

SEQUENCE LISTING

<110> Spiber Inc.
KOJIMA INDUSTRIES CORPORATION

<120> Production method for insoluble recombinant protein aggregate

<130> 17-0442-00

<140> PCT/JP2017/029033

<141> 2017-08-10

<150> JP2016-157912

<151> 2016-08-10

<150> JP2016-229227

<151> 2016-11-25

<150> JP2017-048702

<151> 2017-03-14

<150> JP2017-094144

<151> 2017-05-10

<160> 12

<170> PatentIn version 3.5

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<211> 601

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<213> Artificial Sequence

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Asn Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Gln Ser Gly Gln Tyr
35 40 45

Gly Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Gly Ser Ser Ala
50 55 60

Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro
65 70 75 80

Ser Ala Ser Ala Ala Ala Ala Gly Pro Gly Ser Gly Gln Gln Gly
85 90 95

Pro Gly Ala Ser Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln
100 105 110

Gln Gly Pro Gly Ser Ser Ala Ala Ala Ala Gly Gln Tyr Gly Ser
115 120 125

Gly Pro Gly Gln Gln Gly Pro Tyr Gly Ser Ala Ala Ala Ala Gly
130 135 140

Pro Gly Ser Gly Gln Tyr Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser
145 150 155 160

Gly Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala
165 170 175

Ala Ala Ala Ala Gly Ser Gly Gln Gln Gly Pro Gly Gln Tyr Gly Pro
180 185 190

Tyr Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly
195 200 205

Gln Gln Gly Pro Tyr Gly Pro Gly Gln Ser Gly Ser Gly Gln Gln Gly
210 215 220

Pro Gly Gln Gln Gly Pro Tyr Ala Ser Ala Ala Ala Ala Gly Pro
225 230 235 240

Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala
245 250 255

Gly Gln Tyr Gly Tyr Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly
260 265 270

Ala Ser Gly Gln Asn Gly Pro Gly Ser Gly Gln Tyr Gly Pro Gly Gln
275 280 285

Gln Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Gly Pro Gly Gln Gln
290 295 300

Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala Ala Ala Gly Gln Tyr
305 310 315 320

Gly Pro Gly Gln Gln Gly Pro Gly Gln Tyr Gly Pro Gly Ser Ser Gly
325 330 335

Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ser Ser Ala Ala Ala Ala
340 345 350

Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Gln
355 360 365

Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gln Gln Gly Pro Gly Gln Gln
370 375 380

Gly Pro Tyr Gly Pro Gly Ala Ser Gly Pro Gly Gln Gln Gly Pro Tyr
385 390 395 400

Gly Pro Gly Ala Ser Ala Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly
405 410 415

Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala Ala Gly Gln
420 425 430

Tyr Gly Ser Gly Pro Gly Gln Tyr Gly Pro Tyr Gly Pro Gly Gln Ser
435 440 445

Gly Pro Gly Ser Gly Gln Gln Gly Gln Gly Pro Tyr Gly Pro Gly Ala
450 455 460

Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro
465 470 475 480

Tyr Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly

485

490

495

Gln Tyr Gly Pro Gly Ala Ser Gly Gln Asn Gly Pro Gly Ser Gly Gln
 500 505 510

Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala
 515 520 525

Gly Gln Tyr Gln Gln Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly
 530 535 540

Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly Gln
 545 550 555 560

Gln Gly Pro Tyr Gly Pro Gly Gln Ser Gly Ser Gly Gln Gln Gly Pro
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Gln Asn Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Gln Ser Gly Gln
 35 40 45

Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Gly Ser Ser
50 55 60

Ala Ala Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly Pro Gly Gln Gln
65 70 75 80

Gly Pro Ser Ala Ser Ala Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly
85 90 95

Gln Gln Gly Pro Gly Ala Ser Gly Gln Tyr Gly Pro Gly Gln Gln Gly
100 105 110

Pro Gly Gln Gln Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala Ala Gly
115 120 125

Gln Tyr Gly Ser Gly Pro Gly Gln Gln Gly Pro Tyr Gly Ser Ala Ala
130 135 140

Ala Ala Ala Ala Gly Pro Gly Ser Gly Gln Tyr Gly Gln Gly Pro Tyr
145 150 155 160

Gly Pro Gly Ala Ser Gly Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly
165 170 175

Pro Ser Ala Ser Ala Ala Ala Ala Ala Ala Gly Ser Gly Gln Gln Gly
180 185 190

Pro Gly Gln Tyr Gly Pro Tyr Ala Ser Ala Ala Ala Ala Ala Ala Gly
195 200 205

Gln Tyr Gly Ser Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Gln
210 215 220

Ser Gly Ser Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Tyr Ala Ser
225 230 235 240

Ala Ala Ala Ala Ala Ala Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro
245 250 255

Gly Ser Ser Ala Ala Ala Ala Ala Ala Gly Gln Tyr Gly Tyr Gly Pro

260

265

270

Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ala Ser Gly Gln Asn Gly Pro
 275 280 285

Gly Ser Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Ser Ala
 290 295 300

Ala Ala Ala Ala Ala Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly
 305 310 315 320

Ala Ser Ala Ala Ala Ala Ala Ala Gly Gln Tyr Gly Pro Gly Gln Gln
 325 330 335

Gly Pro Gly Gln Tyr Gly Pro Gly Ser Ser Gly Pro Gly Gln Gln Gly
 340 345 350

Pro Tyr Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala Gly Gln Tyr
 355 360 365

Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Gln Ser Ala Ala Ala
 370 375 380

Ala Ala Ala Gly Gln Tyr Gln Gln Gly Pro Gly Gln Gln Gly Pro Tyr
 385 390 395 400

Gly Pro Gly Ala Ser Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly
 405 410 415

Ala Ser Ala Ala Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly Pro Gly
 420 425 430

Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr
 435 440 445

Gly Ser Gly Pro Gly Gln Tyr Gly Pro Tyr Gly Pro Gly Gln Ser Gly
 450 455 460

Pro Gly Ser Gly Gln Gln Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser
 465 470 475 480

Ala Ala Ala Ala Ala Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro
485 490 495

Tyr Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser
500 505 510

Gly Gln Tyr Gly Pro Gly Ala Ser Gly Gln Asn Gly Pro Gly Ser Gly
515 520 525

Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Ser Ala Ala Ala Ala
530 535 540

Ala Ala Gly Gln Tyr Gln Gln Gly Pro Gly Gln Gln Gly Pro Tyr Gly
545 550 555 560

Pro Gly Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly
565 570 575

Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Gln Ser Gly Ser Gly Gln
580 585 590

Gln Gly Pro Gly Gln Gln Gly Pro Tyr Ala Ser Ala Ala Ala Ala Ala
595 600 605

Ala Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Ala Ser Ala Ala Ala
610 615 620

Ala Ala Ala Ala Glu Phe Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ala
625 630 635 640

Ser Ala Ala Ala Ala Ala Ala Gly Gln Asn Gly Pro Gly Ser Gly Gln
645 650 655

Gln Gly Pro Gly Gln Ser Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro
660 665 670

Gly Gln Gln Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala Gly Pro
675 680 685

Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala
690 695 700

Ala Ala Ala Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Ala Ser Gly
705 710 715 720

Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Gly Ser
725 730 735

Ser Ala Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly Gln
740 745 750

Gln Gly Pro Tyr Gly Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser
755 760 765

Gly Gln Tyr Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser Gly Pro Gly
770 775 780

Gln Tyr Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala Ala
785 790 795 800

Ala Ala Gly Ser Gly Gln Gln Gly Pro Gly Gln Tyr Gly Pro Tyr Ala
805 810 815

Ser Ala Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly Gln
820 825 830

Gln Gly Pro Tyr Gly Pro Gly Gln Ser Gly Ser Gly Gln Gln Gly Pro
835 840 845

Gly Gln Gln Gly Pro Tyr Ala Ser Ala Ala Ala Ala Ala Ala Gly Pro
850 855 860

Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala
865 870 875 880

Ala Gly Gln Tyr Gly Tyr Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro
885 890 895

Gly Ala Ser Gly Gln Asn Gly Pro Gly Ser Gly Gln Tyr Gly Pro Gly
900 905 910

Gln Gln Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Ala Gly Pro Gly
915 920 925

Gln Gln Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala Ala Ala Ala
930 935 940

Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Tyr Gly Pro Gly
945 950 955 960

Ser Ser Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ser Ser Ala
965 970 975

Ala Ala Ala Ala Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Tyr
980 985 990

Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gln Gln
995 1000 1005

Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ala Ser Gly Pro
1010 1015 1020

Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala Ala Ala
1025 1030 1035

Ala Ala Gly Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Ser
1040 1045 1050

Ala Ser Ala Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro
1055 1060 1065

Gly Gln Tyr Gly Pro Tyr Gly Pro Gly Gln Ser Gly Pro Gly Ser
1070 1075 1080

Gly Gln Gln Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala
1085 1090 1095

Ala Ala Ala Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Tyr

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1130						1135					1140				
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1145						1150					1155				
Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gln	Gln	Gly	Pro	Gly	Gln	Gln	Gly	
1160						1165					1170				
Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Gln	
1175						1180					1185				
Tyr	Gly	Ser	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Gln	
1190						1195					1200				
Ser	Gly	Ser	Gly	Gln	Gln	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Ala	
1205						1210					1215				
Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly	Ser	Gly	Gln	Gln	Gly	
1220						1225					1230				
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1235						1240					1245				
Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	
1250						1255					1260				
Gly	Gln	Asn	Gly	Pro	Gly	Ser	Gly	Gln	Gln	Gly	Pro	Gly	Gln	Ser	
1265						1270					1275				
Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Gly	Gln	Gln	Gly	Pro	
1280						1285					1290				
Gly	Ser	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly	Gln	Tyr	Gly	
1295						1300					1305				

Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala Ala Ala Ala
 1310 1315 1320

Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Ala Ser Gly Gln Tyr
 1325 1330 1335

Gly Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Gly Ser Ser
 1340 1345 1350

Ala Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly Gln
 1355 1360 1365

Gln Gly Pro Tyr Gly Ser Ala Ala Ala Ala Ala Ala Gly Pro Gly
 1370 1375 1380

Ser Gly Gln Tyr Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser Gly
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Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala
 1400 1405 1410

Ala Ala Ala Ala Ala Gly Ser Gly Gln Gln Gly Pro Gly Gln Tyr
 1415 1420 1425

Gly Pro Tyr Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly
 1430 1435 1440

Ser Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Gln Ser Gly
 1445 1450 1455

Ser Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Tyr Ala Ser Ala
 1460 1465 1470

Ala Ala Ala Ala Ala Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro
 1475 1480 1485

Gly Ser Ser Ala Ala Ala Ala Ala Ala Gly Gln Tyr Gly Tyr Gly
 1490 1495 1500

Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Gly	Gln	Asn
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1520						1525					1530			
Gln	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly	Gln	Gln	Gly	Pro
1535						1540					1545			
Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr
1550						1555					1560			
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1565						1570					1575			
Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ser	Ser	Ala	Ala
1580						1585					1590			
Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr
1595						1600					1605			
Gly	Pro	Gly	Gln	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gln
1610						1615					1620			
Gln	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Gly
1625						1630					1635			
Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala
1640						1645					1650			
Ala	Ala	Ala	Gly	Pro	Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro
1655						1660					1665			
Ser	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly	Ser	Gly
1670						1675					1680			
Pro	Gly	Gln	Tyr	Gly	Pro	Tyr	Gly	Pro	Gly	Gln	Ser	Gly	Pro	Gly
1685						1690					1695			

Ser	Gly	Gln	Gln	Gly	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala
1700						1705					1710			
Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro
1715						1720					1725			
Tyr	Gly	Pro	Gly	Gln	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly
1730						1735					1740			
Ser	Gly	Gln	Tyr	Gly	Pro	Gly	Ala	Ser	Gly	Gln	Asn	Gly	Pro	Gly
1745						1750					1755			
Ser	Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Gly	Gln	Ser	Ala
1760						1765					1770			
Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gln	Gln	Gly	Pro	Gly	Gln	Gln
1775						1780					1785			
Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly
1790						1795					1800			
Gln	Tyr	Gly	Ser	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly
1805						1810					1815			
Gln	Ser	Gly	Ser	Gly	Gln	Gln	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr
1820						1825					1830			
Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly	Ser	Gly	Gln	Gln
1835						1840					1845			
Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Lys	Leu	Gly
1850						1855					1860			
Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala	Ala	Ala
1865						1870					1875			
Ala	Gly	Gln	Asn	Gly	Pro	Gly	Ser	Gly	Gln	Gln	Gly	Pro	Gly	Gln
1880						1885					1890			
Ser	Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Gly	Gln	Gln	Gly

1895	1900	1905
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Gly Pro 1925	Gly Gln Gln Gly Pro 1930	Ser Ala Ser Ala Ala Ala Ala 1935
Ala Gly 1940	Pro Gly Ser Gly Gln 1945	Gln Gly Pro Gly Ala Ser Gly Gln 1950
Tyr Gly 1955	Pro Gly Gln Gln Gly 1960	Pro Gly Gln Gln Gly Pro Gly Ser 1965
Ser Ala 1970	Ala Ala Ala Ala Ala 1975	Ala Gly Gln Tyr Gly Ser Gly Pro Gly 1980
Gln Gln 1985	Gly Pro Tyr Gly Ser 1990	Ala Ala Ala Ala Ala Ala Gly Pro 1995
Gly Ser 2000	Gly Gln Tyr Gly Gln 2005	Gly Pro Tyr Gly Pro Gly Ala Ser 2010
Gly Pro 2015	Gly Gln Tyr Gly Pro 2020	Gly Gln Gln Gly Pro Ser Ala Ser 2025
Ala Ala 2030	Ala Ala Ala Ala Gly 2035	Ser Gly Gln Gln Gly Pro Gly Gln 2040
Tyr Gly 2045	Pro Tyr Ala Ser Ala 2050	Ala Ala Ala Ala Ala Gly Gln Tyr 2055
Gly Ser 2060	Gly Pro Gly Gln Gln 2065	Gly Pro Tyr Gly Pro Gly Gln Ser 2070
Gly Ser 2075	Gly Gln Gln Gly Pro 2080	Gly Gln Gln Gly Pro Tyr Ala Ser 2085
Ala Ala 2090	Ala Ala Ala Ala Gly 2095	Pro Gly Gln Gln Gly Pro Tyr Gly 2100

