

SEQUENCE LISTING

<110> GIULIANI INTERNATIONAL LIMITED

<120> INTERLEUKIN-21 (IL-21) BINDING PROTEINS AND METHODS
OF MAKING AND USING SAME

<130> GIU-010PC (123670-183803)

<140>

<141>

<150> 61/084,296

<151> 2008-07-29

<150> EP 08425294.9

<151> 2008-04-28

<160> 69

<170> PatentIn version 3.5

<210> 1

<211> 15

<212> PRT

<213> Homo sapiens

<400> 1

Asn	Val	Ser	Ile	Lys	Lys	Leu	Lys	Arg	Lys	Pro	Pro	Ser	Thr	Asn
1				5					10					15

<210> 2

<211> 642

<212> DNA

<213> Homo sapiens

<400> 2

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caaatcaagc tccaagggtc aagatcgcca catgattaga atgcgtcaac ttatagatat	180
tgttgatcag ctgaaaaatt atgtgaatga cttgggtccct gaatttctgc cagctccaga	240
agatgtagag acaaactgtg agtgggtcagc tttttcctgt tttcagaagg cccaactaaa	300
gtcagcaaat acaggaaaca atgaaaggat aatcaatgta tcaattaaaa agctgaagag	360
gaaaccacct tccacaaatg cagggagaag acagaaacac agactaacat gcccttcatg	420
tgattcttat gagaaaaaac caccctaaaga attcctagaa agattcaaatt cacttctcca	480
aaagatgatt catcagcatc tgtcctctag aacacacgga agtgaagatt cctgaggatc	540
taacttgcag ttggacacta tgttacatac tctaatatag tagtgaaagt catttctttg	600

tattccaagt ggaggagccc tatttaaatta tataaagaaa ta

642

<210> 3

<211> 162

<212> PRT

<213> Homo sapiens

<400> 3

Met Arg Ser Ser Pro Gly Asn Met Glu Arg Ile Val Ile Cys Leu Met
1 5 10 15

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

Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile Val Asp Gln
35 40 45

Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu Pro Ala Pro
50 55 60

Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser Cys Phe Gln
65 70 75 80

Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu Arg Ile Ile
85 90 95

Asn Val Ser Ile Lys Lys Leu Lys Arg Lys Pro Pro Ser Thr Asn Ala
100 105 110

Gly Arg Arg Gln Lys His Arg Leu Thr Cys Pro Ser Cys Asp Ser Tyr
115 120 125

Glu Lys Lys Pro Pro Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu
130 135 140

Gln Lys Met Ile His Gln His Leu Ser Ser Arg Thr His Gly Ser Glu
145 150 155 160

Asp Ser

<210> 4

<211> 453

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 4

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gttcagctgc agcagtctgg ggctgagctt gtgaggccag gggcctcagt caagttgtcc      120
tgcacagctt ctggctttta cattaagac gaatatatgc actgggtgaa gcagaggcct      180
gaaaatggcc tggagtggat tggatggatt gatcctgaga atggtgatac tgaatatgcc      240
tcgaagttcc agggcaaggc cactataaca gcagacacat cctccaacac agcctacctg      300
cagctcagca gcctgacatc tgaggacact gccgtctatt actgtactac atgggattac      360
tacggtagtc cctatgctat ggactactgg ggtcaaggaa cctcagtcac cgtctcctca      420
gccaaaacga caccgccatc wgtctatcca ctg                                     453

