

SEQUENCE LISTING

<110> Sengenics Corporation Pte Ltd
Agency for Science, Technology and Research

<120> IDENTIFICATION OF HEALTH STATUS IN THE ELDERLY USING
IMMUNOLOGICAL BIOMARKERS

<130> SP101688SG

<160> 32

<170> PatentIn version 3.5

<210> 1
<211> 1422
<212> DNA
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products

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1422

<210> 2
<211> 1659
<212> DNA
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 2
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acgagggatg aggtgacggg tgaagctgcc ctgcggggca cgacgctgca gtcgctgggc 480
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<210> 3
 <211> 1209
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

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 ggtccaaaac gtgttctcgt gactcagcaa tttccttgtc agaatccatt acctgtaaat 120
 agtggccagg ctgagcgggt cttgtgtcct tcaaattctt cccagcgcgt tcctttgcaa 180
 gcacaaaagc ttgtctccag tcacaagccg gttcagaatc agaagcagaa gcaattgcag 240
 gcaaccagtg tacctcatcc tgtctccagg cactgaata acacccaaaa gagcaagcag 300
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 aaaggaaagt ttggtaatgt ttatttggca agagaaaagc aaagcaagtt tattctggct 480
 cttaaagtgt tatttaaagc tcagctggag aaagccggag tggagcatca gctcagaaga 540
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 catgatgcta ccagagtcta cctaattctg gaatatgcac cacttggaac agtttataga 660
 gaacttcaga aactttcaaa gtttgatgag cagagaactg ctacttatat aacagaattg 720
 gcaaatgccc tgtcttactg tcattcgaag agagtatttc atagagacat taagccagag 780
 aacttacttc ttggatcagc tggagagctt aaaattgcag attttgggtg gtcagtacat 840
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 aaacagtct 1209

<210> 4
 <211> 1566
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

<400> 4
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 cgtgagaagc ttctgattat tgattcaaac ctgggggtcc aagatgtgga gaacctcaag 120

tttctctgca taggattggt ccccaacaag aagctggaga agtccagctc agcctcagat	180
gtttttgaac atctcttggc agaggatctg ctgagtgagg aagacccttt cttcctggca	240
gaactcctct atatcatatc gcagaagaag ctgctgcagc acctcaactg taccaaagag	300
gaagtggagc gactgctgcc caccgcacaa aggggtttctc tgtttagaaa cctgctctac	360
gaactgtcag aaggcattga ctcagagaac ttaaaggaca tgatcttcct tctgaaagac	420
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ggtaacagag ccacaaatgg tgcaccaagc ctggtctcca ggggatgca aggagcatct	780
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caaggaaccc ataaagatgc tgagatcctg agtcatgtgt tccagtggct tgggttcaca	960
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tctctgtgta atcatctgaa gaaattggtc ccaagacatg aagacatctt atccatcctc	1440
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tcatta	1566

<210> 5
 <211> 1206
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

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gtcaacctga cctgccaaac acagacagta ggcttcttcg tgcagatgca atggccaag	180
gtcaccaata agatagacct gattgctgtc tatcatcccc aatacggctt ctactgtgcc	240

tatgggagac cctgtgagtc acttgtgact ttcacagaaa ctctgagaa tgggtcaaaa	300
tggactctgc acttaaggaa tatgtcttgt tcagtcagtg gaaggtacga gtgtatgctt	360
gttctgtatc cagagggcat tcagactaaa atctacaacc ttctcattca gacacacgtt	420
acagcagatg aatggaacag caaccatacg atagaaatag agataaatca gactctggaa	480
ataccatgct ttcaaaatag ctctcaaaa atttcatctg agttcaccta tgcattggtcg	540
gtggaggata atggaactca ggaaacactt atctccaaa atcacctcat cagcaattcc	600
acattactta aagatagagt caagcttggg acagactaca gactccacct ctctccagtc	660
caaattcttcg atgatgggcg gaagttctct tgccacatta gagtcggtcc taacaaaatc	720
ttgaggagct ccaccacagt caagggtttt gctaaaccag aaatccctgt gattgtggaa	780
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cccaaagcaa atatcacatg gtttatagat ggaagttttc ttcattgatga aaaagaagga	900
atatatatta ctaatgaaga gagaaaaggc aaagatggat ttttggaaact gaagtctgtt	960
ttaacaaggg tacatagtaa taaaccagcc caatcagaca acttgaccat ttggtgtatg	1020
gctctgtctc cagtcccagg aaataaagtg tggaacatct catcagaaaa gatcactttt	1080
ctcttaggtt ctgaaatttc ctcaacagac cctccactga gtgttacaga atctaccctt	1140
gacaccaac cttctccagc cagcagtgtg tctctgcaa gtaagaatgt tttcacactg	1200
agctat	1206

<210> 6
 <211> 1140
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

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cagttcctga ttgctgttcg ccaggggtggg gatgtgctgc agaattgagga gggtagagacc	180
accagccacc tgatgggcat gttctaccgc accattcgca tgatggagaa cggcatcaag	240
cccgtgtatg tctttgatgg caagccgcca cagctcaagt caggcgagct ggccaaacgc	300
agttagcggc gggctgaggc agagaagcag ctgcagcagg ctcaggctgc tggggccgag	360
caggaggtgg aaaaattcac taagcggctg gtgaagggtca ctaagcagca caatgatgag	420
tgcaaacatc tgctgagcct catgggcatc cttatcttg atgcacccag tgaggcagag	480
gccagctgtg ctgccctggg gaaggctggc aaagtctatg ctgcggctac cgaggacatg	540
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aagctgccaa tccaggaatt ccacctgagc cggattctgc aggagctggg cctgaaccag	660
gaacagtttg tggatctgtg catcctgcta ggcagtgact actgtgagag tatccggggg	720

attgggcca agcgggctgt ggacctcatc cagaagcaca agagcatcga ggagatcgtg	780
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ccaaatgaag aagagctgat caagtcatg tgtggtgaaa agcagttctc tgaggagcga	960
atccgcagtg gggtaagag gctgagtaag agccgccaag gcagcaccca gggccgcctg	1020
gatgatttct tcaaggtgac cggctcactc tcttcagcta agcgcaagga gccagaaccc	1080
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<210> 7
 <211> 672
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

<400> 7	
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cccaagaagg acattatcaa gtttctgcag gaacacggtt cagattcggt tcttgcagaa	120
cataaattat taggaaacat taaaaatgtg gccaagacag ctaacaagga ccacttggtt	180
acagcctata accatctttt tgaaactaag cgttttaagg gtactgaaag tataagtaaa	240
gtgtctgagc aagtaaaaaa tgtgaagctt aatgaagata aacccaaaga aaccaagtct	300
gaagagaccc tggatgaggg tccacaaaa tatactaaat ctgttctgaa aaaggagat	360
aaaaccaact ttccaaaaa gggagatggt gttcactgct ggtatacagg aacactacaa	420
gatgggactg tttttgatac taatattcaa acaagtgcaa agaagaagaa aaatgccaa	480
cctttaagtt ttaaggtcgg agtaggcaaa gttatcagag gatgggatga agctctcttg	540
actatgagta aaggagaaaa ggctcgactg gagattgaac cagaatgggc ttacggaaag	600
aaaggacagc ctgatgccaa aattccacca aatgcaaac tcacttttga agtggaatta	660
gtggatattg at	672

<210> 8
 <211> 534
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

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gcctttgatg atgttgtaga gtattttgga gaaaaccca agacaacacc acctctgtc	180
ttctttcctg tctttgtccg gtttgtgaaa gcatataagc aagcagaaga ggaaaatgag	240
ctgaggaaaa agcaggaaca agctctcatg gaaaaactcc tagagcaaga agctctgatg	300

gagcagcagg atccaaagtc tccttctcat aaatcaaaga ggcagcagca agagttaatt	360
gcagaattaa gaagacgaca agttaaagat aacagacatg tatatgaggg aaaagatggt	420
gccattgaag atattatcac agccttaaag aagaataata tcactaaatt tccaaatggt	480
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<210> 9
 <211> 1005
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

<400> 9	
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ccatgggctc cacagtgtgc acagatgaac gaagttatgg cagagttagc taaagaactc	180
cctcaagttt catttggtgaa gttggaagct gaagggtgttc ctgaagtatc tgaaaaatat	240
gaaattagct ctgttccac ttttctgttt ttcaagaatt ctcagaaaat cgaccgatta	300
gatggtgcac atgccccaga gttgaccaa aaagttcagc gacatgcac tagtggtctc	360
ttcctacca gcgctaata acatcttaaa gaagatctca accttcgctt gaagaaattg	420
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atcttctcag atgaagaggt tcgacagga ctcaaagcct attccagttg gcctacctat	600
cctcagctct atgtttctgg agagctcata ggaggacttg atataattaa ggagctagaa	660
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acataccctc agctgtatgt gaaaggggag ctggtgggag gattggatat tgtgaaggaa	960
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<210> 10
 <211> 2898
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

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aagctgctcg aggaccagca ggaaaagggg atggtacgaa cagagctaata cgagagcgtg	180
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gagaacagcg ttcttcagct aagggaaacac gatgaatcag agacggcggg gtctcagggg	300
aacagcaaca cgggtggacgg agagagcaca agcgggaactg aagacataaa gattcagttc	360
agcaggtcag gcagtggcag tgggtgggttt cttgaaggac tatttggatg ctttaaggcct	420
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tgggaagtgc catttgagga gatctcagag ctgcagtggc tgggtagtgg agcccaagga	540
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cggcagacac tcatgcattt agacattgcc tctgcagatg tacttgccac cccacaagaa	1260
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aaaagtgaag gaacttgat acaccggta gatgaagaac tgattcgaag gcgcagagaa	1380
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attaagcgtg agcaagcagt ggaaaagaag tatcctggga cctacaaacg acaccctgtt	1560
cgtcctatca tccatcccaa tgccatggag aaactcatga aaaggaaagg agtgcctcac	1620
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gactttgccg caatcttgaa aaaccagcca gcccgagaaa attcaccca tcccacttac	1860
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caggacatag caacctgctc caacaacctg aggtatttcg gccagcagc agccctgcgg	2040
agcccactca gcaaccatgc tcagagacag ctgcccggct cgagccctga cctcatctcc	2100
acagccatgg ctgcagactg ctggagaagt tctgagcctg acaagggccca agctggtccc	2160
tggggctggt gccaggctga cgcttatgac ccctgccttc agtgcaggcc agaacagtat	2220

gggtccttag acataccctc tgctgagcca gtggggagga gccctgacct ttccaagtca	2280
ccagcacata atcctctctt ggaaaacgcc cagagttctg agaaaacgga agaaaatgaa	2340
ttcagcggct gtaggtctga gtcattccctc ggcacctctc atctcggcac ccctccagcg	2400
ctacctcgaa aaacaaggcc tctgcagaag agtggagatg actcctcaga agaggaagaa	2460
ggggaagtag atagtgaagt tgaattttcca cgaagacaga ggccccatcg ctgtatcagc	2520
agctgccagt catattcaac ctttagctctt gagaattttct ctgtgtctga tggagaagag	2580
ggaaatacca gtgaccactc aaacagtcct gatgagttag ctgataaact tgaagaccgc	2640
ttggcagaga agctagacga cctgctgtcc cagacgccag agattcccat tgacatatcc	2700
tcacactcgg atgggctctc tgacaaggag tgtgccgtgc gccgtgtgaa gactcagatg	2760
tctctgggca agctgtgtgt ggaggaacgt ggctatgaga accccatgca gtttgaagaa	2820
tcggactgtg actcttcaga tggggagtgt tctgatgcca cagttaggac caataaacac	2880
tacagctctg ctacctgg	2898