Pro	Gly	Ser	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly	Tyr
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Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Gly	Gln
	2120					2125					2130			
Asn	Gly	Pro	Gly	Ser	Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro
	2135					2140					2145			
Gly	Gln	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly	Gln	Gln	Gly
	2150					2155					2160			
Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Gln
	2165					2170					2175			
Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Gly	Gln	Tyr	Gly	Pro	Gly	Ser
	2180					2185					2190			
Ser	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ser	Ser	Ala
	2195					2200					2205			
Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro
	2210					2215					2220			
Tyr	Gly	Pro	Gly	Gln	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr
	2225					2230					2235			
Gln	Gln	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser
	2240					2245					2250			
Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala
	2255					2260					2265			
Ala	Ala	Ala	Ala	Gly	Pro	Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly
	2270					2275					2280			
Pro	Ser	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly	Ser
	2285					2290					2295			

Gly Pro Gly Gln Tyr Gly Pro Tyr Gly Pro Gly Gln Ser Gly Pro
2300 2305 2310

Gly Ser Gly Gln Gln Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser
2315 2320 2325

Ala Ala Ala Ala Ala Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly
2330 2335 2340

Pro Tyr Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Ala Gly Pro
2345 2350 2355

Gly Ser Gly Gln Tyr Gly Pro Gly Ala Ser Gly Gln Asn Gly Pro
2360 2365 2370

Gly Ser Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Ser
2375 2380 2385

Ala Ala Ala Ala Ala Ala Gly Gln Tyr Gln Gln Gly Pro Gly Gln
2390 2395 2400

Gln Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala Ala Ala Ala Ala
2405 2410 2415

Gly Gln Tyr Gly Ser Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro
2420 2425 2430

Gly Gln Ser Gly Ser Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro
2435 2440 2445

Tyr Ala Ser Ala Ala Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly Gln
2450 2455 2460

Gln Gly Pro Gly Ala Ser Ala Ala Ala Ala Ala Ala Ala
2465 2470 2475

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Ser Leu Cys Ala Leu Gly Gln Ala Asn Thr Pro Trp Ser Ser Lys Glu
35 40 45

Asn Ala Asp Ala Phe Ile Gly Ala Phe Met Asn Ala Ala Ser Gln Ser
50 55 60

Gly Ala Phe Ser Ser Asp Gln Ile Asp Asp Met Ser Val Ile Ser Asn
65 70 75 80

Thr Leu Met Ala Ala Met Asp Asn Met Gly Gly Arg Ile Thr Gln Ser
85 90 95

Lys Leu Gln Ala Leu Asp Met Ala Phe Ala Ser Ser Val Ala Glu Ile
100 105 110

Ala Val Ala Asp Gly Gln Asn Val Gly Ala Ala Thr Asn Ala Ile Ser
115 120 125

Asp Ala Leu Arg Ser Ala Phe Tyr Gln Thr Thr Gly Val Val Asn Asn
130 135 140

Gln Phe Ile Thr Gly Ile Ser Ser Leu Ile Gly Met Phe Ala Gln Val
145 150 155 160

Ser Gly Asn Glu Val Ser Tyr Ser Ser Ala Gly Ser Ser Ser Ala Ala
165 170 175

Ala Ser Glu Ala Val Ser Ala Gly Gln Gly Pro Ala Ala Gln Pro Val
180 185 190

Tyr Ala Pro Ser Ala Ser Ala Ala Ala Ala Ala Ala Ser Gly Ala Ala
195 200 205

Pro Ala Ile Gln Gln Ala Tyr Glu Arg Gly Gly Ser Gly Ser Ala Ala
210 215 220

Ala Ala Ala Gly Ser Gly Pro Ser Gly Tyr Gly Gln Gly Ala Gly Gly
225 230 235 240

Pro Gly Gly Ala Gly Ala Ala Ala Gly Ala Ala Ala Ala Gly Gly Ser
245 250 255

Gly Pro Gly Gly Tyr Gly Gln Gly Pro Ala Ala Tyr Gly Pro Ser Gly
260 265 270

Pro Ser Gly Gln Gln Gly Tyr Gly Pro Gly Gly Ser Gly Ala Ala Ala
275 280 285

Ala Ala Ala Ala Ala Ala Gly Ser Gly Pro Ser Gly Tyr Gly Pro Gly
290 295 300

Ala Gly Gly Pro Gly Gly Ala Gly Ala Ala Ala Ala Ala Ala Ala Ala
305 310 315 320

Gly Gly Ser Gly Pro Gly Gly Tyr Gly Gln Gly Gln Ala Ser Tyr Gly
325 330 335

Pro Ser Gly Pro Ser Gly Gln Gln Gly Tyr Gly Pro Gly Gly Ser Gly
340 345 350

Ala Ala Ala Ala Ala Ala Ala Ala Ala Gly Gly Pro Gly Phe Gly Gly
355 360 365

Gln Gln Gly Tyr Gly Pro Gly Gly Ser Gly Ala Ala Ala Ala Ala Ala
370 375 380

Ala Gly Gly Ala Gly Pro Gly Arg Gln Gln Ala Tyr Gly Pro Gly Gly
385 390 395 400

Ser Gly Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Gly Ser Gly Pro Ser
405 410 415

Gly Tyr Gly Pro Ser Ala Ala Gly Pro Ser Gly Pro Gly Gly Ser Gly
420 425 430

Ala Ala Gly Gly Ser Gly Pro Gly Gly Phe Gly Gln Gly Pro Ala Gly
435 440 445

Tyr Gly Pro Ser Gly Pro Gly Gly Gln Gln Gly Tyr Gly Pro Gly Ala
450 455 460

Ser Gly Ala Ala Ala Ala Ala Ala Ala Ala Ser Gly Ser Gly Gly Tyr Gly
465 470 475 480

Pro Ser Gln Tyr Val Pro Ser Ser Val Ala Ser Ser Ala Ala Ser Ala
485 490 495

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

Ala Ser Thr Leu Leu Ser Ser Gly Pro Thr Asn Ala Ala Ala Leu Ser
515 520 525

Asn Val Ile Ser Asn Ala Val Ser Gln Val Ser Ala Ser Asn Pro Gly
530 535 540

Ser Ser Ser Cys Asp Val Leu Val Gln Ala Leu Leu Glu Ile Ile Thr
545 550 555 560

Ala Leu Ile Ser Ile Leu Asp Ser Ser Ser Val Gly Gln Val Asn Tyr
565 570 575

Gly Ser Ser Gly Gln Tyr Ala Gln Ile Val Gly Gln Ser Met Gln Gln
580 585 590

Ala Met Gly
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Gly Ser Asn Gly Pro Gly Ser Gly Val Leu Gly Pro Gly Gln Ser Gly
35 40 45

