

SEQUENCE LISTING

<110> Teijin Pharma Limited
KM Biologics Co., Ltd.

<120> Humanized anti IGF-1R antibody

<130> P190562WO

<150> 2018-226669

<151> 2018-12-03

<160> 24

<170> PatentIn version 3.5

<210> 1

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-H1

<400> 1

Ser Tyr Trp Met His

1 5

<210> 2

<211> 17

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<213> Artificial Sequence

<220>

<223> CDR-H2

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Glu Thr Asn Pro Ser Asn Ser Val Thr Asn Tyr Asn Glu Lys Phe Lys

1 5 10 15

Ser

<210> 3
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<223> CDR-H3

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Gly Arg Gly Arg Gly Phe Ala Tyr
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<223> CDR-L1

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Arg Ala Ser Gln Asn Ile Asn Phe Trp Leu Ser
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Lys Ala Ser Asn Leu His Thr
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Leu Gln Gly Gln Ser Tyr Pro Tyr Thr
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<223> R11-16VH

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Gln Val Gln Leu Val Gln Pro Gly Ala Glu Leu Val Lys Pro Gly Ala
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Ser Val Lys Val Ser Cys Lys Ala Pro Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Glu Thr Asn Pro Ser Asn Ser Val Thr Asn Tyr Asn Glu Lys Phe
50 55 60

Lys Ser Lys Ala Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Thr Ile Gly Arg Gly Arg Gly Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser
115

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<213> Artificial Sequence

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<223> R11-16VL-C36Y

<400> 8

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

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

Tyr Lys Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

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

	85	90	95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	

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 <212> PRT
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 <223> R11-16VL-C36A

<400> 9

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asn Ile Asn Phe Trp
20 25 30

Leu Ser Trp Ala Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Ile Ala Thr Tyr Tyr Cys Leu Gln Gly Gln Ser Tyr Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

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<212> PRT
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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asn Ile Asn Phe Trp
20 25 30

Leu Ser Trp Ser Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Ile Ala Thr Tyr Tyr Cys Leu Gln Gly Gln Ser Tyr Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 11

<211> 107
<212> PRT
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<223> R11-16VL-C36F

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

Leu Ser Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Ile Ala Thr Tyr Tyr Cys Leu Gln Gly Gln Ser Tyr Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 12
<211> 107
<212> PRT
<213> Artificial Sequence

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<223> R11-16VL-C36

<400> 12

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asn Ile Asn Phe Trp
20 25 30

Leu Ser Trp Cys Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Lys Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Ile Ala Thr Tyr Tyr Cys Leu Gln Gly Gln Ser Tyr Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 13