<210> 11
 <211> 2937
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

<400> 11	
atggctgacc tcagtcttgc agatgcatta acagaaccat ctccagacat tgagggagag	60
ataaagcggg acttcattgc cactactagag gcagaggcct ttgatgatgt tgtgggagaa	120
actgttgga aaacagacta tattcctctc ctggatgttg atgagaaaac cgggaactca	180
gagtcaaaga agaaaccgtg ctcaaaaact agccagattg aagatactcc atcttctaaa	240
ccaacactcc tagccaatgg tggctatgga gtagaaggga gcgatactac agggctctcca	300
actgaattcc ttgaagagaa aatggcctac caggaatacc caaatagcca gaactggcca	360
gaagatacca acttttgttt ccaacctgag caagtggctg atcctatcca gactgatccc	420
tttaagatgt accatgatga tgacctggca gatttggctt ttccctccag tgcgacagct	480
gatacttcaa tatttgcagg acaaaatgat cccttgaaag acagttacgg tatgtctccc	540
tgcaacacag ctgttgtacc tcaggggtgg tctgtggaag ccttaaactc tccacactca	600
gagtcctttg tttccccaga ggctgttgca gaacctcctc agccaacggc agttccctta	660
gagctagcca aggagataga aatggcatca gaagagaggc caccagcaca agcattggaa	720
ataatgatgg gactgaagac tactgacatg gcaccatcta aagaaacaga gatggccctc	780
gccaaggaca tggcactagc taaaaaac gaggtggcat tggctaaaga tatggaatca	840
cccaccaa at tagatgtgac actggccaag gacatgcagc catccatgga atcagatatg	900
gccctagtca aggacatgga actaccaca gaaaaagaag tggccctggg taaggatgtc	960
agatggccca cagaaacaga tgtatcttca gccagaatg tgggtactgcc cacagaaaca	1020

gaggtagccc	cagccaagga	tgtgacactg	ttgaaagaaa	cagagagggc	atctcctata	1080
aaaatggact	tagccccctc	caaggacatg	ggaccaccca	aagaaaacaa	gaaagaaaca	1140
gagagggcat	ctcctataaa	aatggacttg	gctccttcca	aggacatggg	accacccaaa	1200
gaaaacaaga	tagtcccagc	caaggatttg	gtattactct	cagaaataga	ggtggcacag	1260
gctaattgaca	ttatatcatc	cacagaaata	tcctctgctg	agaaggtggc	tttgtcctca	1320
gaaacagagg	tagccctggc	cagggacatg	acactgcccc	cggaaaccaa	cgtgatcttg	1380
accaaggata	aagcactacc	tttagaagca	gaggtggccc	cagtcaagga	catggctcaa	1440
ctcccagaaa	cagaaatagc	cccggccaag	gatgtggctc	cgtccacagt	aaaagaagtg	1500
ggcttggtga	aggacatgtc	tccactatca	gaaacagaaa	tggctctggg	caaggatgtg	1560
actccacctc	cagaaacaga	agtagttctc	atcaagaacg	tatgtctgcc	tccagaaatg	1620
gaggtggccc	tgactgagga	tcaggtccca	gccctcaaaa	cagaagctcc	caccaccatt	1680
ggtgggttga	ataaaaaacc	catgagcctt	gcttcaggct	tagtgccagc	tgccccaccc	1740
aaacgcctg	ccgtcgcctc	tgccaggcct	tccatcttac	cttcaaaaga	cgtgaagcca	1800
aagcccattg	cagatgcaaa	ggctcctgag	aagcgggcct	caccatccaa	gccagcttct	1860
gccccagcct	ccagatctgg	gtccaagagc	actcagactg	ttgcaaaaac	cacaacagct	1920
gctgctgttg	cctcaactgg	cccaagcagt	aggagcccct	ccacgctcct	gccaagaag	1980
cccactgcca	ttaagactga	gggaaaacct	gcagaagtca	agaagatgac	tgcaaagtct	2040
gtaccagctg	acttgagtcg	cccaaagagc	acctccacca	gttccatgaa	gaaaaccacc	2100
actctcagtg	ggacagcccc	cgctgcaggg	gtggttccca	gccgagtcaa	ggccacaccc	2160
atgccctccc	ggccctccac	aactcctttc	atagacaaga	agcccacctc	ggccaaaccc	2220
agctccacca	ccccccggct	cagccgcctg	gccaccaata	cttctgctcc	tgatctgaag	2280
aatgtccgct	ccaaggttgg	ctccacggaa	aacatcaagc	atcagcctgg	aggaggccgg	2340
gcaaagtag	agaaaaaaac	agaggcagct	gctacaaccc	gaaagcctga	atctaagtca	2400
gtcactaaaa	cagccggccc	aattgcaagt	gcacagaaac	aacctgcggg	gaaagtccag	2460
atagtctcca	aaaaagttag	ctacagccat	attcagtcca	agtgtggttc	caaggacaat	2520
attaagcatg	tccctggagg	tggtaatgtt	cagattcaga	acaagaaagt	ggacatctct	2580
aaggtctcct	ccaagtgtgg	gtctaaggct	aacatcaagc	acaagcctgg	tgaggagat	2640
gtcaagattg	aaagtcagaa	gttgaacttc	aaggagaagg	cccaggccaa	ggtgggatcc	2700
ctcgataatg	tgggccacct	acctgcagga	ggtgctgtga	agactgaggg	cggtggcagc	2760
gaggctcctc	tgtgtccggg	ttcccctgct	ggggaggagc	cggccatctc	tgaggcagcg	2820
cctgaagctg	gcgcccccac	ttcagccagt	ggcctcaatg	gccaccccac	cctgtcaggg	2880
ggtggtgacc	aaagggaggc	ccagaccttg	gacagccaga	tccaggagac	aagcatc	2937

<210> 12
 <211> 777
 <212> DNA

<213> Artificial Sequence

<220>

<223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

<400> 12

atgctggaga gtagcggctg caaagcgtg aaggagggcg tgctggagaa ggcgagcgac	60
gggttggtgc agctctggaa gaaaaagtgt tgcattctca ccgaggaagg gctgctgctt	120
atcccgccca agcagctgca acaccagcag cagcagcaac agcagcagca gcagcagcaa	180
caacagcccc ggagggggcc ggccgagccg tcccaacca gtggccccgc tgtcgccagc	240
ctcgagccgc cggtaagct caaggaactg cacttctcca acatgaagac cgtggactgt	300
gtggagcgca agggcaagta catgtacttc actgtggtga tggcagaggg caaggagatc	360
gactttcggg gcccgcaaga ccagggtggt aacgccgaga tcacgtgca gatggtgcag	420
tacaagaatc gtcaggccat cctggcggtc aaatccacgc ggcagaagca gcagcacctg	480
gtccagcagc agccccctc gcagccgcag ccgcagccgc agctccagcc ccaacccag	540
cctcagcctc agccgcaacc ccagcccaaa tcacaacccc agcctcagcc ccaacccaag	600
cctcagcccc agcagctcca cccgtatccg catccacatc cacatccaca ctctatcct	660
cactcgcacc cacaccctca cccgcaccg catccgcacc aaataccgca cccacacca	720
cagccgcact cgcagccgca cgggcaccgg cttctccgca gcacctccaa ctctgcc	777

<210> 13

<211> 1146

<212> DNA

<213> Artificial Sequence

<220>

<223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

<400> 13

atgggagcat ttttagacaa gccaaagatg gaaaagcata atgcccaggg gcagggtaat	60
gggttgcgat atgggctaag cagcatgcaa ggctggcgtg ttgaaatgga ggatgcacat	120
acggctgtga tcggtttgcc aagtggactt gaatcgtggt cattctttgc tgtgtatgat	180
gggcatgctg gttctcaggt tgccaaatac tgctgtgagc atttgtaga tcacatcacc	240
aataaccagg attttaaggt gtctgcagga gcaccttctg tggaaaatgt aaagaatgga	300
atcagaacag gttttctgga gattgatgaa cacatgagag ttatgtcaga gaagaaacat	360
ggtgcagata gaagtgggtc aacagctgta ggtgtcttaa tttctccca acatacttat	420
ttcattaact gtggagactc aagagggtta cttttagtaga acaggaaagt tcatttcttc	480
acacaagatc acaaaccaag taatccgctg gagaaagaac gaattcagaa tgcagggtggc	540
tctgtaatga ttcagcgtgt gaatggctct ctggctgtat cgagggccct tggggatttt	600
gattacaaat gtgtccatgg aaaaggctct actgagcagc ttgtctcacc agagcctgaa	660
gtccatgata ttgaaagatc tgaagaagat gatcagttca ttatccttgc atgtgatggt	720
atctgggatg ttatgggaaa tgaagagctc tgtgattttg taagatccag acttgaagtc	780

actgatgacc ttgagaaagt ttgcaatgaa gtagtcgaca cctgtttgta taaggggaagt	840
cgagacaaca tgagtgtgat tttgatctgt tttccaaatg cacccaaagt atcgccagaa	900
gcagtgaaga aggaggcaga gttggacaag tacctggaat gcagagtaga agaaatcata	960
aagaagcagg gggaaggcgt ccccgactta gtccatgtga tgcgcacatt agcgagttag	1020
aacatcccca gcctcccacc agggggtgaa ttggcaagca agaggaatgt tattgaagcc	1080
gtttacaata gactgaatcc ttacaaaaat gacgacactg actctacatc aacagatgat	1140
atgtgg	1146

<210> 14
 <211> 342
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

<400> 14	
atggccgagt gcccgaact cggggaggca gtcaccgacc acccgaccg cctgtgggccc	60
tgggagaagt tcgtgtatTTT ggacgagaag cagcacgcct ggctgccctt aaccatcgag	120
ataaaggata ggttacagtt acgggtgctc ttgctgcggg aagacgtcgt cctggggagg	180
cctatgacct ccaccagat aggcccaagc ctgctgccta tcatgtggca gctctacct	240
gatggacgat accgatctc agactccagt ttctggcgct tagtgtacca catcaagatt	300
gacggcgtgg aggacatgct tctcgagctg ctgccagatg ac	342

<210> 15
 <211> 474
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

<400> 15	
atgtcgggga tcgccctcag cagactcgcc caggagagga aagcatggag gaaagaccac	60
ccatttggtt tcgtggctgt cccaacaaaa aatcccgatg gcacgatgaa cctcatgaac	120
tgggagtgcg ccattccagg aaagaaaggg actccgtggg aaggaggctt gtttaaacta	180
cggatgcttt tcaaagatga ttatccatct tcgccaccaa aatgtaaatt cgaaccacca	240
ttatttcacc cgaatgtgta cccttcgggg acagtgtgcc tgtccatctt agaggaggac	300
aaggactgga ggccagccat cacaatcaaa cagatcctat taggaatata ggaacttcta	360
aatgaaccaa atatccaaga cccagctcaa gcagaggcct acacgattta ctgccaaaac	420
agagtggagt acgagaaaag ggtccgagca caagccaaga agtttgcgcc ctca	474

