Val Ser Thr Ala Val Ala
 1 5 10

<210> 69
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 69

Ser Ala Ser Tyr Arg Tyr Thr
 1 5

<210> 70
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic polypeptide

<400> 70

Gln Gln His Tyr Ser Thr Pro Tyr Thr

1

5

<210> 71
 <211> 411
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic polynucleotide

<400> 71

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tgttctttct ctgggttttc actgagttct tcttatatgg gtgtaggctg gattcgtcag      180
ccttcaggga agggctctgga gtggctggca cacatttggt gggatgatgt caagcgctat      240
aatccagccc tgaagagccg actgacaatc tccaaggata tctccaacaa ccaggttttc      300
ctaaagatcg ccagtgtgga cactgcagat tctgccacat attattgtgg tcgaatagac      360
agacactact ttgactactg gggccaaggc accattctca cggtctcctc c              411

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<210> 72
 <211> 137
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Synthetic polypeptide

<400> 72

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1           5           10           15

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

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Pro Ser Gln Thr Leu Asn Leu Thr Cys Ser Phe Ser Gly Phe Ser Leu
35          40          45

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```

Ser Ser Ser Tyr Met Gly Val Gly Trp Ile Arg Gln Pro Ser Gly Lys
50          55          60

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Gly Leu Glu Trp Leu Ala His Ile Trp Trp Asp Asp Val Lys Arg Tyr
65          70          75          80

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Asn Pro Ala Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Ile Ser Asn
85          90          95

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PCTIL2013050087-seq1-000001-EN

Asn Gln Val Phe Leu Lys Ile Ala Ser Val Asp Thr Ala Asp Ser Ala
100 105 110

Thr Tyr Tyr Cys Gly Arg Ile Asp Arg His Tyr Phe Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Ile Leu Thr Val Ser Ser
130 135

<210> 73
<211> 381
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic polynucleotide

<400> 73

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gacatcaaga tgaccagtc tccatcttcc atatatgcat ctctaggaga gagagtcact	120
atcacttgca aggcgagtc ggacattaat ggatatttaa cctgggtcca gcagaaacca	180
ggaaaatctc ctaagaccct gatctatcgc gcaaacagat tgtagatgg tgtcccatca	240
aggttcagtg gcagtggatc tgggcaagat tattctctca ccatcagcag cctggattat	300
gaagatatgg gaatttacta ttgtctgcag tatgatgagt ttccgtggac gttcgggtgga	360
ggcaccaaac tggaaatcaa a	381

<210> 74
<211> 127
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 74

Met Arg Thr Pro Ala Gln Phe Leu Gly Ile Leu Leu Leu Trp Phe Pro
1 5 10 15

Gly Ile Lys Cys Asp Ile Lys Met Thr Gln Ser Pro Ser Ser Ile Tyr
20 25 30

Ala Ser Leu Gly Glu Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp
35 40 45

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

PCTIL2013050087-seq1-000001-EN

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

Arg Phe Ser Gly Ser Gly Ser Gly Gln Asp Tyr Ser Leu Thr Ile Ser
85 90 95

Ser Leu Asp Tyr Glu Asp Met Gly Ile Tyr Tyr Cys Leu Gln Tyr Asp
100 105 110

Glu Phe Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
115 120 125

<210> 75
<211> 36
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic polynucleotide

<400> 75

gggttttcac tgagttcttc ttatatgggt gtaggc 36

<210> 76
<211> 48
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic polynucleotide

<400> 76

cacatttggt gggatgatgt caagcgctat aatccagccc tgaagagc 48

<210> 77
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic polynucleotide

<400> 77

atagacagac actactttga ctac 24

<210> 78
<211> 12
<212> PRT
<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 78

Gly Phe Ser Leu Ser Ser Ser Tyr Met Gly Val Gly
1 5 10

<210> 79

<211> 16

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 79

His Ile Trp Trp Asp Asp Val Lys Arg Tyr Asn Pro Ala Leu Lys Ser
1 5 10 15

<210> 80

<211> 8

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 80

Ile Asp Arg His Tyr Phe Asp Tyr
1 5

<210> 81

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic polynucleotide

<400> 81

aaggcgagtc aggacattaa tggatattta acc

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<210> 82

<211> 21

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic polynucleotide

<400> 82

cgcgcaaaca gattgtaga t

21

<210> 83
 <211> 27
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic polynucleotide

<400> 83

ctgcagtatg atgagtttcc gtggacg

27

<210> 84
 <211> 11
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Synthetic polypeptide