<211> 70

<212> PRT

<213> Homo sapiens

<220>

<223> Human mature IGF-I

<400> 13

Gly Pro Glu Thr Leu Cys Gly Ala Glu Leu Val Asp Ala Leu Gln Phe

1 5 10 15

 Val Cys Gly Asp Arg Gly Phe Tyr Phe Asn Lys Pro Thr Gly Tyr Gly
 20 25 30

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

 Phe Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Ala Pro Leu
 50 55 60

 Lys Pro Ala Lys Ser Ala
 65 70

 <210> 14
 <211> 1367
 <212> PRT
 <213> Homo sapiens

 <220>
 <223> Human IGF-I receptor

 <400> 14

 Met Lys Ser Gly Ser Gly Gly Gly Ser Pro Thr Ser Leu Trp Gly Leu
 1 5 10 15

 Leu Phe Leu Ser Ala Ala Leu Ser Leu Trp Pro Thr Ser Gly Glu Ile
 20 25 30

 Cys Gly Pro Gly Ile Asp Ile Arg Asn Asp Tyr Gln Gln Leu Lys Arg
 35 40 45

 Leu Glu Asn Cys Thr Val Ile Glu Gly Tyr Leu His Ile Leu Leu Ile
 50 55 60

Ser Lys Ala Glu Asp Tyr Arg Ser Tyr Arg Phe Pro Lys Leu Thr Val
65 70 75 80

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

Gly Asp Leu Phe Pro Asn Leu Thr Val Ile Arg Gly Trp Lys Leu Phe
100 105 110

Tyr Asn Tyr Ala Leu Val Ile Phe Glu Met Thr Asn Leu Lys Asp Ile
115 120 125

Gly Leu Tyr Asn Leu Arg Asn Ile Thr Arg Gly Ala Ile Arg Ile Glu
130 135 140

Lys Asn Ala Asp Leu Cys Tyr Leu Ser Thr Val Asp Trp Ser Leu Ile
145 150 155 160

Leu Asp Ala Val Ser Asn Asn Tyr Ile Val Gly Asn Lys Pro Pro Lys
165 170 175

Glu Cys Gly Asp Leu Cys Pro Gly Thr Met Glu Glu Lys Pro Met Cys
180 185 190

Glu Lys Thr Thr Ile Asn Asn Glu Tyr Asn Tyr Arg Cys Trp Thr Thr
195 200 205

Asn Arg Cys Gln Lys Met Cys Pro Ser Thr Cys Gly Lys Arg Ala Cys
210 215 220

Thr Glu Asn Asn Glu Cys Cys His Pro Glu Cys Leu Gly Ser Cys Ser
225 230 235 240

Ala Pro Asp Asn Asp Thr Ala Cys Val Ala Cys Arg His Tyr Tyr Tyr

245	250	255
Ala Gly Val Cys Val Pro Ala Cys Pro Pro Asn Thr Tyr Arg Phe Glu		
260	265	270
Gly Trp Arg Cys Val Asp Arg Asp Phe Cys Ala Asn Ile Leu Ser Ala		
275	280	285
Glu Ser Ser Asp Ser Glu Gly Phe Val Ile His Asp Gly Glu Cys Met		
290	295	300
Gln Glu Cys Pro Ser Gly Phe Ile Arg Asn Gly Ser Gln Ser Met Tyr		
305	310	315
Cys Ile Pro Cys Glu Gly Pro Cys Pro Lys Val Cys Glu Glu Glu Lys		
325	330	335
Lys Thr Lys Thr Ile Asp Ser Val Thr Ser Ala Gln Met Leu Gln Gly		
340	345	350
Cys Thr Ile Phe Lys Gly Asn Leu Leu Ile Asn Ile Arg Arg Gly Asn		
355	360	365
Asn Ile Ala Ser Glu Leu Glu Asn Phe Met Gly Leu Ile Glu Val Val		
370	375	380
Thr Gly Tyr Val Lys Ile Arg His Ser His Ala Leu Val Ser Leu Ser		
385	390	395
Phe Leu Lys Asn Leu Arg Leu Ile Leu Gly Glu Glu Gln Leu Glu Gly		
405	410	415
Asn Tyr Ser Phe Tyr Val Leu Asp Asn Gln Asn Leu Gln Gln Leu Trp		
420	425	430