<210> 16
 <211> 1585
 <212> DNA

<213> Artificial Sequence

<220>

<223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

<400> 16

atgggggacg ctcccagccc tgaagagaaa ctgcaccta tcacccggaa cctgcaggag	60
gttctggggg aagagaagct gaaggagata ctgaaggagc ggaacttaa aatttactgg	120
ggaacggcaa ccacgggcaa accacatgtg gcttactttg tgcccatgtc aaagattgca	180
gacttcttaa aggcaggggtg tgaggtaaca attctgtttg cggacctcca cgcatacctg	240
gataacatga aagccccatg ggaacttcta gaactccgag tcagttacta tgagaatgtg	300
atcaaagcaa tgctggagag cattggtgtg cccttgagga agctcaagtt catcaaaggc	360
actgattacc agctcagcaa agagtacaca ctagatgtgt acagactctc ctccgtggtc	420
acacagcacg attccaagaa ggctggagct gaggtggtaa agcagggtgga gcaccctttg	480
ctgagtggcc tcttataccc cggactgcag gctttggatg aagagtattt aaaagtagat	540
gccaatttg gaggcattga tcagagaaaag attttcacct ttgcagagaa gtacctccct	600
gcacttggct attcaaaacg ggtccatctg atgaatccta tggttccagg attaacaggc	660
agcaaatga gctcttcaga agaggagtcc aagattgatc tccttgatcg gaaggaggat	720
gtgaagaaaa aactgaagaa ggccttctgt gagccaggaa atgtggagaa caatgggggt	780
ctgtccttca tcaagcatgt cttttttccc cttaatccg agtttgtgat cctacgagat	840
gagaaatggg gtggaaacaa aacctacaca gcttacgtgg acctggaaaa ggactttgct	900
gctgaggttg tacatcctgg agacctgaag aattctgttg aagtcgcact gaacaagttg	960
ctggatccaa tccgggaaaa gtttaatacc cctgccctga aaaaactggc cagcgctgcc	1020
taccagatc cctcaaagca gaagccaatg gccaaaggcc ctgccaagaa ttcagaacca	1080
gaggaggtca tcccatcccg gctggatc cgtgtgggga aaatcatcac tgtggagaag	1140
caccagatg cagacagcct gtatgtagag aagattgacg tgggggaagc tgaaccacgg	1200
actgtggtga gcggcctggt acagttcgtg cccaaggagg aactgcagga caggctggt	1260
gtggtgctgt gcaacctgaa accccagaag atgagaggag tcgagtcca aggcattgct	1320
ctgtgtgctt ctatagaagg gataaaccgc caggttgaac ctctggacct tccggcaggc	1380
tctgtcctg gtgagcacgt gtttgtgaag ggctatgaaa agggccaacc agatgaggag	1440
ctcaagccca agaagaaagt cttcgagaag ttgcaggctg acttcaaaat ttctgaggag	1500
tgcatgcac agtggaagca aaccaacttc atgaccaagc tgggctccat ttcctgtaaa	1560
tcgctgaaag gggggaacat tagcc	1585

<210> 17

<211> 961

<212> PRT

<213> Artificial Sequence

<220>

<223> A synthetic gene insert was assembled from synthetic

oligonucleotides and/or PCR products.

<400> 17

Met Lys Lys Phe Phe Asp Ser Arg Arg Glu Gln Gly Gly Ser Gly Leu
1 5 10 15

Gly Ser Gly Ser Ser Gly Gly Gly Gly Ser Thr Ser Gly Leu Gly Ser
20 25 30

Gly Tyr Ile Gly Arg Val Phe Gly Ile Gly Arg Gln Gln Val Thr Val
35 40 45

Asp Glu Val Leu Ala Glu Gly Gly Phe Ala Ile Val Phe Leu Val Arg
50 55 60

Thr Ser Asn Gly Met Lys Cys Ala Leu Lys Arg Met Phe Val Asn Asn
65 70 75 80

Glu His Asp Leu Gln Val Cys Lys Arg Glu Ile Gln Ile Met Arg Asp
85 90 95

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

Asn Val Ser Ser Gly Asp Val Trp Glu Val Leu Ile Leu Met Asp Phe
115 120 125

Cys Arg Gly Gly Gln Val Val Asn Leu Met Asn Gln Arg Leu Gln Thr
130 135 140

Gly Phe Thr Glu Asn Glu Val Leu Gln Ile Phe Cys Asp Thr Cys Glu
145 150 155 160

Ala Val Ala Arg Leu His Gln Cys Lys Thr Pro Ile Ile His Arg Asp
165 170 175

Leu Lys Val Glu Asn Ile Leu Leu His Asp Arg Gly His Tyr Val Leu
180 185 190

Cys Asp Phe Gly Ser Ala Thr Asn Lys Phe Gln Asn Pro Gln Thr Glu
195 200 205

Gly Val Asn Ala Val Glu Asp Glu Ile Lys Lys Tyr Thr Thr Leu Ser
210 215 220

Tyr Arg Ala Pro Glu Met Val Asn Leu Tyr Ser Gly Lys Ile Ile Thr
225 230 235 240

Thr Lys Ala Asp Ile Trp Ala Leu Gly Cys Leu Leu Tyr Lys Leu Cys
245 250 255

Tyr Phe Thr Leu Pro Phe Gly Glu Ser Gln Val Ala Ile Cys Asp Gly

Gln Gln Leu Ala Thr Ala Leu His Gln Gln Gln Leu Met Thr Gln Gln
 545 550 555 560

Ala Ala Leu Gln Gln Lys Pro Thr Met Ala Ala Gly Gln Gln Pro Gln
 565 570 575

Pro Gln Pro Ala Ala Ala Pro Gln Pro Ala Pro Ala Gln Glu Pro Ala
 580 585 590

Ile Gln Ala Pro Val Arg Gln Gln Pro Lys Val Gln Thr Thr Pro Pro
 595 600 605

Pro Ala Val Gln Gly Gln Lys Val Gly Ser Leu Thr Pro Pro Ser Ser
 610 615 620

Pro Lys Thr Gln Arg Ala Gly His Arg Arg Ile Leu Ser Asp Val Thr
 625 630 635 640

His Ser Ala Val Phe Gly Val Pro Ala Ser Lys Ser Thr Gln Leu Leu
 645 650 655

Gln Ala Ala Ala Ala Glu Ala Ser Leu Asn Lys Ser Lys Ser Ala Thr
 660 665 670

Thr Thr Pro Ser Gly Ser Pro Arg Thr Ser Gln Gln Asn Val Tyr Asn
 675 680 685

Pro Ser Glu Gly Ser Thr Trp Asn Pro Phe Asp Asp Asp Asn Phe Ser
 690 695 700

Lys Leu Thr Ala Glu Glu Leu Leu Asn Lys Asp Phe Ala Lys Leu Gly
 705 710 715 720

Glu Gly Lys His Pro Glu Lys Leu Gly Gly Ser Ala Glu Ser Leu Ile
 725 730 735

Pro Gly Phe Gln Ser Thr Gln Gly Asp Ala Phe Ala Thr Thr Ser Phe
 740 745 750

Ser Ala Gly Thr Ala Glu Lys Arg Lys Gly Gly Gln Thr Val Asp Ser
 755 760 765

Gly Leu Pro Leu Leu Ser Val Ser Asp Pro Phe Ile Pro Leu Gln Val
 770 775 780

Pro Asp Ala Pro Glu Lys Leu Ile Glu Gly Leu Lys Ser Pro Asp Thr
 785 790 795 800

Ser Leu Leu Leu Pro Asp Leu Leu Pro Met Thr Asp Pro Phe Gly Ser
 805 810 815

Thr Ser Asp Ala Val Ile Glu Lys Ala Asp Val Ala Val Glu Ser Leu
820 825 830

Ile Pro Gly Leu Glu Pro Pro Val Pro Gln Arg Leu Pro Ser Gln Thr
835 840 845

Glu Ser Val Thr Ser Asn Arg Thr Asp Ser Leu Thr Gly Glu Asp Ser
850 855 860

Leu Leu Asp Cys Ser Leu Leu Ser Asn Pro Thr Thr Asp Leu Leu Glu
865 870 875 880

Glu Phe Ala Pro Thr Ala Ile Ser Ala Pro Val His Lys Ala Ala Glu
885 890 895

Asp Ser Asn Leu Ile Ser Gly Phe Asp Val Pro Glu Gly Ser Asp Lys
900 905 910

Val Ala Glu Asp Glu Phe Asp Pro Ile Pro Val Leu Ile Thr Lys Asn
915 920 925

Pro Gln Gly Gly His Ser Arg Asn Ser Ser Gly Ser Ser Glu Ser Ser
930 935 940

Leu Pro Asn Leu Ala Arg Ser Leu Leu Leu Val Asp Gln Leu Ile Asp
945 950 955 960

Leu

<210> 18
<211> 553
<212> PRT
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 18

Met Ala Ala Pro Ala Gly Gly Gly Gly Ser Ala Val Ser Val Leu Ala
1 5 10 15

Pro Asn Gly Arg Arg His Thr Val Lys Val Thr Pro Ser Thr Val Leu
20 25 30

Leu Gln Val Leu Glu Asp Thr Cys Arg Arg Gln Asp Phe Asn Pro Cys
35 40 45

Glu Tyr Asp Leu Lys Phe Gln Arg Ser Val Leu Asp Leu Ser Leu Gln
50 55 60

Trp Arg Phe Ala Asn Leu Pro Asn Asn Ala Lys Leu Glu Met Val Pro

65		70		75		80
Ala Ser Arg Ser	Arg 85	Glu Gly Pro Glu	Asn 90	Met Val Arg Ile	Ala 95	Leu
Gln Leu Asp	Asp 100	Gly Ser Arg Leu	Gln 105	Asp Ser Phe Cys	Ser 110	Gly Gln
Thr Leu Trp	Glu 115	Leu Leu Ser	His 120	Phe Pro Gln Ile	Arg 125	Glu Cys Leu
Gln His Pro	Gly 130	Gly Ala Thr	Pro 135	Val Cys Val Tyr	Thr 140	Arg Asp Glu
Val Thr Gly	Glu 145	Ala Ala Leu	Arg Gly Thr	Thr 155	Leu Gln Ser	Leu Gly 160
Leu Thr Gly	Gly 165	Ser Ala Thr	Ile Arg Phe	Val 170	Met Lys Cys	Tyr 175
Pro Val Gly	Lys 180	Thr Pro Gly	Ser Leu 185	Gly Ser Ser	Ala 190	Ser Ala Gly
Gln Ala Ala	Ala 195	Ser Ala Pro	Leu 200	Pro Leu Glu	Ser Gly 205	Glu Leu Ser
Arg Gly Asp	Leu 210	Ser Arg Pro	Glu 215	Asp Ala Asp	Thr 220	Ser Gly Pro Cys
Cys Glu His	Thr 225	Gln Glu Lys	Gln 230	Ser Thr Arg	Ala 235	Pro Ala Ala Ala 240
Pro Phe Val	Pro 245	Phe Ser Gly	Gly Gly Gly	Gln 250	Arg Leu Gly	Gly Pro Pro 255
Gly Pro Thr	Arg 260	Pro Leu Thr	Ser 265	Ser Ala Lys	Leu 270	Pro Lys Ser
Leu Ser Ser	Pro 275	Gly Gly Pro	Ser 280	Lys Pro Lys	Lys 285	Ser Lys Ser Gly
Gln Asp Pro	Gln 290	Gln Glu Gln	Glu 295	Gln Glu Arg	Glu 300	Arg Asp Pro Gln
Gln Glu Gln	Glu 305	Arg Glu Arg	Pro 310	Val Asp Arg	Glu 315	Pro Val Asp Arg 320
Glu Pro Val	Val 325	Cys His Pro	Asp Leu	Glu 330	Glu Arg Leu	Gln Ala Trp 335
Pro Ala Glu	Leu 340	Pro Asp Glu	Phe 345	Phe Glu Leu	Thr Val	Asp 350

Arg Arg Arg Leu Ala Gln Leu Lys Ser Glu Arg Lys Arg Leu Glu Glu
355 360 365

Ala Pro Leu Val Thr Lys Ala Phe Arg Glu Ala Gln Ile Lys Glu Lys
370 375 380

Leu Glu Arg Tyr Pro Lys Val Ala Leu Arg Val Leu Phe Pro Asp Arg
385 390 395 400

Tyr Val Leu Gln Gly Phe Phe Arg Pro Ser Glu Thr Val Gly Asp Leu
405 410 415

Arg Asp Phe Val Arg Ser His Leu Gly Asn Pro Glu Leu Ser Phe Tyr
420 425 430

Leu Phe Ile Thr Pro Pro Lys Thr Val Leu Asp Asp His Thr Gln Thr
435 440 445

Leu Phe Gln Ala Asn Leu Phe Pro Ala Ala Leu Val His Leu Gly Ala
450 455 460

Glu Glu Pro Ala Gly Val Tyr Leu Glu Pro Gly Leu Leu Glu His Ala
465 470 475 480

Ile Ser Pro Ser Ala Ala Asp Val Leu Val Ala Arg Tyr Met Ser Arg
485 490 495

Ala Ala Gly Ser Pro Ser Pro Leu Pro Ala Pro Asp Pro Ala Pro Lys
500 505 510

Ser Glu Pro Ala Ala Glu Glu Gly Ala Leu Val Pro Pro Glu Pro Ile
515 520 525

Pro Gly Thr Ala Gln Pro Val Lys Arg Ser Leu Gly Lys Val Pro Lys
530 535 540

Trp Leu Lys Leu Pro Ala Ser Lys Arg
545 550

<210> 19
<211> 403
<212> PRT
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 19