Gln Tyr Gly Pro Gly Val Leu Gly Pro Gly Val Leu Gly Pro Gly Ser
50 55 60

Ser Ala Ala Ala Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly Pro Gly
65 70 75 80

Val Leu Gly Pro Ser Ala Ser Ala Ala Ala Ala Ala Ala Gly Pro
85 90 95

Gly Ser Gly Val Leu Gly Pro Gly Ala Ser Gly Gln Tyr Gly Pro Gly
100 105 110

Val Leu Gly Pro Gly Val Leu Gly Pro Gly Ser Ser Ala Ala Ala Ala
115 120 125

Ala Ala Ala Gly Ser Tyr Gly Ser Gly Pro Gly Val Leu Gly Pro Tyr
130 135 140

Gly Ser Ala Ala Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly Gln Tyr
145 150 155 160

Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser Gly Pro Gly Gln Tyr Gly
165 170 175

Pro Gly Val Leu Gly Pro Ser Ala Ser Ala Ala Ala Ala Ala Ala Ala
180 185 190

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

Ala Ala Ala Ala Ala Ala Gly Ser Tyr Gly Ser Gly Pro Gly Val Leu
210 215 220

Gly Pro Tyr Gly Pro Gly Gln Ser Gly Ser Gly Val Leu Gly Pro Gly
225 230 235 240

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

Gly Val Leu Gly Pro Tyr Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala
260 265 270

Ala Ala Gly Ser Tyr Gly Tyr Gly Pro Gly Val Leu Gly Pro Tyr Gly
275 280 285

Pro Gly Ala Ser Gly Gln Asn Gly Pro Gly Ser Gly Gln Tyr Gly Pro
290 295 300

Gly Val Leu Gly Pro Gly Pro Ser Ala Ala Ala Ala Ala Ala Ala Gly
305 310 315 320

Pro Gly Val Leu Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala Ala Ala
325 330 335

Ala Ala Ala Gly Ser Tyr Gly Pro Gly Val Leu Gly Pro Gly Gln Tyr
340 345 350

Gly Pro Gly Ser Ser Gly Pro Gly Val Leu Gly Pro Tyr Gly Pro Gly
355 360 365

Ser Ser Ala Ala Ala Ala Ala Ala Ala Gly Ser Tyr Gly Pro Gly Val
370 375 380

Leu Gly Pro Tyr Gly Pro Gly Pro Ser Ala Ala Ala Ala Ala Ala Ala

385		390		395		400									
Gly	Ser	Tyr	Val	Leu	Gly	Pro	Gly	Val	Leu	Gly	Pro	Tyr	Gly	Pro	Gly
			405						410					415	
Ala	Ser	Gly	Pro	Gly	Val	Leu	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala
			420					425					430		
Ala	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly	Gln	Tyr	Gly	Pro	Gly	Val	Leu
			435					440				445			
Gly	Pro	Ser	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Ser	Tyr	Gly
	450						455					460			
Ser	Gly	Pro	Gly	Gln	Tyr	Gly	Pro	Tyr	Gly	Pro	Gly	Gln	Ser	Gly	Pro
465					470					475					480
Gly	Ser	Gly	Val	Leu	Gly	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala
			485						490					495	
Ala	Ala	Ala	Ala	Ala	Ala	Gly	Ser	Tyr	Gly	Pro	Gly	Val	Leu	Gly	Pro
			500						505				510		
Tyr	Gly	Pro	Gly	Pro	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly
		515						520					525		
Ser	Gly	Gln	Tyr	Gly	Pro	Gly	Ala	Ser	Gly	Gln	Asn	Gly	Pro	Gly	Ser
	530						535				540				
Gly	Gln	Tyr	Gly	Pro	Gly	Val	Leu	Gly	Pro	Gly	Pro	Ser	Ala	Ala	Ala
545						550				555					560
Ala	Ala	Ala	Ala	Gly	Pro	Gly	Ser	Gly	Val	Leu	Gly	Pro	Gly	Ala	Ser
				565						570				575	

<210> 5
 <211> 576
 <212> PRT
 <213> Artificial Sequence

<220>

<223> PRT698

<400> 5

Met His His His His His His Ser Ser Gly Ser Ser Gly Pro Gly Val
1 5 10 15

Leu Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala Ala Ala Ala Ala Ala
20 25 30

Gly Ser Asn Gly Pro Gly Ser Gly Val Leu Gly Pro Gly Ile Ser Gly
35 40 45

Ile Tyr Gly Pro Gly Val Leu Gly Pro Gly Val Leu Gly Pro Gly Ser
50 55 60

Ser Ala Ala Ala Ala Ala Ala Ala Gly Pro Gly Ile Tyr Gly Pro Gly
65 70 75 80

Val Leu Gly Pro Ser Ala Ser Ala Ala Ala Ala Ala Ala Gly Pro
85 90 95

Gly Ser Gly Val Leu Gly Pro Gly Ala Ser Gly Ile Tyr Gly Pro Gly
100 105 110

Val Leu Gly Pro Gly Val Leu Gly Pro Gly Ser Ser Ala Ala Ala Ala
115 120 125

Ala Ala Ala Gly Ser Tyr Gly Ser Gly Pro Gly Val Leu Gly Pro Tyr
130 135 140

Gly Ser Ala Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly Ile Tyr
145 150 155 160

Gly Ile Gly Pro Tyr Gly Pro Gly Ala Ser Gly Pro Gly Ile Tyr Gly
165 170 175

Pro Gly Val Leu Gly Pro Ser Ala Ser Ala Ala Ala Ala Ala Ala Ala
180 185 190

Gly Ser Gly Val Leu Gly Pro Gly Ile Tyr Gly Pro Tyr Ala Ser Ala

195						200						205					
Ala	Ala	Ala	Ala	Ala	Ala	Gly	Ser	Tyr	Gly	Ser	Gly	Pro	Gly	Val	Leu		
	210					215					220						
Gly	Pro	Tyr	Gly	Pro	Gly	Ile	Ser	Gly	Ser	Gly	Val	Leu	Gly	Pro	Gly		
225					230					235					240		
Val	Leu	Gly	Pro	Tyr	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Pro		
				245					250					255			
Gly	Val	Leu	Gly	Pro	Tyr	Gly	Pro	Gly	Ser	Ser	Ala	Ala	Ala	Ala	Ala		
			260					265					270				
Ala	Ala	Gly	Ser	Tyr	Gly	Tyr	Gly	Pro	Gly	Val	Leu	Gly	Pro	Tyr	Gly		
		275					280					285					
Pro	Gly	Ala	Ser	Gly	Ile	Asn	Gly	Pro	Gly	Ser	Gly	Ile	Tyr	Gly	Pro		
	290					295					300						
Gly	Val	Leu	Gly	Pro	Gly	Pro	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Gly		
305					310				315						320		
Pro	Gly	Val	Leu	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala	Ala		
				325					330					335			
Ala	Ala	Ala	Gly	Ser	Tyr	Gly	Pro	Gly	Val	Leu	Gly	Pro	Gly	Ile	Tyr		
			340					345					350				
Gly	Pro	Gly	Ser	Ser	Gly	Pro	Gly	Val	Leu	Gly	Pro	Tyr	Gly	Pro	Gly		
		355					360					365					
Ser	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Ser	Tyr	Gly	Pro	Gly	Val		
		370					375					380					
Leu	Gly	Pro	Tyr	Gly	Pro	Gly	Pro	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Ala		
385					390				395						400		
Gly	Ser	Tyr	Val	Leu	Gly	Pro	Gly	Val	Leu	Gly	Pro	Tyr	Gly	Pro	Gly		
				405					410					415			