Asp Trp Asp His Arg Asn Leu Thr Ile Lys Ala Gly Lys Met Tyr Phe
435 440 445

Ala Phe Asn Pro Lys Leu Cys Val Ser Glu Ile Tyr Arg Met Glu Glu
450 455 460

Val Thr Gly Thr Lys Gly Arg Gln Ser Lys Gly Asp Ile Asn Thr Arg
465 470 475 480

Asn Asn Gly Glu Arg Ala Ser Cys Glu Ser Asp Val Leu His Phe Thr
485 490 495

Ser Thr Thr Thr Ser Lys Asn Arg Ile Ile Ile Thr Trp His Arg Tyr
500 505 510

Arg Pro Pro Asp Tyr Arg Asp Leu Ile Ser Phe Thr Val Tyr Tyr Lys
515 520 525

Glu Ala Pro Phe Lys Asn Val Thr Glu Tyr Asp Gly Gln Asp Ala Cys
530 535 540

Gly Ser Asn Ser Trp Asn Met Val Asp Val Asp Leu Pro Pro Asn Lys
545 550 555 560

Asp Val Glu Pro Gly Ile Leu Leu His Gly Leu Lys Pro Trp Thr Gln
565 570 575

Tyr Ala Val Tyr Val Lys Ala Val Thr Leu Thr Met Val Glu Asn Asp
580 585 590

His Ile Arg Gly Ala Lys Ser Glu Ile Leu Tyr Ile Arg Thr Asn Ala
595 600 605

Ser Val Pro Ser Ile Pro Leu Asp Val Leu Ser Ala Ser Asn Ser Ser
610 615 620

Ser Gln Leu Ile Val Lys Trp Asn Pro Pro Ser Leu Pro Asn Gly Asn
625 630 635 640

Leu Ser Tyr Tyr Ile Val Arg Trp Gln Arg Gln Pro Gln Asp Gly Tyr
645 650 655

Leu Tyr Arg His Asn Tyr Cys Ser Lys Asp Lys Ile Pro Ile Arg Lys
660 665 670

Tyr Ala Asp Gly Thr Ile Asp Ile Glu Glu Val Thr Glu Asn Pro Lys
675 680 685

Thr Glu Val Cys Gly Gly Glu Lys Gly Pro Cys Cys Ala Cys Pro Lys
690 695 700

Thr Glu Ala Glu Lys Gln Ala Glu Lys Glu Glu Ala Glu Tyr Arg Lys
705 710 715 720

Val Phe Glu Asn Phe Leu His Asn Ser Ile Phe Val Pro Arg Pro Glu
725 730 735

Arg Lys Arg Arg Asp Val Met Gln Val Ala Asn Thr Thr Met Ser Ser
740 745 750

Arg Ser Arg Asn Thr Thr Ala Ala Asp Thr Tyr Asn Ile Thr Asp Pro
755 760 765

Glu Glu Leu Glu Thr Glu Tyr Pro Phe Phe Glu Ser Arg Val Asp Asn
770 775 780

Lys Glu Arg Thr Val Ile Ser Asn Leu Arg Pro Phe Thr Leu Tyr Arg
785 790 795 800

Ile Asp Ile His Ser Cys Asn His Glu Ala Glu Lys Leu Gly Cys Ser
805 810 815

Ala Ser Asn Phe Val Phe Ala Arg Thr Met Pro Ala Glu Gly Ala Asp
820 825 830

Asp Ile Pro Gly Pro Val Thr Trp Glu Pro Arg Pro Glu Asn Ser Ile
835 840 845

Phe Leu Lys Trp Pro Glu Pro Glu Asn Pro Asn Gly Leu Ile Leu Met
850 855 860

Tyr Glu Ile Lys Tyr Gly Ser Gln Val Glu Asp Gln Arg Glu Cys Val
865 870 875 880

Ser Arg Gln Glu Tyr Arg Lys Tyr Gly Gly Ala Lys Leu Asn Arg Leu
885 890 895

Asn Pro Gly Asn Tyr Thr Ala Arg Ile Gln Ala Thr Ser Leu Ser Gly
900 905 910

Asn Gly Ser Trp Thr Asp Pro Val Phe Phe Tyr Val Gln Ala Lys Thr
915 920 925

Gly Tyr Glu Asn Phe Ile His Leu Ile Ile Ala Leu Pro Val Ala Val
930 935 940