Met Asp Arg Ser Lys Glu Asn Cys Ile Ser Gly Pro Val Lys Ala Thr
1 5 10 15

Ala Pro Val Gly Gly Pro Lys Arg Val Leu Val Thr Gln Gln Phe Pro
20 25 30

Cys Gln Asn Pro Leu Pro Val Asn Ser Gly Gln Ala Gln Arg Val Leu
35 40 45

Cys Pro Ser Asn Ser Ser Gln Arg Val Pro Leu Gln Ala Gln Lys Leu
50 55 60

Val Ser Ser His Lys Pro Val Gln Asn Gln Lys Gln Lys Gln Leu Gln
65 70 75 80

Ala Thr Ser Val Pro His Pro Val Ser Arg Pro Leu Asn Asn Thr Gln
85 90 95

Lys Ser Lys Gln Pro Leu Pro Ser Ala Pro Glu Asn Asn Pro Glu Glu
100 105 110

Glu Leu Ala Ser Lys Gln Lys Asn Glu Glu Ser Lys Lys Arg Gln Trp
115 120 125

Ala Leu Glu Asp Phe Glu Ile Gly Arg Pro Leu Gly Lys Gly Lys Phe
130 135 140

Gly Asn Val Tyr Leu Ala Arg Glu Lys Gln Ser Lys Phe Ile Leu Ala
145 150 155 160

Leu Lys Val Leu Phe Lys Ala Gln Leu Glu Lys Ala Gly Val Glu His
165 170 175

Gln Leu Arg Arg Glu Val Glu Ile Gln Ser His Leu Arg His Pro Asn
180 185 190

Ile Leu Arg Leu Tyr Gly Tyr Phe His Asp Ala Thr Arg Val Tyr Leu
195 200 205

Ile Leu Glu Tyr Ala Pro Leu Gly Thr Val Tyr Arg Glu Leu Gln Lys
210 215 220

Leu Ser Lys Phe Asp Glu Gln Arg Thr Ala Thr Tyr Ile Thr Glu Leu
225 230 235 240

Ala Asn Ala Leu Ser Tyr Cys His Ser Lys Arg Val Ile His Arg Asp
245 250 255

Ile Lys Pro Glu Asn Leu Leu Leu Gly Ser Ala Gly Glu Leu Lys Ile
260 265 270

Ala Asp Phe Gly Trp Ser Val His Ala Pro Ser Ser Arg Arg Thr Thr
275 280 285

Leu Cys Gly Thr Leu Asp Tyr Leu Pro Pro Glu Met Ile Glu Gly Arg

290 295 300
 Met His Asp Glu Lys Val Asp Leu Trp Ser Leu Gly Val Leu Cys Tyr
 305 310 315 320
 Glu Phe Leu Val Gly Lys Pro Pro Phe Glu Ala Asn Thr Tyr Gln Glu
 325 330 335
 Thr Tyr Lys Arg Ile Ser Arg Val Glu Phe Thr Phe Pro Asp Phe Val
 340 345 350
 Thr Glu Gly Ala Arg Asp Leu Ile Ser Arg Leu Leu Lys His Asn Pro
 355 360 365
 Ser Gln Arg Pro Met Leu Arg Glu Val Leu Glu His Pro Trp Ile Thr
 370 375 380
 Ala Asn Ser Ser Lys Pro Ser Asn Cys Gln Asn Lys Glu Ser Ala Ser
 385 390 395 400
 Lys Gln Ser

<210> 20
 <211> 521
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> A synthetic gene insert was assembled from synthetic
 oligonucleotides and/or PCR products.

<400> 20

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

Ser Leu Phe Arg Asn Leu Leu Tyr Glu Leu Ser Glu Gly Ile Asp Ser
 115 120 125

Glu Asn Leu Lys Asp Met Ile Phe Leu Leu Lys Asp Ser Leu Pro Lys
 130 135 140

Thr Glu Met Thr Ser Leu Ser Phe Leu Ala Phe Leu Glu Lys Gln Gly
 145 150 155 160

Lys Ile Asp Glu Asp Asn Leu Thr Cys Leu Glu Asp Leu Cys Lys Thr
 165 170 175

Val Val Pro Lys Leu Leu Arg Asn Ile Glu Lys Tyr Lys Arg Glu Lys
 180 185 190

Ala Ile Gln Ile Val Thr Pro Pro Val Asp Lys Glu Ala Glu Ser Tyr
 195 200 205

Gln Gly Glu Glu Glu Leu Val Ser Gln Thr Asp Val Lys Thr Phe Leu
 210 215 220

Glu Ala Leu Pro Gln Glu Ser Trp Gln Asn Lys His Ala Gly Ser Asn
 225 230 235 240

Gly Asn Arg Ala Thr Asn Gly Ala Pro Ser Leu Val Ser Arg Gly Met
 245 250 255

Gln Gly Ala Ser Ala Asn Thr Leu Asn Ser Glu Thr Ser Thr Lys Arg
 260 265 270

Ala Ala Val Tyr Arg Met Asn Arg Asn His Arg Gly Leu Cys Val Ile
 275 280 285

Val Asn Asn His Ser Phe Thr Ser Leu Lys Asp Arg Gln Gly Thr His
 290 295 300

Lys Asp Ala Glu Ile Leu Ser His Val Phe Gln Trp Leu Gly Phe Thr
 305 310 315 320

Val His Ile His Asn Asn Val Thr Lys Val Glu Met Glu Met Val Leu
 325 330 335

Gln Lys Gln Lys Cys Asn Pro Ala His Ala Asp Gly Asp Cys Phe Val
 340 345 350

Phe Cys Ile Leu Thr His Gly Arg Phe Gly Ala Val Tyr Ser Ser Asp
 355 360 365

Glu Ala Leu Ile Pro Ile Arg Glu Ile Met Ser His Phe Thr Ala Leu
 370 375 380

Gln Cys Pro Arg Leu Ala Glu Lys Pro Lys Leu Phe Phe Ile Gln Ala
385 390 395 400

Cys Gln Gly Glu Glu Ile Gln Pro Ser Val Ser Ile Glu Ala Asp Ala
405 410 415

Leu Asn Pro Glu Gln Ala Pro Thr Ser Leu Gln Asp Ser Ile Pro Ala
420 425 430

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

Phe Arg His Val Glu Glu Gly Ser Trp Tyr Ile Gln Ser Leu Cys Asn
450 455 460

His Leu Lys Lys Leu Val Pro Arg Met Leu Lys Phe Leu Glu Lys Thr
465 470 475 480

Met Glu Ile Arg Gly Arg Lys Arg Thr Val Trp Gly Ala Lys Gln Ile
485 490 495

Ser Ala Thr Ser Leu Pro Thr Ala Ile Ser Ala Gln Thr Pro Arg Pro
500 505 510

Pro Met Arg Arg Trp Ser Ser Val Ser
515 520

<210> 21
<211> 585
<212> PRT
<213> Artificial sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 21

Met Glu Lys Lys Trp Lys Tyr Cys Ala Val Tyr Tyr Ile Ile Gln Ile
1 5 10 15

His Phe Val Lys Gly Val Trp Glu Lys Thr Val Asn Thr Glu Glu Asn
20 25 30

Val Tyr Ala Thr Leu Gly Ser Asp Val Asn Leu Thr Cys Gln Thr Gln
35 40 45

Thr Val Gly Phe Phe Val Gln Met Gln Trp Ser Lys Val Thr Asn Lys
50 55 60

Ile Asp Leu Ile Ala Val Tyr His Pro Gln Tyr Gly Phe Tyr Cys Ala
65 70 75 80

Tyr Gly Arg Pro Cys Glu Ser Leu Val Thr Phe Thr Glu Thr Pro Glu
85 90 95

Asn Gly Ser Lys Trp Thr Leu His Leu Arg Asn Met Ser Cys Ser Val
 100 105 110
 Ser Gly Arg Tyr Glu Cys Met Leu Val Leu Tyr Pro Glu Gly Ile Gln
 115 120 125
 Thr Lys Ile Tyr Asn Leu Leu Ile Gln Thr His Val Thr Ala Asp Glu
 130 135 140
 Trp Asn Ser Asn His Thr Ile Glu Ile Glu Ile Asn Gln Thr Leu Glu
 145 150 155 160
 Ile Pro Cys Phe Gln Asn Ser Ser Ser Lys Ile Ser Ser Glu Phe Thr
 165 170 175
 Tyr Ala Trp Ser Val Glu Asn Ser Ser Thr Asp Ser Trp Val Leu Leu
 180 185 190
 Ser Lys Gly Ile Lys Glu Asp Asn Gly Thr Gln Glu Thr Leu Ile Ser
 195 200 205
 Gln Asn His Leu Ile Ser Asn Ser Thr Leu Leu Lys Asp Arg Val Lys
 210 215 220
 Leu Gly Thr Asp Tyr Arg Leu His Leu Ser Pro Val Gln Ile Phe Asp
 225 230 235 240
 Asp Gly Arg Lys Phe Ser Cys His Ile Arg Val Gly Pro Asn Lys Ile
 245 250 255
 Leu Arg Ser Ser Thr Thr Val Lys Val Phe Ala Lys Pro Glu Ile Pro
 260 265 270
 Val Ile Val Glu Asn Asn Ser Thr Asp Val Leu Val Glu Arg Arg Phe
 275 280 285
 Thr Cys Leu Leu Lys Asn Val Phe Pro Lys Ala Asn Ile Thr Trp Phe
 290 295 300
 Ile Asp Gly Ser Phe Leu His Asp Glu Lys Glu Gly Ile Tyr Ile Thr
 305 310 315 320
 Asn Glu Glu Arg Lys Gly Lys Asp Gly Phe Leu Glu Leu Lys Ser Val
 325 330 335
 Leu Thr Arg Val His Ser Asn Lys Pro Ala Gln Ser Asp Asn Leu Thr
 340 345 350
 Ile Trp Cys Met Ala Leu Ser Pro Val Pro Gly Asn Lys Val Trp Asn
 355 360 365

Ile Ser Ser Glu Lys Ile Thr Phe Leu Leu Gly Ser Glu Ile Ser Ser
370 375 380

Thr Asp Pro Pro Leu Ser Val Thr Glu Ser Thr Leu Asp Thr Gln Pro
385 390 395 400

Ser Pro Ala Ser Ser Val Ser Pro Ala Arg Tyr Pro Ala Thr Ser Ser
405 410 415

Val Thr Leu Val Asp Val Ser Ala Leu Arg Pro Asn Thr Thr Pro Gln
420 425 430

Pro Ser Asn Ser Ser Met Thr Thr Arg Gly Phe Asn Tyr Pro Trp Thr
435 440 445

Ser Ser Gly Thr Asp Thr Lys Lys Ser Val Ser Arg Ile Pro Ser Glu
450 455 460

Thr Tyr Ser Ser Ser Pro Ser Gly Ala Gly Ser Thr Leu His Asp Asn
465 470 475 480

Val Phe Thr Ser Thr Ala Arg Ala Phe Ser Glu Val Pro Thr Thr Ala
485 490 495

Asn Gly Ser Thr Lys Thr Asn His Val His Ile Thr Gly Ile Val Val
500 505 510

Asn Lys Pro Lys Asp Gly Met Ser Trp Pro Val Ile Val Ala Ala Leu
515 520 525

Leu Phe Cys Cys Met Ile Leu Phe Gly Leu Gly Val Arg Lys Trp Cys
530 535 540

Gln Tyr Gln Lys Glu Ile Met Glu Arg Pro Pro Phe Lys Pro Pro
545 550 555 560

Pro Pro Pro Ile Lys Tyr Thr Cys Ile Gln Glu Pro Asn Glu Ser Asp
565 570 575

Leu Pro Tyr His Glu Met Glu Thr Leu
580 585

<210> 22
<211> 380
<212> PRT
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 22

