

SEQUENCE LISTING

<110> Salubris Biotherapeutics, Inc.
Genekey Biotech (Chengdu) Co., Ltd.

<120> HUMAN NEUREGULIN-1 (NRG-1) RECOMBINANT FUSION PROTEIN
COMPOSITIONS AND METHODS OF USE THEREOF

<130> SBTI-001/001WO 332030-2002

<150> 62/656,246
<151> 2018-04-11

<160> 18

<170> PatentIn version 3.5

<210> 1
<211> 331
<212> PRT
<213> Homo sapiens

<400> 1

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

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

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

Leu Tyr Lys Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu
50 55 60

Ile Val Leu Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile
65 70 75 80

Arg Glu Val Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr
85 90 95

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

Gly Lys Phe Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser
115 120 125

His Ala Leu Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser
130 135 140

Gly Gly Val Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr
145 150 155 160

Ile Asp Trp Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val
165 170 175

Lys Asp Asn Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys Lys Gly
180 185 190

Arg Cys Trp Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr
195 200 205

Ile Cys Ala Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn
210 215 220

Gln Cys Cys His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp
225 230 235 240

Thr Asp Cys Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val
245 250 255

Pro Arg Cys Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu
260 265 270

Glu Pro Asn Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala
275 280 285

Ser Cys Pro His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala
290 295 300

Cys Pro Pro Asp Lys Met Glu Val Asp Lys Asn Gly Leu Lys Met Cys
305 310 315 320

Glu Pro Cys Gly Gly Leu Cys Pro Lys Ala Phe
325 330

<210> 2
<211> 447
<212> PRT
<213> Homo sapiens

<400> 2

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

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

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

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

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

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

Arg Asp Lys Trp Thr Trp Tyr Phe Asp Leu Trp Gly Arg Gly Thr Leu
100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
115 120 125

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

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

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
180 185 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
195 200 205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
210 215 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ala Val
225 230 235 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
245 250 255

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
260 265 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
275 280 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
290 295 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305 310 315 320

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

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
340 345 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
355 360 365

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
370 375 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385 390 395 400