Leu Leu Ile Val Gly Gly Leu Val Ile Met Leu Tyr Val Phe His Arg
945 950 955 960

Lys Arg Asn Asn Ser Arg Leu Gly Asn Gly Val Leu Tyr Ala Ser Val

	965		970		975
Asn Pro Glu Tyr Phe Ser Ala Ala Asp Val Tyr Val Pro Asp Glu Trp					
	980		985		990
Glu Val Ala Arg Glu Lys Ile Thr Met Ser Arg Glu Leu Gly Gln Gly					
	995		1000		1005
Ser Phe Gly Met Val Tyr Glu Gly Val Ala Lys Gly Val Val Lys					
	1010		1015		1020
Asp Glu Pro Glu Thr Arg Val Ala Ile Lys Thr Val Asn Glu Ala					
	1025		1030		1035
Ala Ser Met Arg Glu Arg Ile Glu Phe Leu Asn Glu Ala Ser Val					
	1040		1045		1050
Met Lys Glu Phe Asn Cys His His Val Val Arg Leu Leu Gly Val					
	1055		1060		1065
Val Ser Gln Gly Gln Pro Thr Leu Val Ile Met Glu Leu Met Thr					
	1070		1075		1080
Arg Gly Asp Leu Lys Ser Tyr Leu Arg Ser Leu Arg Pro Glu Met					
	1085		1090		1095
Glu Asn Asn Pro Val Leu Ala Pro Pro Ser Leu Ser Lys Met Ile					
	1100		1105		1110
Gln Met Ala Gly Glu Ile Ala Asp Gly Met Ala Tyr Leu Asn Ala					
	1115		1120		1125
Asn Lys Phe Val His Arg Asp Leu Ala Ala Arg Asn Cys Met Val					
	1130		1135		1140

Ala Glu	Asp Phe Thr Val Lys	Ile Gly Asp Phe Gly	Met Thr Arg
1145	1150	1155	
Asp Ile	Tyr Glu Thr Asp Tyr	Tyr Arg Lys Gly Gly	Lys Gly Leu
1160	1165	1170	
Leu Pro	Val Arg Trp Met Ser	Pro Glu Ser Leu Lys	Asp Gly Val
1175	1180	1185	
Phe Thr	Thr Tyr Ser Asp Val	Trp Ser Phe Gly Val	Val Leu Trp
1190	1195	1200	
Glu Ile	Ala Thr Leu Ala Glu	Gln Pro Tyr Gln Gly	Leu Ser Asn
1205	1210	1215	
Glu Gln	Val Leu Arg Phe Val	Met Glu Gly Gly Leu	Leu Asp Lys
1220	1225	1230	
Pro Asp	Asn Cys Pro Asp Met	Leu Phe Glu Leu Met	Arg Met Cys
1235	1240	1245	
Trp Gln	Tyr Asn Pro Lys Met	Arg Pro Ser Phe Leu	Glu Ile Ile
1250	1255	1260	
Ser Ser	Ile Lys Glu Glu Met	Glu Pro Gly Phe Arg	Glu Val Ser
1265	1270	1275	
Phe Tyr	Tyr Ser Glu Glu Asn	Lys Leu Pro Glu Pro	Glu Glu Leu
1280	1285	1290	
Asp Leu	Glu Pro Glu Asn Met	Glu Ser Val Pro Leu	Asp Pro Ser
1295	1300	1305	

Ala Ser	Ser Ser Ser	Leu Pro	Leu Pro Asp Arg His	Ser Gly His
1310		1315		1320

Lys Ala	Glu Asn Gly	Pro Gly	Pro Gly Val Leu Val	Leu Arg Ala
1325		1330		1335

Ser Phe	Asp Glu Arg	Gln Pro	Tyr Ala His Met Asn	Gly Gly Arg
1340		1345		1350

Lys Asn	Glu Arg Ala	Leu Pro	Leu Pro Gln Ser Ser	Thr Cys
1355		1360		1365

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 <211> 4128
 <212> DNA
 <213> Homo sapiens

<220>
 <223> Human IGF-I receptor

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aacgactatc agcagctgaa gcgcctggag aactgcacgg tgatcgaggg ctacctccac	180
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<210> 16