Met Gly Ile Gln Gly Leu Ala Lys Leu Ile Ala Asp Val Ala Pro Ser

1	5	10	15
Ala Ile Arg	Glu Asn Asp Ile Lys	Ser Tyr Phe Gly Arg	Lys Val Ala
	20	25	30
Ile Asp Ala	Ser Met Ser Ile Tyr	Gln Phe Leu Ile	Ala Val Arg Gln
	35	40	45
Gly Gly Asp	Val Leu Gln Asn Glu Glu Gly Glu	Thr Thr Ser His Leu	
	50	55	60
Met Gly Met	Phe Tyr Arg Thr Ile Arg Met	Met Glu Asn Gly Ile	Lys
	65	70	75
Pro Val Tyr	Val Phe Asp Gly Lys Pro	Pro Gln Leu Lys Ser	Gly Glu
	85	90	95
Leu Ala Lys	Arg Ser Glu Arg Arg Ala	Glu Ala Glu Lys	Gln Leu Gln
	100	105	110
Gln Ala Gln	Ala Ala Gly Ala Glu Gln Glu Val	Glu Lys Phe Thr Lys	
	115	120	125
Arg Leu Val	Lys Val Thr Lys Gln His Asn Asp	Glu Cys Lys His Leu	
	130	135	140
Leu Ser Leu	Met Gly Ile Pro Tyr Leu Asp	Ala Pro Ser Glu Ala Glu	
	145	150	155
Ala Ser Cys	Ala Ala Leu Val Lys Ala	Gly Lys Val Tyr Ala	Ala Ala
	165	170	175
Thr Glu Asp	Met Asp Cys Leu Thr Phe	Gly Ser Pro Val Leu Met Arg	
	180	185	190
His Leu Thr	Ala Ser Glu Ala Lys Lys Leu Pro	Ile Gln Glu Phe His	
	195	200	205
Leu Ser Arg	Ile Leu Gln Glu Leu Gly Leu Asn	Gln Glu Gln Phe Val	
	210	215	220
Asp Leu Cys	Ile Leu Leu Gly Ser Asp Tyr	Cys Glu Ser Ile Arg	Gly
	225	230	235
Ile Gly Pro	Lys Arg Ala Val Asp Leu	Ile Gln Lys His Lys	Ser Ile
	245	250	255
Glu Glu Ile	Val Arg Arg Leu Asp Pro	Asn Lys Tyr Pro Val	Pro Glu
	260	265	270
Asn Trp Leu	His Lys Glu Ala His Gln Leu Phe Leu	Glu Pro Glu Val	
	275	280	285

Leu Asp Pro Glu Ser Val Glu Leu Lys Trp Ser Glu Pro Asn Glu Glu
290 295 300

Glu Leu Ile Lys Phe Met Cys Gly Glu Lys Gln Phe Ser Glu Glu Arg
305 310 315 320

Ile Arg Ser Gly Val Lys Arg Leu Ser Lys Ser Arg Gln Gly Ser Thr
325 330 335

Gln Gly Arg Leu Asp Asp Phe Phe Lys Val Thr Gly Ser Leu Ser Ser
340 345 350

Ala Lys Arg Lys Glu Pro Glu Pro Lys Gly Ser Thr Lys Lys Lys Ala
355 360 365

Lys Thr Gly Ala Ala Gly Lys Phe Lys Arg Gly Lys
370 375 380

<210> 23

<211> 223

<212> PRT

<213> Artificial Sequence

<220>

<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 23

Met Ala Ala Ala Val Pro Gln Arg Ala Trp Thr Val Glu Gln Leu Arg
1 5 10 15

Ser Glu Gln Leu Pro Lys Lys Asp Ile Ile Lys Phe Leu Gln Glu His
20 25 30

Gly Ser Asp Ser Phe Leu Ala Glu His Lys Leu Leu Gly Asn Ile Lys
35 40 45

Asn Val Ala Lys Thr Ala Asn Lys Asp His Leu Val Thr Ala Tyr Asn
50 55 60

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

Val Ser Glu Gln Val Lys Asn Val Lys Leu Asn Glu Asp Lys Pro Lys
85 90 95

Glu Thr Lys Ser Glu Glu Thr Leu Asp Glu Gly Pro Pro Lys Tyr Thr
100 105 110

Lys Ser Val Leu Lys Lys Gly Asp Lys Thr Asn Phe Pro Lys Lys Gly
115 120 125

Asp Val Val His Cys Trp Tyr Thr Gly Thr Leu Gln Asp Gly Thr Val
130 135 140

Phe Asp Thr Asn Ile Gln Thr Ser Ala Lys Lys Lys Lys Asn Ala Lys
145 150 155 160

Pro Leu Ser Phe Lys Val Gly Val Gly Lys Val Ile Arg Gly Trp Asp
165 170 175

Glu Ala Leu Leu Thr Met Ser Lys Gly Glu Lys Ala Arg Leu Glu Ile
180 185 190

Glu Pro Glu Trp Ala Tyr Gly Lys Lys Gly Gln Pro Asp Ala Lys Ile
195 200 205

Pro Pro Asn Ala Lys Leu Thr Phe Glu Val Glu Leu Val Asp Ile
210 215 220

<210> 24
<211> 1086
<212> PRT
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 24

Met Gly Asn Ala Gly Ser Met Asp Ser Gln Gln Thr Asp Phe Arg Ala
1 5 10 15

His Asn Val Pro Leu Lys Leu Pro Met Pro Glu Pro Gly Glu Leu Glu
20 25 30

Glu Arg Phe Ala Ile Val Leu Asn Ala Met Asn Leu Pro Pro Asp Lys
35 40 45

Ala Arg Leu Leu Arg Gln Tyr Asp Asn Glu Lys Lys Trp Glu Leu Ile
50 55 60

Cys Asp Gln Glu Arg Phe Gln Val Lys Asn Pro Pro His Thr Tyr Ile
65 70 75 80

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

Arg Arg Arg Val Gln Glu Ser Thr Gln Val Leu Arg Glu Leu Glu Ile
100 105 110

Ser Leu Arg Thr Asn His Ile Gly Trp Val Arg Glu Phe Leu Asn Glu
115 120 125

Glu Asn Lys Gly Leu Asp Val Leu Val Glu Tyr Leu Ser Phe Ala Gln
130 135 140

Tyr Ala Val Thr Phe Asp Phe Glu Ser Val Glu Ser Thr Val Glu Ser
 145 150 155 160
 Ser Val Asp Lys Ser Lys Pro Trp Ser Arg Ser Ile Glu Asp Leu His
 165 170 175
 Arg Gly Ser Asn Leu Pro Ser Pro Val Gly Asn Ser Val Ser Arg Ser
 180 185 190
 Gly Arg His Ser Ala Leu Arg Tyr Asn Thr Leu Pro Ser Arg Arg Thr
 195 200 205
 Leu Lys Asn Ser Arg Leu Val Ser Lys Lys Asp Asp Val His Val Cys
 210 215 220
 Ile Met Cys Leu Arg Ala Ile Met Asn Tyr Gln Tyr Gly Phe Asn Met
 225 230 235 240
 Val Met Ser His Pro His Ala Val Asn Glu Ile Ala Leu Ser Leu Asn
 245 250 255
 Asn Lys Asn Pro Arg Thr Lys Ala Leu Val Leu Glu Leu Leu Ala Ala
 260 265 270
 Val Cys Leu Val Arg Gly Gly His Glu Ile Ile Leu Ser Ala Phe Asp
 275 280 285
 Asn Phe Lys Glu Val Cys Gly Glu Lys Gln Arg Phe Glu Lys Leu Met
 290 295 300
 Glu His Phe Arg Asn Glu Asp Asn Asn Ile Asp Phe Met Val Ala Ser
 305 310 315 320
 Met Gln Phe Ile Asn Ile Val Val His Ser Val Glu Asp Met Asn Phe
 325 330 335
 Arg Val His Leu Gln Tyr Glu Phe Thr Lys Leu Gly Leu Asp Glu Tyr
 340 345 350
 Leu Asp Lys Leu Lys His Thr Glu Ser Asp Lys Leu Gln Val Gln Ile
 355 360 365
 Gln Ala Tyr Leu Asp Asn Val Phe Asp Val Gly Ala Leu Leu Glu Asp
 370 375 380
 Ala Glu Thr Lys Asn Ala Ala Leu Glu Arg Val Glu Glu Leu Glu Glu
 385 390 395 400
 Asn Ile Ser His Leu Ser Glu Lys Leu Gln Asp Thr Glu Asn Glu Ala
 405 410 415