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<210> 5

<211> 121

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 5

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

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

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

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```

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

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```

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

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```

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

```

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Thr Thr Trp Asp Tyr Tyr Gly Ser Pro Tyr Ala Met Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Ser Val Thr Val Ser Ser
115 120

<210> 6
<211> 436
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 6
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ttgtgatgac ccaaactcca ctctccctgc ctgtcagtct tggagatcaa gcctocatct 120
cttgcatgac tagtcagagc cttgtacaca gtaatggaga aacctattta cattggtacc 180
tgcagaagcc aggccagtct ccaaagctcc tgatctacca ggtttccaac cgattttctg 240
gggtcccaga caggttcagt ggcagtgat cagggacaga tttcacactc aagatcagca 300
gagtggaggc tgaggatctg ggagtttatt tctgctctca aagtacacat gttccgctca 360
cgttcgggtgc tgggaccaag gtggagctga aacgggctga tgctgcacca actgtatcca 420
tcttcccacc atccag 436

<210> 7
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 7
Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
20 25 30

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

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

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

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

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

<210> 8
<211> 5
<212> PRT
<213> Mus musculus

<400> 8
Asp Glu Tyr Met His
1 5

<210> 9
<211> 17
<212> PRT
<213> Mus musculus

<400> 9
Trp Ile Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Ser Lys Phe Gln
1 5 10 15

Gly

<210> 10
<211> 12
<212> PRT
<213> Mus musculus

<400> 10
Trp Asp Tyr Tyr Gly Ser Pro Tyr Ala Met Asp Tyr
1 5 10

<210> 11
<211> 16
<212> PRT
<213> Mus musculus

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<400> 11

Arg Ser Ser Gln Ser Leu Val His Ser Asn Gly Glu Thr Tyr Leu His
1 5 10 15

<210> 12

<211> 7

<212> PRT

<213> Mus musculus

<400> 12

Gln Val Ser Asn Arg Phe Ser
1 5

<210> 13

<211> 9

<212> PRT

<213> Mus musculus

<400> 13

Ser Gln Ser Thr His Val Pro Leu Thr
1 5

<210> 14

<211> 975

<212> DNA

<213> Mus musculus

<400> 14

gccaaaacga caccceccatc tgtctatcca ctggcccctg gatctgctgc ccaaactaac	60
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tggaactctg gatccctgtc cagcgggtgtg cacaccttcc cagctgtcct gcagtctgac	180
ctctacactc tgagcagctc agtgactgtc cctccagca cctggcccag cgagaccgtc	240
acctgcaacg ttgcccaccc ggccagcagc accaagggtgg acaagaaaat tgtgcccagg	300
gattgtggtt gtaagccttg catatgtaca gtcccagaag tatcatctgt cttcatcttc	360
ccccaaaagc ccaaggatgt gtcaccatt actctgactc ctaaggtcac gtgtgttgtg	420
gtagacatca gcaaggatga tcccgaggtc cagttcagct ggttttaga tgatgtggag	480
gtgcacacag ctgagacgca accccgggag gagcagttca acagcacttt ccgctcagtc	540
agtgaacttc ccatcatgca ccaggactgg ctcaatggca aggagttcaa atgcagggtc	600
aacagtgcag ctttcctgc ccccatcgag aaaaccatct ccaaaaccaa aggcagaccg	660
aaggctccac aggtgtacac cattccacct cccaaggagc agatggccaa ggataaagtc	720
agtctgacct gcatgataac agaattcttc cctgaagaca ttactgtgga gtggcagtg	780
aatgggcagc cagcggagaa ctacaagaac actcagccca tcatggacac agatggctct	840

tacttcgtct acagcaagct caatgtgcag aagagcaact gggaggcagg aaatactttc 900
 acctgctctg tgttacatga gggcctgcac aaccaccata ctgagaagag cctctccac 960
 tctcctggta aatga 975

<210> 15
 <211> 324
 <212> PRT
 <213> Mus musculus

<400> 15
 Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala Pro Gly Ser Ala
 1 5 10 15

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

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

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

Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp Pro Ser Glu Thr Val
 65 70 75 80

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

Ile Val Pro Arg Asp Cys Gly Cys Lys Pro Cys Ile Cys Thr Val Pro
 100 105 110

Glu Val Ser Ser Val Phe Ile Phe Pro Pro Lys Pro Lys Asp Val Leu
 115 120 125

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

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

Val His Thr Ala Gln Thr Gln Pro Arg Glu Glu Gln Phe Asn Ser Thr
 165 170 175

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Phe Arg Ser Val Ser Glu Leu Pro Ile Met His Gln Asp Trp Leu Asn
180 185 190

Gly Lys Glu Phe Lys Cys Arg Val Asn Ser Ala Ala Phe Pro Ala Pro
195 200 205

Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Arg Pro Lys Ala Pro Gln
210 215 220

Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln Met Ala Lys Asp Lys Val
225 230 235 240

Ser Leu Thr Cys Met Ile Thr Asp Phe Phe Pro Glu Asp Ile Thr Val
245 250 255

Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu Asn Tyr Lys Asn Thr Gln
260 265 270

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

Val Gln Lys Ser Asn Trp Glu Ala Gly Asn Thr Phe Thr Cys Ser Val
290 295 300

Leu His Glu Gly Leu His Asn His His Thr Glu Lys Ser Leu Ser His
305 310 315 320

Ser Pro Gly Lys

<210> 16

<211> 324

<212> DNA

<213> Mus musculus

<400> 16

cgggctgatg ctgcaccaac tgtatccatc ttcccacccat ccagtgcagca gttaacatct 60

ggaggtgcct cagtcgtgtg cttottgaac aacttctacc ccaaagacat caatgtcaag 120

tggaagattg atggcagtga acgacaaaat ggcgtcctga acagttggac tgatcaggac 180

agcaaagaca gcacctacag catgagcagc accctcacgt tgaccaagga cgagtatgaa 240