<211> 1367

<212> PRT

<213> *Cavia porcellus*

<220>

<223> *Cavia porcellus* IGF-I receptor

<400> 16

Met Lys Ser Gly Ser Gly Gly Gly Ser Pro Thr Ser Leu Trp Gly Leu
1 5 10 15

Leu Phe Leu Ser Ala Ala Leu Ser Leu Trp Pro Thr Ser Gly Glu Ile

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

Asn Arg Cys Gln Lys Met Cys Pro Ser Ala Cys Gly Lys Arg Ala Cys
210 215 220

Thr Glu Tyr Gln Glu Cys Cys His Pro Glu Cys Leu Gly Ser Cys His
225 230 235 240

Ala Pro Asp Asp Asp Thr Ala Cys Val Ala Cys Arg His Phe Tyr Tyr
245 250 255

Ala Gly Ile Cys Val Pro Ala Cys Pro Pro Gly Thr Tyr Arg Phe Glu
260 265 270

Gly Trp Arg Cys Val His Arg Asp Phe Cys Ala Asn Ile Pro Asn Ala
275 280 285

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

Gln Glu Cys Pro Ser Gly Phe Ile Arg Asn Gly Ser Gln Ser Met Tyr
305 310 315 320

Cys Ile Pro Cys Glu Gly Pro Cys Pro Lys Val Cys Glu Glu Glu Lys
325 330 335

Lys Thr Lys Thr Ile Asp Ser Val Thr Ser Ala Gln Met Leu Gln Gly
340 345 350

Cys Thr Ile Phe Lys Gly Asn Leu Leu Ile Asn Ile Arg Arg Gly Asn
355 360 365

Asn Ile Ala Ser Glu Leu Glu Asn Phe Met Gly Leu Ile Glu Val Val
370 375 380

Thr Gly Tyr Val Lys Ile Arg His Ser His Ala Leu Val Ser Leu Ser
385 390 395 400

Phe Leu Lys Asn Leu Arg Leu Ile Leu Gly Glu Glu Gln Leu Glu Gly
405 410 415

Asn Tyr Ser Phe Tyr Val Leu Asp Asn Gln Asn Leu Gln Gln Leu Trp
420 425 430

Asp Trp Asp His Arg Asn Leu Thr Ile Lys Ser Gly Lys Met Tyr Phe
435 440 445

Ala Phe Asn Pro Lys Leu Cys Val Ser Glu Ile Tyr Arg Met Glu Glu
450 455 460

Val Thr Gly Thr Lys Gly Arg Gln Ser Lys Gly Asp Ile Asn Thr Arg
465 470 475 480

Asn Asn Gly Glu Arg Ala Ser Cys Glu Ser Asp Val Leu Arg Phe Thr
485 490 495

Ser Thr Thr Thr Ser Lys Asn Arg Ile Ile Ile Thr Trp His Arg Tyr
500 505 510

Arg Pro Pro Asp Tyr Arg Asp Leu Ile Ser Phe Thr Val Tyr Tyr Lys
515 520 525

Glu Ala Pro Phe Lys Asn Val Thr Glu Tyr Asp Gly Gln Asp Ala Cys