<400> 84

Lys Ala Ser Gln Asp Ile Asn Gly Tyr Leu Thr
 1 5 10

<210> 85
 <211> 7
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Synthetic polypeptide

<400> 85

Arg Ala Asn Arg Leu Leu Asp
 1 5

<210> 86
 <211> 9
 <212> PRT
 <213> Artificial sequence

<220>
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<400> 86

Leu Gln Tyr Asp Glu Phe Pro Trp Thr
 1 5

<210> 87
 <211> 411
 <212> DNA

<213> Artificial sequence

<220>

<223> Synthetic polynucleotide

<400> 87

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tgttctttct ctgggttttc actgagcact tctggatatgg gtgtaggctg gattcgtcag      180
ccatcaggga agggctctgga atggctggca cacatttggt gggatgatgt caagcgctat      240
aactcagccc tgaagaaccg actgactatc tccaaggata cctccagcag ccagggtattc      300
ctcaagatcg ccaatgtgga cactgcagat actgccacat actactgtgc tcgaatagcc      360
cggcacttct ttgactactg gggccaaggc accactctca cagtctcctc a              411

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<210> 88

<211> 137

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 88

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

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Gln Gly Thr Thr Leu Thr Val Ser Ser
130 135

<210> 89
<211> 381
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic polynucleotide

<400> 89

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gacatcaaga tgaccacagtc tccatcttcc atgtatgcat ctctgggaga gagagtcact      120
atcacttgca aggcgagtcga ggacattcat ggctatttaa gctgggtcca ccagaaaccc      180
gtgaaatctc ctaagaccct gatctatcgt gcaaacagat tgatagatgg ggtcccatca      240
aggttcagtg gcagtggatc tgggcaagat tattttctca ccatcagcag cctggagtat      300
gaagatatgg gaatttatta ttgtctacag tatgatgagt ttccgtggac gttcgggtgga      360
ggcaccaagc tggaatatcaa a                                          381
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<210> 90
<211> 127
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 90

Met Arg Thr Pro Ala Gln Phe Leu Gly Ile Leu Leu Leu Trp Phe Pro
1 5 10 15

Gly Ile Lys Cys Asp Ile Lys Met Thr Gln Ser Pro Ser Ser Met Tyr
20 25 30

Ala Ser Leu Gly Glu Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp
35 40 45

Ile His Gly Tyr Leu Ser Trp Phe His Gln Lys Pro Val Lys Ser Pro
50 55 60

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

Arg Phe Ser Gly Ser Gly Ser Gly Gln Asp Tyr Phe Leu Thr Ile Ser
85 90 95

Ser Leu Glu Tyr Glu Asp Met Gly Ile Tyr Tyr Cys Leu Gln Tyr Asp
100 105 110

Glu Phe Pro Trp Thr Phe Gly Gly Thr Lys Leu Glu Ile Lys
115 120 125

<210> 91
<211> 36
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic polynucleotide

<400> 91

gggttttcac tgagcacttc tggtatgggt gtaggc 36

<210> 92
<211> 48
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic polynucleotide

<400> 92

cacatttggt gggatgatgt caagcgctat aactcagccc tgaagaac 48

<210> 93
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic polynucleotide

<400> 93

atagcccggc acttctttga ctac 24

<210> 94
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 94

Gly Phe Ser Leu Ser Thr Ser Gly Met Gly Val Gly
1 5 10

<210> 95
 <211> 16
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Synthetic polypeptide

<400> 95

His Ile Trp Trp Asp Asp Val Lys Arg Tyr Asn Ser Ala Leu Lys Asn
 1 5 10 15

<210> 96
 <211> 8
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Synthetic polypeptide

<400> 96

Ile Ala Arg His Phe Phe Asp Tyr
 1 5

<210> 97
 <211> 33
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic polynucleotide

<400> 97

aaggcgagtc aggacattca tggctattta agc

33

<210> 98
 <211> 21
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic polynucleotide

<400> 98

cgtgcaaaca gattgataga t

21

<210> 99
 <211> 27
 <212> DNA
 <213> Artificial sequence

<220>

<223> Synthetic polynucleotide

<400> 99

ctacagtatg atgagtttcc gtggacg

27

<210> 100

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 100

Lys	Ala	Ser	Gln	Asp	Ile	His	Gly	Tyr	Leu	Ser
1				5					10	

<210> 101

<211> 7

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 101

Arg	Ala	Asn	Arg	Leu	Ile	Asp
1				5		

<210> 102

<211> 9

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 102

Leu	Gln	Tyr	Asp	Glu	Phe	Pro	Trp	Thr
1				5				

<210> 103

<211> 166

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 103

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