Ala Ser Gly Pro Gly Val Leu Gly Pro Tyr Gly Pro Gly Ala Ser Ala
420 425 430

Ala Ala Ala Ala Ala Ala Gly Pro Gly Ile Tyr Gly Pro Gly Val Leu
435 440 445

Gly Pro Ser Ala Ser Ala Ala Ala Ala Ala Ala Gly Ser Tyr Gly
450 455 460

Ser Gly Pro Gly Ile Tyr Gly Pro Tyr Gly Pro Gly Ile Ser Gly Pro
465 470 475 480

Gly Ser Gly Val Leu Gly Ile Gly Pro Tyr Gly Pro Gly Ala Ser Ala
485 490 495

Ala Ala Ala Ala Ala Ala Gly Ser Tyr Gly Pro Gly Val Leu Gly Pro
500 505 510

Tyr Gly Pro Gly Pro Ser Ala Ala Ala Ala Ala Ala Gly Pro Gly
515 520 525

Ser Gly Ile Tyr Gly Pro Gly Ala Ser Gly Ile Asn Gly Pro Gly Ser
530 535 540

Gly Ile Tyr Gly Pro Gly Val Leu Gly Pro Gly Pro Ser Ala Ala Ala
545 550 555 560

Ala Ala Ala Ala Gly Pro Gly Ser Gly Val Leu Gly Pro Gly Ala Ser
565 570 575

<210> 6
<211> 252
<212> PRT
<213> Artificial Sequence

<220>
<223> Collagen-type4-Kai

<400> 6

Met His His His His His His Ser Ser Gly Ser Ser Lys Asp Gly Val

1		5		10		15													
Pro	Gly	Phe	Pro	Gly	Ser	Glu	Gly	Val	Lys	Gly	Asn	Arg	Gly	Phe	Pro				
			20					25					30						
Gly	Leu	Met	Gly	Glu	Asp	Gly	Ile	Lys	Gly	Gln	Lys	Gly	Asp	Ile	Gly				
		35					40					45							
Pro	Pro	Gly	Phe	Arg	Gly	Pro	Thr	Glu	Tyr	Tyr	Asp	Thr	Tyr	Gln	Glu				
	50					55					60								
Lys	Gly	Asp	Glu	Gly	Thr	Pro	Gly	Pro	Pro	Gly	Pro	Arg	Gly	Ala	Arg				
65					70					75					80				
Gly	Pro	Gln	Gly	Pro	Ser	Gly	Pro	Pro	Gly	Val	Pro	Gly	Ser	Pro	Gly				
				85					90					95					
Ser	Ser	Arg	Pro	Gly	Leu	Arg	Gly	Ala	Pro	Gly	Trp	Pro	Gly	Leu	Lys				
			100					105					110						
Gly	Ser	Lys	Gly	Glu	Arg	Gly	Arg	Pro	Gly	Lys	Asp	Ala	Met	Gly	Thr				
		115					120					125							
Pro	Gly	Ser	Pro	Gly	Cys	Ala	Gly	Ser	Pro	Gly	Leu	Pro	Gly	Ser	Pro				
	130					135					140								
Gly	Pro	Pro	Gly	Pro	Pro	Gly	Asp	Ile	Val	Phe	Arg	Lys	Gly	Pro	Pro				
145					150					155					160				
Gly	Asp	His	Gly	Leu	Pro	Gly	Tyr	Leu	Gly	Ser	Pro	Gly	Ile	Pro	Gly				
				165				170						175					
Val	Asp	Gly	Pro	Lys	Gly	Glu	Pro	Gly	Leu	Leu	Cys	Thr	Gln	Cys	Pro				
			180					185					190						
Tyr	Ile	Pro	Gly	Pro	Pro	Gly	Leu	Pro	Gly	Leu	Pro	Gly	Leu	His	Gly				
		195					200					205							
Val	Lys	Gly	Ile	Pro	Gly	Arg	Gln	Gly	Ala	Ala	Gly	Leu	Lys	Gly	Ser				
	210					215					220								

Pro Gly Ser Pro Gly Asn Thr Gly Leu Pro Gly Phe Pro Gly Phe Pro
 225 230 235 240

Gly Ala Gln Gly Asp Pro Gly Leu Lys Gly Glu Lys
 245 250

<210> 7
 <211> 315
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Resilin-Kai