Met Ser Lys Ile Val Glu Leu Glu Lys Gln Leu Met Gln Arg Asn Lys
 420 425 430

Glu Leu Asp Val Val Arg Glu Ile Tyr Lys Asp Ala Asn Thr Gln Val
 435 440 445

His Thr Leu Arg Lys Met Val Lys Glu Lys Glu Glu Ala Ile Gln Arg
 450 455 460

Gln Ser Thr Leu Glu Lys Lys Ile His Glu Leu Glu Lys Gln Gly Thr
 465 470 475 480

Ile Lys Ile Gln Lys Lys Gly Asp Gly Asp Ile Ala Ile Leu Pro Val
 485 490 495

Val Ala Ser Gly Thr Leu Ser Met Gly Ser Glu Val Val Ala Gly Asn
 500 505 510

Ser Val Gly Pro Thr Met Gly Ala Ala Ser Ser Gly Pro Leu Pro Pro
 515 520 525

Pro Pro Pro Pro Leu Pro Pro Ser Ser Asp Thr Pro Glu Thr Val Gln
 530 535 540

Asn Gly Pro Val Thr Pro Pro Met Pro Pro Pro Pro Pro Pro Pro
 545 550 555 560

Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro Leu Pro Gly
 565 570 575

Pro Ala Ala Glu Thr Val Pro Ala Pro Pro Leu Ala Pro Pro Leu Pro
 580 585 590

Ser Ala Pro Pro Leu Pro Gly Thr Ser Ser Pro Thr Val Val Phe Asn
 595 600 605

Ser Gly Leu Ala Ala Val Lys Ile Lys Lys Pro Ile Lys Thr Lys Phe
 610 615 620

Arg Met Pro Val Phe Asn Trp Val Ala Leu Lys Pro Asn Gln Ile Asn
 625 630 635 640

Gly Thr Val Phe Asn Glu Ile Asp Asp Glu Arg Ile Leu Glu Asp Leu
 645 650 655

Asn Val Asp Glu Phe Glu Glu Ile Phe Lys Thr Lys Ala Gln Gly Pro
 660 665 670

Ala Ile Asp Leu Ser Ser Ser Lys Gln Lys Ile Pro Gln Lys Gly Ser
 675 680 685

Asn Lys Val Thr Leu Leu Glu Ala Asn Arg Ala Lys Asn Leu Ala Ile
690 695 700

Thr Leu Arg Lys Ala Gly Lys Thr Ala Asp Glu Ile Cys Lys Ala Ile
705 710 715 720

His Val Phe Asp Leu Lys Thr Leu Pro Val Asp Phe Val Glu Cys Leu
725 730 735

Met Arg Phe Leu Pro Thr Glu Asn Glu Val Lys Val Leu Arg Leu Tyr
740 745 750

Glu Arg Glu Arg Lys Pro Leu Glu Asn Leu Ser Asp Glu Asp Arg Phe
755 760 765

Met Met Gln Phe Ser Lys Ile Glu Arg Leu Met Gln Lys Met Thr Ile
770 775 780

Met Ala Phe Ile Gly Asn Phe Ala Glu Ser Ile Gln Met Leu Thr Pro
785 790 795 800

Gln Leu His Ala Ile Ile Ala Ala Ser Val Ser Ile Lys Ser Ser Gln
805 810 815

Lys Leu Lys Lys Ile Leu Glu Ile Ile Leu Ala Leu Gly Asn Tyr Met
820 825 830

Asn Ser Ser Lys Arg Gly Ala Val Tyr Gly Phe Lys Leu Gln Ser Leu
835 840 845

Asp Leu Leu Leu Asp Thr Lys Ser Thr Asp Arg Lys Gln Thr Leu Leu
850 855 860

His Tyr Ile Ser Asn Val Val Lys Glu Lys Tyr His Gln Val Ser Leu
865 870 875 880

Phe Tyr Asn Glu Leu His Tyr Val Glu Lys Ala Ala Ala Val Ser Leu
885 890 895

Glu Asn Val Leu Leu Asp Val Lys Glu Leu Gln Arg Gly Met Asp Leu
900 905 910

Thr Lys Arg Glu Tyr Thr Met His Asp His Asn Thr Leu Leu Lys Glu
915 920 925

Phe Ile Leu Asn Asn Glu Gly Lys Leu Lys Lys Leu Gln Asp Asp Ala
930 935 940

Lys Ile Ala Gln Asp Ala Phe Asp Asp Val Val Lys Tyr Phe Gly Glu
945 950 955 960

Asn Pro Lys Thr Thr Pro Pro Ser Val Phe Phe Pro Val Phe Val Arg

Ile Asp Arg Leu Asp Gly Ala His Ala Pro Glu Leu Thr Lys Lys Val
100 105 110

Gln Arg His Ala Ser Ser Gly Ser Phe Leu Pro Ser Ala Asn Glu His
115 120 125

Leu Lys Glu Asp Leu Asn Leu Arg Leu Lys Lys Leu Thr His Ala Ala
130 135 140

Pro Cys Met Leu Phe Met Lys Gly Thr Pro Gln Glu Pro Arg Cys Gly
145 150 155 160

Phe Ser Lys Gln Met Val Glu Ile Leu His Lys His Asn Ile Gln Phe
165 170 175

Ser Ser Phe Asp Ile Phe Ser Asp Glu Glu Val Arg Gln Gly Leu Lys
180 185 190

Ala Tyr Ser Ser Trp Pro Thr Tyr Pro Gln Leu Tyr Val Ser Gly Glu
195 200 205

Leu Ile Gly Gly Leu Asp Ile Ile Lys Glu Leu Glu Ala Ser Glu Glu
210 215 220

Leu Asp Thr Ile Cys Pro Lys Ala Pro Lys Leu Glu Glu Arg Leu Lys
225 230 235 240

Val Leu Thr Asn Lys Ala Ser Val Met Leu Phe Met Lys Gly Asn Lys
245 250 255

Gln Glu Ala Lys Cys Gly Phe Ser Lys Gln Ile Leu Glu Ile Leu Asn
260 265 270

Ser Thr Gly Val Glu Tyr Glu Thr Phe Asp Ile Leu Glu Asp Glu Glu
275 280 285

Val Arg Gln Gly Leu Lys Ala Tyr Ser Asn Trp Pro Thr Tyr Pro Gln
290 295 300

Leu Tyr Val Lys Gly Glu Leu Val Gly Gly Leu Asp Ile Val Lys Glu
305 310 315 320

Leu Lys Glu Asn Gly Glu Leu Leu Pro Ile Leu Arg Gly Glu Asn
325 330 335

<210> 26
<211> 966
<212> PRT
<213> Artificial sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 26

Met Ala Asn Phe Gln Glu His Leu Ser Cys Ser Ser Ser Pro His Leu
1 5 10 15

Pro Phe Ser Glu Ser Lys Thr Phe Asn Gly Leu Gln Asp Glu Leu Thr
20 25 30

Ala Met Gly Asn His Pro Ser Pro Lys Leu Leu Glu Asp Gln Gln Glu
35 40 45

Lys Gly Met Val Arg Thr Glu Leu Ile Glu Ser Val His Ser Pro Val
50 55 60

Thr Thr Thr Val Leu Thr Ser Val Ser Glu Asp Ser Arg Asp Gln Phe
65 70 75 80

Glu Asn Ser Val Leu Gln Leu Arg Glu His Asp Glu Ser Glu Thr Ala
85 90 95

Val Ser Gln Gly Asn Ser Asn Thr Val Asp Gly Glu Ser Thr Ser Gly
100 105 110

Thr Glu Asp Ile Lys Ile Gln Phe Ser Arg Ser Gly Ser Gly Ser Gly
115 120 125

Gly Phe Leu Glu Gly Leu Phe Gly Cys Leu Arg Pro Val Trp Asn Ile
130 135 140

Ile Gly Lys Ala Tyr Ser Thr Asp Tyr Lys Leu Gln Gln Gln Asp Thr
145 150 155 160

Trp Glu Val Pro Phe Glu Glu Ile Ser Glu Leu Gln Trp Leu Gly Ser
165 170 175

Gly Ala Gln Gly Ala Val Phe Leu Gly Lys Phe Arg Ala Glu Glu Val
180 185 190

Ala Ile Lys Lys Val Arg Glu Gln Asn Glu Thr Asp Ile Lys His Leu
195 200 205

Arg Lys Leu Lys His Pro Asn Ile Ile Ala Phe Lys Gly Val Cys Thr
210 215 220

Gln Ala Pro Cys Tyr Cys Ile Ile Met Glu Tyr Cys Ala His Gly Gln
225 230 235 240

Leu Tyr Glu Val Leu Arg Ala Gly Arg Lys Ile Thr Pro Arg Leu Leu
245 250 255

Val Asp Trp Ser Thr Gly Ile Ala Ser Gly Met Asn Tyr Leu His Leu
260 265 270

His Lys Ile Ile His Arg Asp Leu Lys Ser Pro Asn Val Leu Val Thr
 275 280 285
 His Thr Asp Ala Val Lys Ile Ser Asp Phe Gly Thr Ser Lys Glu Leu
 290 295 300
 Ser Asp Lys Ser Thr Lys Met Ser Phe Ala Gly Thr Val Ala Trp Met
 305 310 315 320
 Ala Pro Glu Val Ile Arg Asn Glu Pro Val Ser Glu Lys Val Asp Ile
 325 330 335
 Trp Ser Phe Gly Val Val Leu Trp Glu Leu Leu Thr Gly Glu Ile Pro
 340 345 350
 Tyr Lys Asp Val Asp Ser Ser Ala Ile Ile Trp Gly Val Gly Ser Asn
 355 360 365
 Ser Leu His Leu Pro Val Pro Ser Thr Cys Pro Asp Gly Phe Lys Ile
 370 375 380
 Leu Met Lys Gln Thr Trp Gln Ser Lys Pro Arg Asn Arg Pro Ser Phe
 385 390 395 400
 Arg Gln Thr Leu Met His Leu Asp Ile Ala Ser Ala Asp Val Leu Ala
 405 410 415
 Thr Pro Gln Glu Thr Tyr Phe Lys Ser Gln Ala Glu Trp Arg Glu Glu
 420 425 430
 Val Lys Lys His Phe Glu Lys Ile Lys Ser Glu Gly Thr Cys Ile His
 435 440 445
 Arg Leu Asp Glu Glu Leu Ile Arg Arg Arg Arg Glu Glu Leu Arg His
 450 455 460
 Ala Leu Asp Ile Arg Glu His Tyr Glu Arg Lys Leu Glu Arg Ala Asn
 465 470 475 480
 Asn Leu Tyr Met Glu Leu Ser Ala Ile Met Leu Gln Leu Glu Met Arg
 485 490 495
 Glu Lys Glu Leu Ile Lys Arg Glu Gln Ala Val Glu Lys Lys Tyr Pro
 500 505 510
 Gly Thr Tyr Lys Arg His Pro Val Arg Pro Ile Ile His Pro Asn Ala
 515 520 525
 Met Glu Lys Leu Met Lys Arg Lys Gly Val Pro His Lys Ser Gly Met
 530 535 540

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

Glu Val Ala Pro Thr Ala Ser Pro Leu Ser Gly Ser Pro Lys Met Ser
 565 570 575

Thr Ser Ser Ser Lys Ser Arg Tyr Arg Ser Lys Pro Arg His Arg Arg
 580 585 590

Gly Asn Ser Arg Gly Ser His Ser Asp Phe Ala Ala Ile Leu Lys Asn
 595 600 605

Gln Pro Ala Gln Glu Asn Ser Pro His Pro Thr Tyr Leu His Gln Ala
 610 615 620

Gln Ser Gln Tyr Pro Ser Leu His His His Asn Ser Leu Gln Gln Gln
 625 630 635 640

Tyr Gln Gln Pro Pro Pro Ala Met Ser Gln Ser His His Pro Arg Leu
 645 650 655

Asn Met His Gly Gln Asp Ile Ala Thr Cys Ala Asn Asn Leu Arg Tyr
 660 665 670

Phe Gly Pro Ala Ala Ala Leu Arg Ser Pro Leu Ser Asn His Ala Gln
 675 680 685

Arg Gln Leu Pro Gly Ser Ser Pro Asp Leu Ile Ser Thr Ala Met Ala
 690 695 700

Ala Asp Cys Trp Arg Ser Ser Glu Pro Asp Lys Gly Gln Ala Gly Pro
 705 710 715 720

Trp Gly Cys Cys Gln Ala Asp Ala Tyr Asp Pro Cys Leu Gln Cys Arg
 725 730 735

Pro Glu Gln Tyr Gly Ser Leu Asp Ile Pro Ser Ala Glu Pro Val Gly
 740 745 750

Arg Ser Pro Asp Leu Ser Lys Ser Pro Ala His Asn Pro Leu Leu Glu
 755 760 765

Asn Ala Gln Ser Ser Glu Lys Thr Glu Glu Asn Glu Phe Ser Gly Cys
 770 775 780

Arg Ser Glu Ser Ser Leu Gly Thr Ser His Leu Gly Thr Pro Pro Ala
 785 790 795 800

Leu Pro Arg Lys Thr Arg Pro Leu Gln Lys Ser Gly Asp Asp Ser Ser
 805 810 815

Glu Glu Glu Glu Gly Glu Val Asp Ser Glu Val Glu Phe Pro Arg Arg
820 825 830

Gln Arg Pro His Arg Cys Ile Ser Ser Cys Gln Ser Tyr Ser Thr Phe
835 840 845

Ser Ser Glu Asn Phe Ser Val Ser Asp Gly Glu Glu Gly Asn Thr Ser
850 855 860

Asp His Ser Asn Ser Pro Asp Glu Leu Ala Asp Lys Leu Glu Asp Arg
865 870 875 880

Leu Ala Glu Lys Leu Asp Asp Leu Leu Ser Gln Thr Pro Glu Ile Pro
885 890 895

Ile Asp Ile Ser Ser His Ser Asp Gly Leu Ser Asp Lys Glu Cys Ala
900 905 910

Val Arg Arg Val Lys Thr Gln Met Ser Leu Gly Lys Leu Cys Val Glu
915 920 925

Glu Arg Gly Tyr Glu Asn Pro Met Gln Phe Glu Glu Ser Asp Cys Asp
930 935 940

Ser Ser Asp Gly Glu Cys Ser Asp Ala Thr Val Arg Thr Asn Lys His
945 950 955 960

Tyr Ser Ser Ala Thr Trp
965

<210> 27
<211> 1152
<212> PRT
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 27