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg

405

410

415

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
 420 425 430

His Ala His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440 445

<210> 3

<211> 220

<212> PRT

<213> Homo sapiens

<400> 3

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

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

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

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

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

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

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

Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp
 115 120 125

Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn
 130 135 140

Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu
145 150 155 160

Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp
165 170 175

Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr
180 185 190

Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser
195 200 205

Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215 220

<210> 4
<211> 61
<212> PRT
<213> Homo sapiens

<400> 4

Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys Val Asn
1 5 10 15

Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr
20 25 30

Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr
35 40 45

Val Met Ala Ser Phe Tyr Lys Ala Glu Glu Leu Tyr Gln
50 55 60

<210> 5
<211> 10
<212> PRT
<213> Artificial

<220>
<223> Glycine-Serine linker

<400> 5

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

1

5

10

<210> 6

<211> 1614

<212> DNA

<213> Homo sapiens

<400> 6

atggagtttg ggctgagctg ggttttcctt gttgctataa taaaaggtgt ccagtgtcag	60
gtgcagctgc agcagtgggg agctggactg ctgaagccaa gcgagaccct gtctctgaca	120
tgcgccgtgt acggaggatc cttcagcgga tactattgggt cttggatcag gcagccacct	180
ggcaagggac tggagtggat cggcgagatc aaccactctg gctccaccaa ctacaatccc	240
tctctgaagt cccgggtgac catctccgtg gagacaagca agaatcagtt ttccctgaag	300
ctgtccagcg tgaccgccgc tgacacagcc gtgtactatt gcgctaggga caagtggacc	360
tggtatttcg atctgtgggg aaggggcacc ctggtgacag tgtcttccgc ctctacaaag	420
ggccccctccg tgtttcctct ggctccaagc tctaagagca cctctggagg aacagccgct	480
ctgggatgtc tggatgaagga ttacttcctt gagccagtga ccgtgagctg gaactctggc	540
gccctgacct ccggagtgc tacatttccc gctgtgctgc agtccagcgg cctgtatagc	600
ctgtcttccg tggtgaccgt gcctagctct tccctgggca ccagacata catctgcaac	660
gtgaatcaca agccctccaa tacaaaggtg gacaagagag tggagcctaa gagctgtgat	720
aagaccata catgcccacc atgtccagct cctgagctgc tgggaggacc ttccgtgttc	780
ctgtttcctc caaagccaaa ggacaccctg atgatctctc gcaccctga ggtgacatgc	840
gtggtggtgg acgtgtccca cgaggatcca gaggtgaagt tcaactggta cgtggatggc	900
gtggaggtgc ataatgctaa gaccaagcct agggaggagc agtacaacag cacctatcgg	960
gtggtgtctg tgctgacagt gctgcaccag gactggctga acggcaagga gtacaagtgc	1020
aaggtgagca ataaggccct gccagctccc atcgagaaga ccatctctaa ggccaagggc	1080
cagcccagag agcctcaggt gtatacactg ccccctagcc gcgaggagat gaccaagaac	1140
caggtgtctc tgacatgtct ggtgaagggc ttctacccat ctgacatcgc tgtggagtgg	1200
gagtccaatg gccagcccga gaacaattat aagaccacac caccgtgct ggactccgat	1260
ggcagcttct ttctgtactc caagctgacc gtggataaga gcaggtggca gcagggaac	1320
gtgttttcct gcagcgtgat gcacagggcc ctgcacaatc attatacaca gaaatctctg	1380

tccctgagcc caggcaaggg aggaggagga agcggaggag gaggcagctc tcctctggtg	1440
aagtgtgctg agaaggagaa gaccttctgc gtgaacggcg gcgagtgttt tatggtgaag	1500
gacctgtcta atccatccag atacctgtgc aagtgtccca acgagttcac aggcgatcgc	1560
tgccagaatt acgtgatggc ctctttttat aaggctgagg agctgtacca gtaa	1614

<210> 7
 <211> 1614
 <212> DNA
 <213> Homo sapiens

<400> 7	
atggagtttg ggctgagctg ggttttcctt gttgctataa taaaaggtgt ccagtgtcag	60
gtgcagctgc agcagtgggg agctggactg ctgaagccaa gcgagaccct gtctctgaca	120
tgcgccgtgt acggaggatc cttcagcggg tactattggt cttggatcag gcagccacct	180
ggcaagggac tggagtggat cggcgagatc aaccactctg gctccaccaa ctacaatccc	240
tctctgaagt cccgggtgac catctccgtg gagacaagca agaatcagtt ttccctgaag	300
ctgtccagcg tgaccgccgc tgacacagcc gtgtactatt gcgctaggga caagtggacc	360
tggtatttcg atctgtgggg aaggggcacc ctggtgacag tgtcttccgc ctctacaaag	420
ggcccctccg tgtttctctt ggctccaagc tctaagagca cctctggagg aacagccgct	480
ctgggatgtc tgggtgaagga ttacttcctt gagccagtga ccgtgagctg gaactctggc	540
gccctgacct ctggagtgca tacatttccc gctgtgctgc agtccagcgg cctgtatagc	600
ctgtcttccg tggtgaccgt gcctagctct tccctgggca ccagacata catctgcaac	660
gtgaatcaca agccctccaa taaaaggtg gacaagagag tggagcctaa gagctgtgat	720
aagaccata catgcccacc atgtccagct cctgagttcc tgggaggacc tgccgtgttc	780
ctgtttctc caaagccaaa ggacaccctg atgatctctc gcaccctga ggtgacatgc	840
gtggtggtgg acgtgtccca cgaggatcca gaggtgaagt tcaactggta cgtggatggc	900
gtggaggtgc ataatgctaa gaccaagcct agggaggagc agtacaacag cacctatcgg	960
gtggtgtctg tgctgacagt gctgcaccag gactggctga acggcaagga gtacaagtgc	1020
aaggtgagca ataaggccct gccagctccc atcgagaaga ccatctctaa ggccaagggc	1080
cagcccagag agcctcaggt gtatacactg cccctagcc gcgaggagat gaccaagaac	1140