<400> 7

Met His His His His His His Ser Ser Gly Ser Ser Pro Glu Pro Pro
 1 5 10 15

Val Asn Ser Tyr Leu Pro Pro Ser Asp Ser Tyr Gly Ala Pro Gly Gln
 20 25 30

Ser Gly Pro Gly Gly Arg Pro Ser Asp Ser Tyr Gly Ala Pro Gly Gly
 35 40 45

Gly Asn Gly Gly Arg Pro Ser Asp Ser Tyr Gly Ala Pro Gly Gln Gly
 50 55 60

Gln Gly Gln Gly Gln Gly Gln Gly Gly Tyr Ala Gly Lys Pro Ser Asp
 65 70 75 80

Ser Tyr Gly Ala Pro Gly Gly Gly Asp Gly Asn Gly Gly Arg Pro Ser
 85 90 95

Ser Ser Tyr Gly Ala Pro Gly Gly Gly Asn Gly Gly Arg Pro Ser Asp
 100 105 110

Thr Tyr Gly Ala Pro Gly Gly Gly Asn Gly Gly Arg Pro Ser Asp Thr
 115 120 125

Tyr Gly Ala Pro Gly Gly Gly Gly Asn Gly Asn Gly Gly Arg Pro Ser

130

135

140

Ser Ser Tyr Gly Ala Pro Gly Gln Gly Gln Gly Asn Gly Asn Gly Gly
 145 150 155 160

Arg Pro Ser Ser Ser Tyr Gly Ala Pro Gly Gly Gly Asn Gly Gly Arg
 165 170 175

Pro Ser Asp Thr Tyr Gly Ala Pro Gly Gly Gly Asn Gly Gly Arg Pro
 180 185 190

Ser Asp Thr Tyr Gly Ala Pro Gly Gly Gly Asn Asn Gly Gly Arg Pro
 195 200 205

Ser Ser Ser Tyr Gly Ala Pro Gly Gly Gly Asn Gly Gly Arg Pro Ser
 210 215 220

Asp Thr Tyr Gly Ala Pro Gly Gly Gly Asn Gly Asn Gly Ser Gly Gly
 225 230 235 240

Arg Pro Ser Ser Ser Tyr Gly Ala Pro Gly Gln Gly Gln Gly Gly Phe
 245 250 255

Gly Gly Arg Pro Ser Asp Ser Tyr Gly Ala Pro Gly Gln Asn Gln Lys
 260 265 270

Pro Ser Asp Ser Tyr Gly Ala Pro Gly Ser Gly Asn Gly Asn Gly Gly
 275 280 285

Arg Pro Ser Ser Ser Tyr Gly Ala Pro Gly Ser Gly Pro Gly Gly Arg
 290 295 300

Pro Ser Asp Ser Tyr Gly Pro Pro Ala Ser Gly
 305 310 315

<210> 8

<211> 282

<212> PRT

<213> Artificial Sequence

<220>

<223> elastin short

<400> 8

Met His His His His His His Ser Ser Gly Ser Ser Leu Gly Val Ser
1 5 10 15

Ala Gly Ala Val Val Pro Gln Pro Gly Ala Gly Val Lys Pro Gly Lys
20 25 30

Val Pro Gly Val Gly Leu Pro Gly Val Tyr Pro Gly Gly Val Leu Pro
35 40 45

Gly Ala Arg Phe Pro Gly Val Gly Val Leu Pro Gly Val Pro Thr Gly
50 55 60

Ala Gly Val Lys Pro Lys Ala Pro Gly Val Gly Gly Ala Phe Ala Gly
65 70 75 80

Ile Pro Gly Val Gly Pro Phe Gly Gly Pro Gln Pro Gly Val Pro Leu
85 90 95

Gly Tyr Pro Ile Lys Ala Pro Lys Leu Pro Gly Gly Tyr Gly Leu Pro
100 105 110

Tyr Thr Thr Gly Lys Leu Pro Tyr Gly Tyr Gly Pro Gly Gly Val Ala
115 120 125

Gly Ala Ala Gly Lys Ala Gly Tyr Pro Thr Gly Thr Gly Val Gly Pro
130 135 140

Gln Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala Ala Lys Phe Gly Ala
145 150 155 160

Gly Ala Ala Gly Val Leu Pro Gly Val Gly Gly Ala Gly Val Pro Gly
165 170 175

Val Pro Gly Ala Ile Pro Gly Ile Gly Gly Ile Ala Gly Val Gly Thr
180 185 190

Pro Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala Lys Tyr

195

200

205

Gly Ala Ala Ala Gly Leu Val Pro Gly Gly Pro Gly Phe Gly Pro Gly
 210 215 220

Val Val Gly Val Pro Gly Ala Gly Val Pro Gly Val Gly Val Pro Gly
 225 230 235 240

Ala Gly Ile Pro Val Val Pro Gly Ala Gly Ile Pro Gly Ala Ala Val
 245 250 255

Pro Gly Val Val Ser Pro Glu Ala Ala Ala Lys Ala Ala Ala Lys Ala
 260 265 270

Ala Lys Tyr Gly Ala Arg Pro Gly Val Gly
 275 280

<210> 9

<211> 468

<212> PRT

<213> Artificial Sequence

<220>

<223> type I keratin 26

<400> 9

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

Gly Thr Gly Arg Leu Thr Gly Gly Arg Thr Gly Phe Arg Ala Gly Asn
 20 25 30

Val Cys Ser Gly Leu Gly Ala Gly Ser Ser Phe Ser Gly Pro Leu Gly
 35 40 45

Ser Val Ser Ser Lys Gly Ser Phe Ser His Gly Gly Gly Gly Leu Gly
 50 55 60

Ser Gly Val Cys Thr Gly Phe Leu Glu Asn Glu His Gly Leu Leu Pro
 65 70 75 80

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

Tyr Leu Asp His Val Cys Thr Leu Glu Glu Ala Asn Ala Asp Leu Glu
100 105 110

Gln Lys Ile Lys Gly Trp Tyr Glu Lys Tyr Gly Pro Gly Ser Gly Arg
115 120 125

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

Lys Arg Gln Ile Ile Ser Val Thr Thr Cys Asn Ala Ser Ile Val Leu
145 150 155 160

Gln Asn Glu Asn Ala Arg Leu Thr Ala Asp Asp Phe Arg Leu Lys Cys
165 170 175

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

Leu His Arg Val Met Asp Glu Leu Thr Leu Cys Thr Ser Asp Leu Glu
195 200 205

Met Gln Cys Glu Ala Leu Ser Glu Glu Leu Thr Tyr Leu Lys Lys Asn
210 215 220

His Gln Glu Glu Met Lys Val Met Gln Gly Ala Ala Arg Gly Asn Val
225 230 235 240

Asn Val Glu Ile Asn Ala Ala Pro Gly Val Asp Leu Thr Val Leu Leu
245 250 255

Asn Asn Met Arg Ala Glu Tyr Glu Asp Leu Ala Glu Gln Asn His Glu
260 265 270

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

Ile Ser Asp Asp Ala Gly Ala Ala Met Ala Ala Arg Asn Glu Leu Met

290

295

300

Glu Leu Lys Arg Asn Leu Gln Thr Leu Glu Ile Glu Leu Gln Ser Leu
 305 310 315 320

Leu Ala Met Lys His Ser Tyr Glu Cys Ser Leu Ala Glu Thr Glu Ser
 325 330 335

Asn Tyr Cys His Gln Leu Gln Gln Ile Gln Glu Gln Ile Gly Ala Met
 340 345 350

Glu Asp Gln Leu Gln Gln Ile Arg Met Glu Thr Glu Gly Gln Lys Leu
 355 360 365

Glu His Glu Arg Leu Leu Asp Val Lys Ile Phe Leu Glu Lys Glu Ile
 370 375 380

Glu Met Tyr Cys Lys Leu Ile Asp Gly Glu Gly Arg Lys Ser Lys Ser
 385 390 395 400

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

Val Lys Asp Ser Lys Glu Glu Ala Val Val Lys Thr Val Val Gly Glu
 420 425 430

Leu Asp Gln Leu Gly Ser Val Leu Ser Leu Arg Val His Ser Val Glu
 435 440 445

Glu Lys Ser Ser Lys Ile Ser Asn Ile Thr Met Glu Gln Arg Leu Pro
 450 455 460

Ser Lys Val Pro
 465

<210> 10

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> HisTag

<400> 10

Met Glu Thr His Ile Ser His Ile Ser His Ile Ser His Ile Ser His
1 5 10 15

Ile Ser His Ile Ser Ser Glu Arg Ser Glu Arg Gly Leu Tyr Ser Glu
20 25 30

Arg Ser Glu Arg
35

<210> 11

<211> 2375

<212> PRT

<213> Artificial Sequence

<220>

<223> PRT799

<400> 11

Met His His His His His His Ser Ser Gly Ser Ser Gly Pro Gly Gln
1 5 10 15

Gln Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala Ala Ala Ala Gly Gln
20 25 30

Asn Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Gln Ser Gly Gln Tyr
35 40 45

Gly Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Gly Ser Ser Ala
50 55 60

Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro
65 70 75 80

Ser Ala Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly Gln Gln Gly
85 90 95