530 535 540

Gly Ser Asn Ser Trp Asn Met Val Asp Val Asp Leu Pro Pro Asn Lys
545 550 555 560

Asp Ala Glu Pro Gly Ile Leu Leu His Gly Leu Lys Pro Trp Thr Gln
565 570 575

Tyr Ala Val Tyr Val Lys Ala Val Thr Leu Thr Met Val Glu Asn Asp
580 585 590

His Ile Arg Gly Ala Lys Ser Glu Ile Leu Tyr Ile Arg Thr Asn Ala
595 600 605

Ser Val Pro Ser Ile Pro Leu Asp Val Leu Ser Ala Ser Asn Ser Ser
610 615 620

Ser Gln Leu Ile Val Lys Trp Asn Pro Pro Ser Leu Pro Asn Gly Asn
625 630 635 640

Leu Ser Tyr Tyr Ile Val Arg Trp Gln Arg Gln Pro Gln Asp Ser Tyr
645 650 655

Leu Tyr Arg His Asn Tyr Cys Ser Lys Asp Lys Ile Pro Ile Arg Lys
660 665 670

Tyr Ala Asp Gly Thr Ile Asp Val Glu Glu Val Thr Glu Asn Pro Lys
675 680 685

Thr Glu Val Cys Gly Gly Glu Lys Gly Pro Cys Cys Ala Cys Pro Lys
690 695 700

Thr Glu Ala Glu Lys Gln Ala Glu Lys Glu Glu Ala Glu Tyr Arg Lys
705 710 715 720

Val Phe Glu Asn Phe Leu His Asn Ser Ile Phe Val Pro Arg Pro Glu
725 730 735

Arg Arg Arg Arg Asp Val Ala Gln Met Ala Asn Thr Thr Met Ser Ser

740	745	750
Arg Ser Arg Asn Thr Thr Val Ala Asp Thr Tyr Asn Ala Thr Asp Pro		
755	760	765
Glu Glu Leu Glu Thr Glu Tyr Pro Phe Phe Glu Ser Arg Val Asp Asn		
770	775	780
Lys Glu Arg Thr Val Ile Ser Asn Leu Arg Pro Phe Thr Leu Tyr Arg		
785	790	795
		800
Ile Asp Ile His Ser Cys Asn His Glu Ala Glu Lys Leu Gly Cys Ser		
805	810	815
Ala Ser Asn Phe Val Phe Ala Arg Thr Met Pro Ala Glu Gly Ala Asp		
820	825	830
Asp Ile Pro Gly Pro Val Thr Trp Glu Ala Arg Pro Glu Asn Ser Ile		
835	840	845
Phe Leu Lys Trp Pro Glu Pro Glu Asn Pro Asn Gly Leu Ile Leu Met		
850	855	860
Tyr Glu Ile Lys Tyr Gly Ser Gln Val Glu Asp Gln Arg Glu Cys Val		
865	870	875
		880
Ser Arg Gln Glu Tyr Arg Lys Tyr Gly Gly Ala Lys Leu Ser Arg Leu		
885	890	895
Asn Pro Gly Asn Tyr Thr Ala Arg Ile Gln Ala Thr Ser Leu Ser Gly		
900	905	910
Asn Gly Ser Trp Thr Asp Pro Val Phe Phe Tyr Val Pro Ala Lys Thr		
915	920	925