Met Ala Asp Leu Ser Leu Ala Asp Ala Leu Thr Glu Pro Ser Pro Asp
1 5 10 15

Ile Glu Gly Glu Ile Lys Arg Asp Phe Ile Ala Thr Leu Glu Ala Glu
20 25 30

Ala Phe Asp Asp Val Val Gly Glu Thr Val Gly Lys Thr Asp Tyr Ile
35 40 45

Pro Leu Leu Asp Val Asp Glu Lys Thr Gly Asn Ser Glu Ser Lys Lys
50 55 60

Lys Pro Cys Ser Glu Thr Ser Gln Ile Glu Asp Thr Pro Ser Ser Lys
65 70 75 80

Pro Thr Leu Leu Ala Asn Gly Gly His Gly Val Glu Gly Ser Asp Thr
 85 90 95
 Thr Gly Ser Pro Thr Glu Phe Leu Glu Glu Lys Met Ala Tyr Gln Glu
 100 105 110
 Tyr Pro Asn Ser Gln Asn Trp Pro Glu Asp Thr Asn Phe Cys Phe Gln
 115 120 125
 Pro Glu Gln Val Val Asp Pro Ile Gln Thr Asp Pro Phe Lys Met Tyr
 130 135 140
 His Asp Asp Asp Leu Ala Asp Leu Val Phe Pro Ser Ser Ala Thr Ala
 145 150 155 160
 Asp Thr Ser Ile Phe Ala Gly Gln Asn Asp Pro Leu Lys Asp Ser Tyr
 165 170 175
 Gly Met Ser Pro Cys Asn Thr Ala Val Val Pro Gln Gly Trp Ser Val
 180 185 190
 Glu Ala Leu Asn Ser Pro His Ser Glu Ser Phe Val Ser Pro Glu Ala
 195 200 205
 Val Ala Glu Pro Pro Gln Pro Thr Ala Val Pro Leu Glu Leu Ala Lys
 210 215 220
 Glu Ile Glu Met Ala Ser Glu Glu Arg Pro Pro Ala Gln Ala Leu Glu
 225 230 235 240
 Ile Met Met Gly Leu Lys Thr Thr Asp Met Ala Pro Ser Lys Glu Thr
 245 250 255
 Glu Met Ala Leu Ala Lys Asp Met Ala Leu Ala Thr Lys Thr Glu Val
 260 265 270
 Ala Leu Ala Lys Asp Met Glu Ser Pro Thr Lys Leu Asp Val Thr Leu
 275 280 285
 Ala Lys Asp Met Gln Pro Ser Met Glu Ser Asp Met Ala Leu Val Lys
 290 295 300
 Asp Met Glu Leu Pro Thr Glu Lys Glu Val Ala Leu Val Lys Asp Val
 305 310 315 320
 Arg Trp Pro Thr Glu Thr Asp Val Ser Ser Ala Lys Asn Val Val Leu
 325 330 335
 Pro Thr Glu Thr Glu Val Ala Pro Ala Lys Asp Val Thr Leu Leu Lys
 340 345 350

Glu Thr Glu Arg Ala Ser Pro Ile Lys Met Asp Leu Ala Pro Ser Lys
 355 360 365

Asp Met Gly Pro Pro Lys Glu Asn Lys Lys Glu Thr Glu Arg Ala Ser
 370 375 380

Pro Ile Lys Met Asp Leu Ala Pro Ser Lys Asp Met Gly Pro Pro Lys
 385 390 395 400

Glu Asn Lys Ile Val Pro Ala Lys Asp Leu Val Leu Leu Ser Glu Ile
 405 410 415

Glu Val Ala Gln Ala Asn Asp Ile Ile Ser Ser Thr Glu Ile Ser Ser
 420 425 430

Ala Glu Lys Val Ala Leu Ser Ser Glu Thr Glu Val Ala Leu Ala Arg
 435 440 445

Asp Met Thr Leu Pro Pro Glu Thr Asn Val Ile Leu Thr Lys Asp Lys
 450 455 460

Ala Leu Pro Leu Glu Ala Glu Val Ala Pro Val Lys Asp Met Ala Gln
 465 470 475 480

Leu Pro Glu Thr Glu Ile Ala Pro Ala Lys Asp Val Ala Pro Ser Thr
 485 490 495

Val Lys Glu Val Gly Leu Leu Lys Asp Met Ser Pro Leu Ser Glu Thr
 500 505 510

Glu Met Ala Leu Gly Lys Asp Val Thr Pro Pro Pro Glu Thr Glu Val
 515 520 525

Val Leu Ile Lys Asn Val Cys Leu Pro Pro Glu Met Glu Val Ala Leu
 530 535 540

Thr Glu Asp Gln Val Pro Ala Leu Lys Thr Glu Ala Pro Leu Ala Lys
 545 550 555 560

Asp Gly Val Leu Thr Leu Ala Asn Asn Val Thr Pro Ala Lys Asp Val
 565 570 575

Pro Pro Leu Ser Glu Thr Glu Ala Thr Pro Val Pro Ile Lys Asp Met
 580 585 590

Glu Ile Ala Gln Thr Gln Lys Gly Ile Ser Glu Asp Ser His Leu Glu
 595 600 605

Ser Leu Gln Asp Val Gly Gln Ser Ala Ala Pro Thr Phe Met Ile Ser
 610 615 620

Pro Glu Thr Val Thr Gly Thr Gly Lys Lys Cys Ser Leu Pro Ala Glu
 625 630 635 640
 Glu Asp Ser Val Leu Glu Lys Leu Gly Glu Arg Lys Pro Cys Asn Ser
 645 650 655
 Gln Pro Ser Glu Leu Ser Ser Glu Thr Ser Gly Ile Ala Arg Pro Glu
 660 665 670
 Glu Gly Arg Pro Val Val Ser Gly Thr Gly Asn Asp Ile Thr Thr Pro
 675 680 685
 Pro Asn Lys Glu Leu Pro Pro Ser Pro Glu Lys Lys Thr Lys Pro Leu
 690 695 700
 Ala Thr Thr Gln Pro Ala Lys Thr Ser Thr Ser Lys Ala Lys Thr Gln
 705 710 715 720
 Pro Thr Ser Leu Pro Lys Gln Pro Ala Pro Thr Thr Ile Gly Gly Leu
 725 730 735
 Asn Lys Lys Pro Met Ser Leu Ala Ser Gly Leu Val Pro Ala Ala Pro
 740 745 750
 Pro Lys Arg Pro Ala Val Ala Ser Ala Arg Pro Ser Ile Leu Pro Ser
 755 760 765
 Lys Asp Val Lys Pro Lys Pro Ile Ala Asp Ala Lys Ala Pro Glu Lys
 770 775 780
 Arg Ala Ser Pro Ser Lys Pro Ala Ser Ala Pro Ala Ser Arg Ser Gly
 785 790 795 800
 Ser Lys Ser Thr Gln Thr Val Ala Lys Thr Thr Thr Ala Ala Ala Val
 805 810 815
 Ala Ser Thr Gly Pro Ser Ser Arg Ser Pro Ser Thr Leu Leu Pro Lys
 820 825 830
 Lys Pro Thr Ala Ile Lys Thr Glu Gly Lys Pro Ala Glu Val Lys Lys
 835 840 845
 Met Thr Ala Lys Ser Val Pro Ala Asp Leu Ser Arg Pro Lys Ser Thr
 850 855 860
 Ser Thr Ser Ser Met Lys Lys Thr Thr Thr Leu Ser Gly Thr Ala Pro
 865 870 875 880
 Ala Ala Gly Val Val Pro Ser Arg Val Lys Ala Thr Pro Met Pro Ser
 885 890 895
 Arg Pro Ser Thr Thr Pro Phe Ile Asp Lys Lys Pro Thr Ser Ala Lys

	900		905		910										
Pro	Ser	Ser	Thr	Thr	Pro	Arg	Leu	Ser	Arg	Leu	Ala	Thr	Asn	Thr	Ser
		915					920					925			
Ala	Pro	Asp	Leu	Lys	Asn	Val	Arg	Ser	Lys	Val	Gly	Ser	Thr	Glu	Asn
	930					935					940				
Ile	Lys	His	Gln	Pro	Gly	Gly	Gly	Arg	Ala	Lys	Val	Glu	Lys	Lys	Thr
945					950					955					960
Glu	Ala	Ala	Ala	Thr	Thr	Arg	Lys	Pro	Glu	Ser	Asn	Ala	Val	Thr	Lys
				965					970					975	
Thr	Ala	Gly	Pro	Ile	Ala	Ser	Ala	Gln	Lys	Gln	Pro	Ala	Gly	Lys	Val
			980					985					990		
Gln	Ile	Val	Ser	Lys	Lys	Val	Ser	Tyr	Ser	His	Ile	Gln	Ser	Lys	Cys
		995					1000					1005			
Gly	Ser	Lys	Asp	Asn	Ile	Lys	His	Val	Pro	Gly	Gly	Gly	Asn	Val	
	1010					1015					1020				
Gln	Ile	Gln	Asn	Lys	Lys	Val	Asp	Ile	Ser	Lys	Val	Ser	Ser	Lys	
	1025					1030					1035				
Cys	Gly	Ser	Lys	Ala	Asn	Ile	Lys	His	Lys	Pro	Gly	Gly	Gly	Asp	
	1040					1045					1050				
Val	Lys	Ile	Glu	Ser	Gln	Lys	Leu	Asn	Phe	Lys	Glu	Lys	Ala	Gln	
	1055					1060					1065				
Ala	Lys	Val	Gly	Ser	Leu	Asp	Asn	Val	Gly	His	Leu	Pro	Ala	Gly	
	1070					1075					1080				
Gly	Ala	Val	Lys	Thr	Glu	Gly	Gly	Gly	Ser	Glu	Ala	Pro	Leu	Cys	
	1085					1090					1095				
Pro	Gly	Pro	Pro	Ala	Gly	Glu	Glu	Pro	Ala	Ile	Ser	Glu	Ala	Ala	
	1100					1105					1110				
Pro	Glu	Ala	Gly	Ala	Pro	Thr	Ser	Ala	Ser	Gly	Leu	Asn	Gly	His	
	1115					1120					1125				
Pro	Thr	Leu	Ser	Gly	Gly	Gly	Asp	Gln	Arg	Glu	Ala	Gln	Thr	Leu	
	1130					1135					1140				
Asp	Ser	Gln	Ile	Gln	Glu	Thr	Ser	Ile							
	1145					1150									

<210> 28
<211> 401

<212> PRT
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic oligonucleotides and/or PCR products.