Pro Gly Ala Ser Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln
100 105 110

Gln Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser
115 120 125

Gly Pro Gly Gln Gln Gly Pro Tyr Gly Ser Ala Ala Ala Ala Gly
130 135 140

Pro Gly Ser Gly Gln Tyr Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser
145 150 155 160

Gly Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala
165 170 175

Ala Ala Ala Ala Gly Ser Gly Gln Gln Gly Pro Gly Gln Tyr Gly Pro
180 185 190

Tyr Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly
195 200 205

Gln Gln Gly Pro Tyr Gly Pro Gly Gln Ser Gly Ser Gly Gln Gln Gly
210 215 220

Pro Gly Gln Gln Gly Pro Tyr Ala Ser Ala Ala Ala Ala Gly Pro
225 230 235 240

Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala
245 250 255

Gly Gln Tyr Gly Tyr Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly
260 265 270

Ala Ser Gly Gln Asn Gly Pro Gly Ser Gly Gln Tyr Gly Pro Gly Gln
275 280 285

Gln Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Gly Pro Gly Gln Gln
290 295 300

Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala Ala Ala Gly Gln Tyr
305 310 315 320

Gly Pro Gly Gln Gln Gly Pro Gly Gln Tyr Gly Pro Gly Ser Ser Gly

325

330

335

Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ser Ser Ala Ala Ala Ala
 340 345 350

Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Gln
 355 360 365

Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gln Gln Gly Pro Gly Gln Gln
 370 375 380

Gly Pro Tyr Gly Pro Gly Ala Ser Gly Pro Gly Gln Gln Gly Pro Tyr
 385 390 395 400

Gly Pro Gly Ala Ser Ala Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly
 405 410 415

Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala Ala Ala Gly Gln
 420 425 430

Tyr Gly Ser Gly Pro Gly Gln Tyr Gly Pro Tyr Gly Pro Gly Gln Ser
 435 440 445

Gly Pro Gly Ser Gly Gln Gln Gly Gln Gly Pro Tyr Gly Pro Gly Ala
 450 455 460

Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro
 465 470 475 480

Tyr Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly
 485 490 495

Gln Tyr Gly Pro Gly Ala Ser Gly Gln Asn Gly Pro Gly Ser Gly Gln
 500 505 510

Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala
 515 520 525

Gly Gln Tyr Gln Gln Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly
 530 535 540

Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly Gln
545 550 555 560

Gln Gly Pro Tyr Gly Pro Gly Gln Ser Gly Ser Gly Gln Gln Gly Pro
565 570 575

Gly Gln Gln Gly Pro Tyr Ala Ser Ala Ala Ala Ala Ala Gly Pro Gly
580 585 590

Ser Gly Gln Gln Gly Pro Gly Ala Ser Gly Gln Gln Gly Pro Tyr Gly
595 600 605

Pro Gly Ala Ser Ala Ala Ala Ala Ala Gly Gln Asn Gly Pro Gly Ser
610 615 620

Gly Gln Gln Gly Pro Gly Gln Ser Gly Gln Tyr Gly Pro Gly Gln Gln
625 630 635 640

Gly Pro Gly Gln Gln Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala Gly
645 650 655

Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala
660 665 670

Ala Ala Ala Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Ala Ser Gly
675 680 685

Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Gly Ser
690 695 700

Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly Gln Gln
705 710 715 720

Gly Pro Tyr Gly Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly Gln
725 730 735

Tyr Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser Gly Pro Gly Gln Tyr
740 745 750

Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala Ala Gly
755 760 765

Ser Gly Gln Gln Gly Pro Gly Gln Tyr Gly Pro Tyr Ala Ser Ala Ala
770 775 780

Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly Gln Gln Gly Pro Tyr
785 790 795 800

Gly Pro Gly Gln Ser Gly Ser Gly Gln Gln Gly Pro Gly Gln Gln Gly
805 810 815

Pro Tyr Ala Ser Ala Ala Ala Ala Ala Gly Pro Gly Gln Gln Gly Pro
820 825 830

Tyr Gly Pro Gly Ser Ser Ala Ala Ala Ala Gly Gln Tyr Gly Tyr
835 840 845

Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ala Ser Gly Gln Asn
850 855 860

Gly Pro Gly Ser Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln
865 870 875 880

Ser Ala Ala Ala Ala Ala Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro
885 890 895

Gly Ala Ser Ala Ala Ala Ala Gly Gln Tyr Gly Pro Gly Gln Gln
900 905 910

Gly Pro Gly Gln Tyr Gly Pro Gly Ser Ser Gly Pro Gly Gln Gln Gly
915 920 925

Pro Tyr Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly
930 935 940

Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Gln Ser Ala Ala Ala Ala
945 950 955 960

Ala Gly Gln Tyr Gln Gln Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro
965 970 975

Gly Ala Ser Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ala Ser
980 985 990

Ala Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly
995 1000 1005

Pro Ser Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly
1010 1015 1020

Pro Gly Gln Tyr Gly Pro Tyr Gly Pro Gly Gln Ser Gly Pro Gly
1025 1030 1035

Ser Gly Gln Gln Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser Ala
1040 1045 1050

Ala Ala Ala Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Tyr
1055 1060 1065

Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly
1070 1075 1080

Gln Tyr Gly Pro Gly Ala Ser Gly Gln Asn Gly Pro Gly Ser Gly
1085 1090 1095

Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Ser Ala Ala Ala
1100 1105 1110

Ala Ala Gly Gln Tyr Gln Gln Gly Pro Gly Gln Gln Gly Pro Tyr
1115 1120 1125

Gly Pro Gly Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser
1130 1135 1140

Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Gln Ser Gly Ser
1145 1150 1155

Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Tyr Ala Ser Ala Ala

1160	1165	1170
Ala Ala Ala Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Ala Ser 1175 1180 1185		
Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala Ala Ala 1190 1195 1200		
Ala Gly Gln Asn Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Gln 1205 1210 1215		
Ser Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly 1220 1225 1230		
Pro Gly Ser Ser Ala Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly 1235 1240 1245		
Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala Ala Ala Gly 1250 1255 1260		
Pro Gly Ser Gly Gln Gln Gly Pro Gly Ala Ser Gly Gln Tyr Gly 1265 1270 1275		
Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Gly Ser Ser Ala 1280 1285 1290		
Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly Gln Gln Gly 1295 1300 1305		
Pro Tyr Gly Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly Gln 1310 1315 1320		
Tyr Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser Gly Pro Gly Gln 1325 1330 1335		
Tyr Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala Ala 1340 1345 1350		
Ala Gly Ser Gly Gln Gln Gly Pro Gly Gln Tyr Gly Pro Tyr Ala 1355 1360 1365		