cgacataaca gctatacctg tgaggccact cacaagacat caacttcacc catcgtcaag 300

agcttcaaca ggaatgagtg ttag 324

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<210> 17
<211> 106
<212> PRT
<213> Mus musculus

<400> 17
Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln
1 5 10 15
Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr
20 25 30
Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln
35 40 45
Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr
50 55 60
Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg
65 70 75 80
His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro
85 90 95
Ile Val Lys Ser Phe Asn Arg Asn Glu Cys
100 105

<210> 18
<211> 1338
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 18
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tcctgcacag cttctggctt taacattaaa gacgaatata tgcactgggt gaagcagagg 120
cctgaaaatg gcctggagtg gattggatgg attgatcctg agaatgggtga tactgaatat 180
gcctogaagt tccaggggcaa ggccactata acagcagaca catcctccaa cacagcctac 240
ctgcagctca gcagcctgac atctgaggac actgccgtct attactgtac tacatgggat 300
tactacggtg gtcctatgc tatggactac tgggggtcaag gaacctcagt caccgtctcc 360

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tcagccaaaa cgacaccccc atctgtctat ccactggccc ctggatctgc tgcccaaact 420
aactccatgg tgacctggg atgcctggtc aagggtatt tccctgagcc agtgacagtg 480
acctggaact ctggatccct gtccagcggg gtgcacacct tcccagctgt cctgcagtct 540
gacctctaca ctctgagcag ctcagtgact gtcccctcca gcacctggcc cagcgagacc 600
gtcacctgca acgttgccca cccggccagc agcaccaagg tggacaagaa aattgtgccc 660
agggattgtg gttgtaagcc ttgcatatgt acagtcccag aagtatcatc tgtcttcac 720
ttcccccaa agccaagga tgtgtcacc attactctga ctctaaggc cactgtgtt 780
gtggtagaca tcagcaagga tgatcccag gtccagttca gctggtttgt agatgatgtg 840
gaggtgcaca cagctcagac gcaaccccg gaggagcagt tcaacagcac tttccgctca 900
gtcagtgaac ttcccatcat gcaccaggac tggctcaatg gcaaggagtt caaatgcagg 960
gtcaacagtg cagctttccc tgccccatc gagaaaacca tctccaaaac caaaggcaga 1020
ccgaaggtc cacaggtgta caccattcca cctccaagg agcagatggc caaggataaa 1080
gtcagtctga cctgcatgat aacagacttc ttccctgaag acattactgt ggagtggcag 1140
tggaatggg agccagcga gaactacaag aacactcagc ccatcatgga cacagatggc 1200
tcttacttgc tctacagcaa gctcaatgtg cagaagagca actgggaggc aggaataact 1260
ttcacctgct ctgtgttaca tgagggcctg cacaaccacc atactgagaa gagcctctcc 1320
cactctctctg gtaaatga 1338

<210> 19

<211> 445

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 19

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

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

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

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

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

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

Thr Thr Trp Asp Tyr Tyr Gly Ser Pro Tyr Ala Met Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser
115 120 125

Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val
130 135 140

Thr Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val
145 150 155 160

Thr Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala
165 170 175

Val Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro
180 185 190

Ser Ser Thr Trp Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro
195 200 205

Ala Ser Ser Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly
210 215 220

Cys Lys Pro Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile
225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys
245 250 255

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

Phe Ser Trp Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Gln
275 280 285

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Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu
290 295 300

Pro Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg
305 310 315 320

Val Asn Ser Ala Ala Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
325 330 335

Thr Lys Gly Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro
340 345 350

Lys Glu Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr
355 360 365

Asp Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln
370 375 380

Pro Ala Glu Asn Tyr Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly
385 390 395 400

Ser Tyr Phe Val Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu
405 410 415

Ala Gly Asn Thr Phe Thr Cys Ser Val Leu His Glu Gly Leu His Asn
420 425 430

His His Thr Glu Lys Ser Leu Ser His Ser Pro Gly Lys
435 440 445

<210> 20
<211> 657
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 20
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atctcttgca gatctagtca gagccttgta cacagtaatg gagaaaccta ttacattgg 120
tacctgcaga agccaggcca gtctccaaag ctctgatct accaggtttc caaccgattt 180

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tctggggtcc cagacaggtt cagtggcagt ggatcagggg cagatttcac actcaagatc      240
agcagagtgg aggctgagga tctgggagtt tatttctgct ctcaaagtac acatgttccg      300
ctcacgttcg gtgctgggac caaggtggag ctgaaagctg atgctgcacc aactgtatcc      360
atcttcccaac catccagtga gcagttaaca tctggaggtg cctcagtcgt gtgcttcttg      420
aacaacttct accccaaaga catcaatgtc aagtgaaga ttgatggcag tgaacgacaa      480
aatggcgctcc tgaacagttg gactgatcag gacagcaaag acagcaccta cagcatgagc      540
agcacctca cgttgaccaa ggacgagtat gaacgacata acagctatac ctgtgaggcc      600
actcacaaga catcaacttc acccatcgtc aagagcttca acaggaatga gtgttag      657

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<210> 21

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 21

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

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Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
20           25           30