<400> 28

Met Arg Arg Ala Pro Ala Ala Glu Arg Leu Leu Glu Leu Gly Phe Pro
1 5 10 15

Pro Arg Cys Gly Arg Gln Glu Pro Pro Phe Pro Leu Gly Val Thr Arg
20 25 30

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

Val Pro Phe Ser Glu Arg Ser Gln Glu Asp Gly Arg Gly Pro Ala Ala
50 55 60

Arg Ser Ser Gly Thr Leu Trp Arg Ile Arg Thr Arg Leu Ser Leu Cys
65 70 75 80

Arg Asp Pro Glu Pro Pro Pro Pro Leu Cys Leu Leu Arg Val Ser Leu
85 90 95

Leu Cys Ala Leu Arg Ala Gly Gly Arg Gly Ser Arg Trp Gly Glu Asp
100 105 110

Gly Ala Arg Leu Leu Leu Leu Pro Pro Ala Arg Ala Ala Gly Asn Gly
115 120 125

Glu Ala Glu Pro Ser Gly Gly Pro Ser Tyr Ala Gly Arg Met Leu Glu
130 135 140

Ser Ser Gly Cys Lys Ala Leu Lys Glu Gly Val Leu Glu Lys Arg Ser
145 150 155 160

Asp Gly Leu Leu Gln Leu Trp Lys Lys Lys Cys Cys Ile Leu Thr Glu
165 170 175

Glu Gly Leu Leu Leu Ile Pro Pro Lys Gln Leu Gln His Gln Gln Gln
180 185 190

Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Pro Gly Gln Gly
195 200 205

Pro Ala Glu Pro Ser Gln Pro Ser Gly Pro Ala Val Ala Ser Leu Glu
210 215 220

Pro Pro Val Lys Leu Lys Glu Leu His Phe Ser Asn Met Lys Thr Val
225 230 235 240

Asp Cys Val Glu Arg Lys Gly Lys Tyr Met Tyr Phe Thr Val Val Met
245 250 255

Ala Glu Gly Lys Glu Ile Asp Phe Arg Cys Pro Gln Asp Gln Gly Trp
260 265 270

Asn Ala Glu Ile Thr Leu Gln Met Val Gln Tyr Lys Asn Arg Gln Ala
275 280 285

Ile Leu Ala Val Lys Ser Thr Arg Gln Lys Gln Gln His Leu Val Gln
290 295 300

Gln Gln Pro Pro Ser Gln Pro Gln Pro Gln Pro Gln Leu Gln Pro Gln
305 310 315 320

Pro Gln Pro Gln Pro Gln Pro Gln Pro Gln Ser Gln Pro Gln
325 330 335

Pro Gln Pro Gln Pro Lys Pro Gln Pro Gln Gln Leu His Pro Tyr Pro
340 345 350

His Pro His Pro His Pro His Ser His Pro His Ser His Pro His Pro
355 360 365

His Pro His Pro His Pro His Gln Ile Pro His Pro His Pro Gln Pro
370 375 380

His Ser Gln Pro His Gly His Arg Leu Leu Arg Ser Thr Ser Asn Ser
385 390 395 400

Ala

<210> 29
<211> 382
<212> PRT
<213> Artificial sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 29

Met Gly Ala Phe Leu Asp Lys Pro Lys Met Glu Lys His Asn Ala Gln
1 5 10 15

Gly Gln Gly Asn Gly Leu Arg Tyr Gly Leu Ser Ser Met Gln Gly Trp
20 25 30

Arg Val Glu Met Glu Asp Ala His Thr Ala Val Ile Gly Leu Pro Ser
35 40 45

Gly Leu Glu Ser Trp Ser Phe Phe Ala Val Tyr Asp Gly His Ala Gly
50 55 60

Ser Gln Val Ala Lys Tyr Cys Cys Glu His Leu Leu Asp His Ile Thr
 65 70 75 80
 Asn Asn Gln Asp Phe Lys Gly Ser Ala Gly Ala Pro Ser Val Glu Asn
 85 90 95
 Val Lys Asn Gly Ile Arg Thr Gly Phe Leu Glu Ile Asp Glu His Met
 100 105 110
 Arg Val Met Ser Glu Lys Lys His Gly Ala Asp Arg Ser Gly Ser Thr
 115 120 125
 Ala Val Gly Val Leu Ile Ser Pro Gln His Thr Tyr Phe Ile Asn Cys
 130 135 140
 Gly Asp Ser Arg Gly Leu Leu Cys Arg Asn Arg Lys Val His Phe Phe
 145 150 155 160
 Thr Gln Asp His Lys Pro Ser Asn Pro Leu Glu Lys Glu Arg Ile Gln
 165 170 175
 Asn Ala Gly Gly Ser Val Met Ile Gln Arg Val Asn Gly Ser Leu Ala
 180 185 190
 Val Ser Arg Ala Leu Gly Asp Phe Asp Tyr Lys Cys Val His Gly Lys
 195 200 205
 Gly Pro Thr Glu Gln Leu Val Ser Pro Glu Pro Glu Val His Asp Ile
 210 215 220
 Glu Arg Ser Glu Glu Asp Asp Gln Phe Ile Ile Leu Ala Cys Asp Gly
 225 230 235 240
 Ile Trp Asp Val Met Gly Asn Glu Glu Leu Cys Asp Phe Val Arg Ser
 245 250 255
 Arg Leu Glu Val Thr Asp Asp Leu Glu Lys Val Cys Asn Glu Val Val
 260 265 270
 Asp Thr Cys Leu Tyr Lys Gly Ser Arg Asp Asn Met Ser Val Ile Leu
 275 280 285
 Ile Cys Phe Pro Asn Ala Pro Lys Val Ser Pro Glu Ala Val Lys Lys
 290 295 300
 Glu Ala Glu Leu Asp Lys Tyr Leu Glu Cys Arg Val Glu Glu Ile Ile
 305 310 315 320
 Lys Lys Gln Gly Glu Gly Val Pro Asp Leu Val His Val Met Arg Thr
 325 330 335

Leu Ala Ser Glu Asn Ile Pro Ser Leu Pro Pro Gly Gly Glu Leu Ala
340 345 350

Ser Lys Arg Asn Val Ile Glu Ala Val Tyr Asn Arg Leu Asn Pro Tyr
355 360 365

Lys Asn Asp Asp Thr Asp Ser Thr Ser Thr Asp Asp Met Trp
370 375 380

<210> 30
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 30

Met Ala Glu Cys Pro Thr Leu Gly Glu Ala Val Thr Asp His Pro Asp
1 5 10 15

Arg Leu Trp Ala Trp Glu Lys Phe Val Tyr Leu Asp Glu Lys Gln His
20 25 30

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

Val Leu Leu Arg Arg Glu Asp Val Val Leu Gly Arg Pro Met Thr Pro
50 55 60

Thr Gln Ile Gly Pro Ser Leu Leu Pro Ile Met Trp Gln Leu Tyr Pro
65 70 75 80

Asp Gly Arg Tyr Arg Ser Ser Asp Ser Ser Phe Trp Arg Leu Val Tyr
85 90 95

His Ile Lys Ile Asp Gly Val Glu Asp Met Leu Leu Glu Leu Leu Pro
100 105 110

Asp Asp

<210> 31
<211> 158
<212> PRT
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 31

Met Ser Gly Ile Ala Leu Ser Arg Leu Ala Gln Glu Arg Lys Ala Trp
1 5 10 15

Arg Lys Asp His Pro Phe Gly Phe Val Ala Val Pro Thr Lys Asn Pro
20 25 30

Asp Gly Thr Met Asn Leu Met Asn Trp Glu Cys Ala Ile Pro Gly Lys
35 40 45

Lys Gly Thr Pro Trp Glu Gly Gly Leu Phe Lys Leu Arg Met Leu Phe
50 55 60

Lys Asp Asp Tyr Pro Ser Ser Pro Pro Lys Cys Lys Phe Glu Pro Pro
65 70 75 80

Leu Phe His Pro Asn Val Tyr Pro Ser Gly Thr Val Cys Leu Ser Ile
85 90 95

Leu Glu Glu Asp Lys Asp Trp Arg Pro Ala Ile Thr Ile Lys Gln Ile
100 105 110

Leu Leu Gly Ile Gln Glu Leu Leu Asn Glu Pro Asn Ile Gln Asp Pro
115 120 125

Ala Gln Ala Glu Ala Tyr Thr Ile Tyr Cys Gln Asn Arg Val Glu Tyr
130 135 140

Glu Lys Arg Val Arg Ala Gln Ala Lys Lys Phe Ala Pro Ser
145 150 155

<210> 32
<211> 528
<212> PRT
<213> Artificial Sequence

<220>
<223> A synthetic gene insert was assembled from synthetic
oligonucleotides and/or PCR products.

<400> 32

Met Gly Asp Ala Pro Ser Pro Glu Glu Lys Leu His Leu Ile Thr Arg
1 5 10 15

Asn Leu Gln Glu Val Leu Gly Glu Glu Lys Leu Lys Glu Ile Leu Lys
20 25 30

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

His Val Ala Tyr Phe Val Pro Met Ser Lys Ile Ala Asp Phe Leu Lys
50 55 60

Ala Gly Cys Glu Val Thr Ile Leu Phe Ala Asp Leu His Ala Tyr Leu
65 70 75 80

Asp Asn Met Lys Ala Pro Trp Glu Leu Leu Glu Leu Arg Val Ser Tyr
85 90 95

Tyr Glu Asn Val Ile Lys Ala Met Leu Glu Ser Ile Gly Val Pro Leu
100 105 110

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

Tyr Thr Leu Asp Val Tyr Arg Leu Ser Ser Val Val Thr Gln His Asp
130 135 140

Ser Lys Lys Ala Gly Ala Glu Val Val Lys Gln Val Glu His Pro Leu
145 150 155 160

Leu Ser Gly Leu Leu Tyr Pro Gly Leu Gln Ala Leu Asp Glu Glu Tyr
165 170 175

Leu Lys Val Asp Ala Gln Phe Gly Gly Ile Asp Gln Arg Lys Ile Phe
180 185 190

Thr Phe Ala Glu Lys Tyr Leu Pro Ala Leu Gly Tyr Ser Lys Arg Val
195 200 205

His Leu Met Asn Pro Met Val Pro Gly Leu Thr Gly Ser Lys Met Ser
210 215 220

Ser Ser Glu Glu Glu Ser Lys Ile Asp Leu Leu Asp Arg Lys Glu Asp
225 230 235 240

Val Lys Lys Lys Leu Lys Lys Ala Phe Cys Glu Pro Gly Asn Val Glu
245 250 255

Asn Asn Gly Val Leu Ser Phe Ile Lys His Val Leu Phe Pro Leu Lys
260 265 270

Ser Glu Phe Val Ile Leu Arg Asp Glu Lys Trp Gly Gly Asn Lys Thr
275 280 285

Tyr Thr Ala Tyr Val Asp Leu Glu Lys Asp Phe Ala Ala Glu Val Val
290 295 300

His Pro Gly Asp Leu Lys Asn Ser Val Glu Val Ala Leu Asn Lys Leu
305 310 315 320

Leu Asp Pro Ile Arg Glu Lys Phe Asn Thr Pro Ala Leu Lys Lys Leu
325 330 335

Ala Ser Ala Ala Tyr Pro Asp Pro Ser Lys Gln Lys Pro Met Ala Lys
340 345 350

Gly Pro Ala Lys Asn Ser Glu Pro Glu Glu Val Ile Pro Ser Arg Leu

355					360					365					
Asp	Ile	Arg	Val	Gly	Lys	Ile	Ile	Thr	Val	Glu	Lys	His	Pro	Asp	Ala
370						375					380				
Asp	Ser	Leu	Tyr	Val	Glu	Lys	Ile	Asp	Val	Gly	Glu	Ala	Glu	Pro	Arg
385						390					395				400
Thr	Val	Val	Ser	Gly	Leu	Val	Gln	Phe	Val	Pro	Lys	Glu	Glu	Leu	Gln
				405					410					415	
Asp	Arg	Leu	Val	Val	Val	Leu	Cys	Asn	Leu	Lys	Pro	Gln	Lys	Met	Arg
			420					425					430		
Gly	Val	Glu	Ser	Gln	Gly	Met	Leu	Leu	Cys	Ala	Ser	Ile	Glu	Gly	Ile
		435					440					445			
Asn	Arg	Gln	Val	Glu	Pro	Leu	Asp	Pro	Pro	Ala	Gly	Ser	Ala	Pro	Gly
	450					455					460				
Glu	His	Val	Phe	Val	Lys	Gly	Tyr	Glu	Lys	Gly	Gln	Pro	Asp	Glu	Glu
465						470					475				480
Leu	Lys	Pro	Lys	Lys	Lys	Val	Phe	Glu	Lys	Leu	Gln	Ala	Asp	Phe	Lys
				485					490					495	
Ile	Ser	Glu	Glu	Cys	Ile	Ala	Gln	Trp	Lys	Gln	Thr	Asn	Phe	Met	Thr
			500					505					510		
Lys	Leu	Gly	Ser	Ile	Ser	Cys	Lys	Ser	Leu	Lys	Gly	Gly	Asn	Ile	Ser
		515					520					525			