caggtgtctc tgacctgtct ggtgaagggc ttctacccat ctgacatcgc tgtggagtgg	1200
gagtccaatg gccagcccga gaacaattat aagaccacac caccctgtgct ggactccgat	1260
ggcagcttct ttctgtactc caagctgacc gtggataaga gcaggtggca gcagggcaac	1320
gtgttttcct gcagcgtgat gcacgaggcc ctgcacgctc attatacaca gaaatctctg	1380
tccctgagcc caggcaaggg aggaggagga agcggaggag gaggcagctc tcattctggtg	1440
aagtgtgctg agaaggagaa gaccttctgc gtgaacggcg gcgagtgttt tatggtgaag	1500
gacctgtcta atccatccag atacctgtgc aagtgtccca acgagttcac aggcgatcgc	1560
tgccagaatt acgtgatggc ctctttttat aaggctgagg agctgtacca gtaa	1614

<210> 8
 <211> 723
 <212> DNA
 <213> Homo sapiens

<400> 8	
atggtgttgc agaccaggt cttcatttct ctgttgcctt ggatctctgg tgcctacggg	60
gacatcgaga tgaccagtc tccagattcc ctggccgtga gcctgggaga gagggctaca	120
atcaactgcc ggtccagcca gtctgtgctg tactcttcca gcaacaggaa ttacctggcc	180
tggtatcagc agaatcccgg ccagccccct aagctgctga tctattgggc tagcaccaga	240
gagtctggag tgcctgaccg cttctctgga tccggaagcg gcacagactt caccctgaca	300
atctcttccc tgcaggccga ggacgtggcc gtgtactatt gccagcagta ttactctacc	360
cctaggacat tcggccaggg caccaaggtg gagatcaagc ggacagtggc cgctccatcc	420
gtgttcatct ttccaccctc cgacgagcag ctgaagtccg gaaccgctag cgtggtgtgc	480
ctgctgaaca acttctaccc aagagaggcc aaggtgcagt ggaaggtgga taacgctctg	540
cagagcggca attctcagga gtccgtgacc gagcaggaca gcaaggattc tacatattcc	600
ctgagctcta ccctgacact gtccaaggcc gattacgaga agcacaaggt gtatgcttgc	660
gaggtgaccc atcagggcct gtccagcccc gtgacaaaaga gcttcaaccg cggcgagtgt	720
taa	723

<210> 9
 <211> 537
 <212> PRT
 <213> Homo sapiens

<400> 9

Met Glu Phe Gly Leu Ser Trp Val Phe Leu Val Ala Ile Ile Lys Gly
1 5 10 15

Val Gln Cys Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys
20 25 30

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

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

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

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

Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr
100 105 110

Tyr Cys Ala Arg Asp Lys Trp Thr Trp Tyr Phe Asp Leu Trp Gly Arg
115 120 125

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
130 135 140

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
145 150 155 160

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
165 170 175

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
180 185 190

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
195 200 205

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
210 215 220

Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp
225 230 235 240

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
245 250 255

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
260 265 270

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
275 280 285

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
290 295 300

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
305 310 315 320

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
325 330 335

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
340 345 350

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
355 360 365

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
370 375 380

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
385 390 395 400

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
405 410 415

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp

420

425

430

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
 435 440 445

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 450 455 460

Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser His Leu Val
 465 470 475 480

Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys Val Asn Gly Gly Glu Cys
 485 490 495

Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr Leu Cys Lys Cys
 500 505 510

Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Met Ala Ser
 515 520 525

Phe Tyr Lys Ala Glu Glu Leu Tyr Gln
 530 535

<210> 10
 <211> 537
 <212> PRT
 <213> Homo sapiens

<400> 10

Met Glu Phe Gly Leu Ser Trp Val Phe Leu Val Ala Ile Ile Lys Gly
 1 5 10 15

Val Gln Cys Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys
 20 25 30

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

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

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

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

Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr
100 105 110

Tyr Cys Ala Arg Asp Lys Trp Thr Trp Tyr Phe Asp Leu Trp Gly Arg
115 120 125

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
130 135 140

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
145 150 155 160

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
165 170 175

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
180 185 190

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
195 200 205

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
210 215 220

Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp
225 230 235 240

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
245 250 255

Pro Ala Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
260 265 270

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
275 280 285

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
290 295 300

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
305 310 315 320

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
325 330 335

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
340 345 350

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
355 360 365

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
370 375 380

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
385 390 395 400

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
405 410 415

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
420 425 430

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
435 440 445

Glu Ala Leu His Ala His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
450 455 460

Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ser His Leu Val
465 470 475 480

Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys Val Asn Gly Gly Glu Cys
485 490 495

Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr Leu Cys Lys Cys
500 505 510

Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Met Ala Ser
515 520 525

Phe Tyr Lys Ala Glu Glu Leu Tyr Gln
530 535

<210> 11
<211> 19
<212> PRT
<213> Homo sapiens

<400> 11

Met Glu Phe Gly Leu Ser Trp Val Phe Leu Val Ala Ile Ile Lys Gly
1 5 10 15

Val Gln Cys

<210> 12
<211> 240
<212> PRT
<213> Homo sapiens

<400> 12

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

Gly Ala Tyr Gly Asp Ile Glu Met Thr Gln Ser Pro Asp Ser Leu Ala
20 25 30

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

Val Leu Tyr Ser Ser Ser Asn Arg Asn Tyr Leu Ala Trp Tyr Gln Gln
50 55 60

Asn Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
65 70 75 80

Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
85 90 95

Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr
100 105 110

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

Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe
130 135 140

Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
145 150 155 160

Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
165 170 175

Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
180 185 190

Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
195 200 205

Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
210 215 220

Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225 230 235 240

<210> 13
<211> 20
<212> PRT
<213> Homo sapiens

<400> 13

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

Gly Ala Tyr Gly
20

<210> 14
<211> 518
<212> PRT
<213> Artificial

<220>

<223> Heavy chain component of the recombinant fusion protein

<400> 14

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

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

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

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

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

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

Arg Asp Lys Trp Thr Trp Tyr Phe Asp Leu Trp Gly Arg Gly Thr Leu
100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
115 120 125

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

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

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
180 185 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
195 200 205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
210 215 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ala Val
225 230 235 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
245 250 255

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
260 265 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
275 280 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
290 295 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305 310 315 320

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

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
340 345 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
355 360 365

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
370 375 380

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

385		390		395		400									
Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg
				405					410					415	
Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu
			420					425					430		
His	Ala	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys	Gly
		435					440					445			
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Ser	His	Leu	Val	Lys	Cys	Ala
	450					455					460				
Glu	Lys	Glu	Lys	Thr	Phe	Cys	Val	Asn	Gly	Gly	Glu	Cys	Phe	Met	Val
465					470					475					480
Lys	Asp	Leu	Ser	Asn	Pro	Ser	Arg	Tyr	Leu	Cys	Lys	Cys	Pro	Asn	Glu
				485					490					495	
Phe	Thr	Gly	Asp	Arg	Cys	Gln	Asn	Tyr	Val	Met	Ala	Ser	Phe	Tyr	Lys
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Ala	Glu	Glu	Leu	Tyr	Gln										
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Gly	Val	Cys	Tyr	Tyr	Ile	Glu	Gly	Ile	Asn	Gln	Leu	Ser	Cys	Lys	Cys
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		35					40								

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<212> PRT
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<400> 16

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

<210> 17
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<212> PRT
<213> Homo sapiens

<400> 17

His Glu Glu Pro Cys Gly Pro Ser His Lys Ser Phe Cys Leu Asn Gly
1 5 10 15

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

Val Glu Asn Tyr Thr Gly Ala Arg Cys Glu
35 40

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<213> Artificial Sequence

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<223> EGF like domain consensus sequence

<400> 18

Ala Glu Lys Glu Lys Thr Phe Cys Val Asn Gly Glu Cys Phe Met Val
1 5 10 15

Lys Asp Leu Ser Asn Pro
20