```

```

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

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```

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

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

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

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

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Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln
115 120 125

Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr
130 135 140

Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln
145 150 155 160

Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr
165 170 175

Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg
180 185 190

His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro
195 200 205

Ile Val Lys Ser Phe Asn Arg Asn Glu Cys
210 215

<210> 22
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 22
atgaagttgv vtgtaggct gttggtgc

28

<210> 23
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 23
atggagwcag acacactcct gytatggg

28

<210> 24
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 24
atgagtgtgc tcactcaggt cctggsct

28

<210> 25
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 25
atgaggrccc ctgctcagwt tyttggmw

28

<210> 26
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 26
atggatttwa ggtgcagatt wtcagctt

28

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 27
atgaggtkck ktgktsagst sctgrgg

27

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

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 primer"

<400> 28
 atgggcwtca agatggagtc acakwyyc

28

<210> 29
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 primer"

<400> 29
 atgtggggay ctktttymmm tttttcaa

28

<210> 30
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
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 <223> /note="Description of Artificial Sequence: Synthetic
 primer"

<400> 30
 atggttrtccw casctcagtt ccttg

25

<210> 31
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 primer"

<400> 31
 atgtatatat gtttggtgtc tattttct

27

<210> 32
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 32
atggaagccc cagctcagct tctcttcc

28

<210> 33
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 33
actggatggt gggaagatgg

20

<210> 34
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 34
atgaaatgca gctggggcat sttcttc

27

<210> 35
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 35
atgggatgga gctratatcat sytctt

26

<210> 36
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 36
atgaagwtgt gggttaaactg gggttttt

27

<210> 37
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
primer"

<400> 37
atgracttttg ggytcagctt grttt

25

<210> 38
<211> 30
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primer"

<400> 38
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30

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<400> 39
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21

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21

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21

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<400> 51
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18

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22

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<400> 56
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<400> 58
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<210> 59
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primer"

<400> 59
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<220>
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<210> 61
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primer"

<400> 61
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<210> 62
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<220>
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primer"

<400> 62
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<210> 63
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<220>
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primer"

<400> 63
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<210> 64
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<220>
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primer"

<400> 64
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<210> 65
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<220>
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primer"

<400> 65
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<210> 66
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<212> DNA
<213> Artificial Sequence

<220>
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primer"

<400> 66
aagactacag cccctacttc

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<210> 67
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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primer"

<400> 67
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20

<210> 68
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<212> DNA
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<220>
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probe"

<400> 68
aagatgaccc agatcatgtt tgagacc

27

<210> 69
<211> 20
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<213> Artificial Sequence

<220>
<221> source
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probe"

<400> 69
agccagtcca gacgcaggat

20