Ser	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly	Ser	Gly	Pro	Gly	Gln
1370						1375					1380			
Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Gln	Ser	Gly	Ser	Gly	Gln	Gln	Gly
1385						1390					1395			
Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Gly
1400						1405					1410			
Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ser	Ser	Ala	Ala	Ala
1415						1420					1425			
Ala	Ala	Gly	Gln	Tyr	Gly	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr
1430						1435					1440			
Gly	Pro	Gly	Ala	Ser	Gly	Gln	Asn	Gly	Pro	Gly	Ser	Gly	Gln	Tyr
1445						1450					1455			
Gly	Pro	Gly	Gln	Gln	Gly	Pro	Gly	Gln	Ser	Ala	Ala	Ala	Ala	Ala
1460						1465					1470			
Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala
1475						1480					1485			
Ala	Ala	Ala	Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Gly	Gln
1490						1495					1500			
Tyr	Gly	Pro	Gly	Ser	Ser	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly
1505						1510					1515			
Pro	Gly	Ser	Ser	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly	Pro	Gly
1520						1525					1530			
Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Gln	Ser	Ala	Ala	Ala	Ala	Ala
1535						1540					1545			
Gly	Gln	Tyr	Gln	Gln	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro
1550						1555					1560			

Gly	Ala	Ser	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala
1565						1570					1575			
Ser	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly	Gln	Tyr	Gly	Pro	Gly	Gln
1580						1585					1590			
Gln	Gly	Pro	Ser	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly
1595						1600					1605			
Ser	Gly	Pro	Gly	Gln	Tyr	Gly	Pro	Tyr	Gly	Pro	Gly	Gln	Ser	Gly
1610						1615					1620			
Pro	Gly	Ser	Gly	Gln	Gln	Gly	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala
1625						1630					1635			
Ser	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly
1640						1645					1650			
Pro	Tyr	Gly	Pro	Gly	Gln	Ser	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly
1655						1660					1665			
Ser	Gly	Gln	Tyr	Gly	Pro	Gly	Ala	Ser	Gly	Gln	Asn	Gly	Pro	Gly
1670						1675					1680			
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1685						1690					1695			
Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gln	Gln	Gly	Pro	Gly	Gln	Gln	Gly
1700						1705					1710			
Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr
1715						1720					1725			
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1730						1735					1740			
Gly	Ser	Gly	Gln	Gln	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Ala	Ser
1745						1750					1755			

Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly
1760 1765 1770

Ala Ser Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala
1775 1780 1785

Ala Ala Ala Gly Gln Asn Gly Pro Gly Ser Gly Gln Gln Gly Pro
1790 1795 1800

Gly Gln Ser Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln
1805 1810 1815

Gln Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala Gly Pro Gly Gln
1820 1825 1830

Tyr Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala Ala
1835 1840 1845

Ala Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Ala Ser Gly Gln
1850 1855 1860

Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Gly Ser
1865 1870 1875

Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly Gln
1880 1885 1890

Gln Gly Pro Tyr Gly Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser
1895 1900 1905

Gly Gln Tyr Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser Gly Pro
1910 1915 1920

Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala
1925 1930 1935

Ala Ala Ala Gly Ser Gly Gln Gln Gly Pro Gly Gln Tyr Gly Pro
1940 1945 1950

Tyr Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro

1955				1960				1965						
Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Gln	Ser	Gly	Ser	Gly	Gln
1970						1975					1980			
Gln	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Ala	Ser	Ala	Ala	Ala	Ala
1985						1990					1995			
Ala	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ser	Ser	Ala
2000						2005					2010			
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2015						2020					2025			
Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Gly	Gln	Asn	Gly	Pro	Gly	Ser	Gly
2030						2035					2040			
Gln	Tyr	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Gly	Gln	Ser	Ala	Ala	Ala
2045						2050					2055			
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2060						2065					2070			
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2075						2080					2085			
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2090						2095					2100			
Tyr	Gly	Pro	Gly	Ser	Ser	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gly
2105						2110					2115			
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Gly	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly	Gln	Tyr	Gly	Pro
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2225						2230					2235			
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2270						2275					2280			
Ser	Ala	Ala	Ala	Ala	Ala	Gly	Gln	Tyr	Gln	Gln	Gly	Pro	Gly	Gln
2285						2290					2295			
Gln	Gly	Pro	Tyr	Gly	Pro	Gly	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Gly
2300						2305					2310			
Gln	Tyr	Gly	Ser	Gly	Pro	Gly	Gln	Gln	Gly	Pro	Tyr	Gly	Pro	Gly
2315						2320					2325			
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2330						2335					2340			
Ala	Ser	Ala	Ala	Ala	Ala	Ala	Gly	Pro	Gly	Ser	Gly	Gln	Gln	Gly
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His His
 2375

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Asn Gly Pro Gly Ser Gly Gln Gln Gly Pro Gly Gln Ser Gly Gln Tyr
 35 40 45

Gly Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Gly Ser Ser Ala
 50 55 60

Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro
 65 70 75 80

Ser Ala Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly Gln Gln Gly
 85 90 95

Pro Gly Ala Ser Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln
 100 105 110

Gln Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser
 115 120 125

Gly Pro Gly Gln Gln Gly Pro Tyr Gly Ser Ala Ala Ala Ala Ala Gly
 130 135 140

Pro Gly Ser Gly Gln Tyr Gly Gln Gly Pro Tyr Gly Pro Gly Ala Ser
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Gly Pro Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala
 165 170 175

Ala Ala Ala Ala Gly Ser Gly Gln Gln Gly Pro Gly Gln Tyr Gly Pro
 180 185 190

Tyr Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly
 195 200 205

Gln Gln Gly Pro Tyr Gly Pro Gly Gln Ser Gly Ser Gly Gln Gln Gly
 210 215 220

Pro Gly Gln Gln Gly Pro Tyr Ala Ser Ala Ala Ala Ala Gly Pro
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Gly Gln Gln Gly Pro Tyr Gly Pro Gly Ser Ser Ala Ala Ala Ala Ala
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Gly Gln Tyr Gly Tyr Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly
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Ala Ser Gly Gln Asn Gly Pro Gly Ser Gly Gln Tyr Gly Pro Gly Gln
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Gln Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Gly Pro Gly Gln Gln
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Gly Pro Tyr Gly Pro Gly Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr
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Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro Tyr Gly Pro Gly Gln
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 385 390 395 400

Gly Pro Gly Ala Ser Ala Ala Ala Ala Ala Gly Pro Gly Gln Tyr Gly
 405 410 415

Pro Gly Gln Gln Gly Pro Ser Ala Ser Ala Ala Ala Ala Gly Gln
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Tyr Gly Ser Gly Pro Gly Gln Tyr Gly Pro Tyr Gly Pro Gly Gln Ser
 435 440 445

Gly Pro Gly Ser Gly Gln Gln Gly Gln Gly Pro Tyr Gly Pro Gly Ala
 450 455 460

Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Pro Gly Gln Gln Gly Pro
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Tyr Gly Pro Gly Gln Ser Ala Ala Ala Ala Ala Gly Pro Gly Ser Gly
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Gln Tyr Gly Pro Gly Ala Ser Gly Gln Asn Gly Pro Gly Ser Gly Gln
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Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly Pro Gly Gln
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Gln Tyr Gly Pro Gly Gln Gln Gly Pro Gly Gln Gln Gly Pro Gly Ser
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775

780

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Pro Ser Ala Ser Ala Ala Ala Ala Ala Gly Gln Tyr Gly Ser Gly
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