Thr Tyr Glu Asn Phe Ile His Leu Ile Ile Ala Leu Pro Val Ala Ile
930 935 940

Leu Leu Ile Val Ala Gly Leu Ala Ile Met Leu Tyr Val Phe His Arg
945 950 955 960

Lys Arg Asn Ser Ser Arg Leu Gly Asn Gly Val Leu Tyr Ala Ser Val
965 970 975

Asn Pro Glu Tyr Phe Ser Ala Ala Asp Val Tyr Val Pro Asp Glu Trp
980 985 990

Glu Val Ala Arg Glu Lys Ile Thr Met Ser Arg Glu Leu Gly Gln Gly
995 1000 1005

Ser Phe Gly Met Val Tyr Glu Gly Val Ala Lys Gly Val Val Lys
1010 1015 1020

Asp Glu Pro Glu Thr Arg Val Ala Ile Lys Thr Val Asn Glu Ala
1025 1030 1035

Ala Ser Met Arg Glu Arg Ile Glu Phe Leu Asn Glu Ala Ser Val
1040 1045 1050

Met Lys Glu Phe Asn Cys His His Val Val Arg Leu Leu Gly Val
1055 1060 1065

Val Ser Gln Gly Gln Pro Thr Leu Val Ile Met Glu Leu Met Thr
1070 1075 1080

Arg Gly Asp Leu Lys Ser Tyr Leu Arg Ser Leu Arg Pro Glu Val
1085 1090 1095

Glu Asn	Ser Pro	Ile Leu	Ala	Pro Pro	Ser Leu	Ser	Lys Met	Ile
1100			1105			1110		
Gln Met	Ala Gly	Glu Ile	Ala	Asp Gly	Met Ala	Tyr	Leu Asn	Ala
1115			1120			1125		
Asn Lys	Phe Val	His Arg	Asp	Leu Ala	Ala Arg	Asn	Cys Met	Val
1130			1135			1140		
Ala Glu	Asp Phe	Thr Val	Lys	Ile Gly	Asp Phe	Gly	Met Thr	Arg
1145			1150			1155		
Asp Ile	Tyr Glu	Thr Asp	Tyr	Tyr Arg	Lys Gly	Gly	Lys Gly	Leu
1160			1165			1170		
Leu Pro	Val Arg	Trp Met	Ser	Pro Glu	Ser Leu	Lys	Asp Gly	Val
1175			1180			1185		
Phe Thr	Thr His	Ser Asp	Val	Trp Ser	Phe Gly	Val	Val Leu	Trp
1190			1195			1200		
Glu Ile	Ala Thr	Leu Ala	Glu	Gln Pro	Tyr Gln	Gly	Leu Ser	Asn
1205			1210			1215		
Glu Gln	Val Leu	Arg Phe	Val	Met Glu	Gly Gly	Leu	Leu Asp	Lys
1220			1225			1230		
Pro Asp	Asn Cys	Pro Asp	Met	Leu Phe	Glu Leu	Met	Arg Met	Cys
1235			1240			1245		
Trp Gln	Tyr Asn	Pro Lys	Met	Arg Pro	Ser Phe	Leu	Glu Ile	Ile
1250			1255			1260		

Ser Ser Val Lys Asp Glu Leu Glu Ala Gly Phe Arg Glu Val Ser
 1265 1270 1275

Phe Tyr Tyr Ser Glu Glu Asn Lys Pro Pro Glu Pro Glu Glu Leu
 1280 1285 1290

Asp Leu Glu Pro Glu Asn Met Glu Ser Val Pro Leu Asp Pro Ser
 1295 1300 1305

Ala Ser Ser Ser Ser Leu Pro Pro Pro Asp Arg His Ser Gly His
 1310 1315 1320

Lys Gly Glu Asn Gly Pro Gly Pro Gly Val Leu Val Leu Arg Ala
 1325 1330 1335

Ser Phe Asp Glu Arg Gln Pro Tyr Ala His Met Asn Gly Gly Arg
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Thr Asn Glu Arg Ala Leu Pro Leu Pro Gln Ser Ser Thr Cys
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<210> 17

<211> 4128

<212> DNA

<213> *Cavia porcellus*

<220>

<223> *Cavia porcellus* IGF-I receptor

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<210> 18

<211> 1367

<212> PRT

<213> Macaca fascicularis

<220>

<223> Macaca fascicularis IGF-I receptor

<400> 18

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Leu Phe Leu Ser Ala Ala Leu Ser Leu Trp Pro Thr Ser Gly Glu Ile
 20 25 30

Cys Gly Pro Gly Ile Asp Ile Arg Asn Asp Tyr Gln Gln Leu Lys Arg
 35 40 45

Leu Glu Asn Cys Thr Val Ile Glu Gly Tyr Leu His Ile Leu Leu Ile
 50 55 60

Ser Lys Ala Glu Asp Tyr Arg Ser Tyr Arg Phe Pro Lys Leu Thr Val
65 70 75 80

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

Gly Asp Leu Phe Pro Asn Leu Thr Val Ile Arg Gly Trp Lys Leu Phe
 100 105 110

Tyr Asn Tyr Ala Leu Val Ile Phe Glu Met Thr Asn Leu Lys Asp Ile
 115 120 125

Gly Leu Tyr Asn Leu Arg Asn Ile Thr Arg Gly Ala Ile Arg Ile Glu
 130 135 140

Lys Asn Ala Asp Leu Cys Tyr Leu Ser Thr Val Asp Trp Ser Leu Ile
145 150 155 160

Leu Asp Ala Val Ser Asn Asn Tyr Ile Val Gly Asn Lys Pro Pro Lys
165 170 175

Glu Cys Gly Asp Leu Cys Pro Gly Thr Met Glu Glu Lys Pro Met Cys
180 185 190

Glu Lys Thr Thr Ile Asn Asn Glu Tyr Asn Tyr Arg Cys Trp Thr Thr
195 200 205

Asn Arg Cys Gln Lys Met Cys Pro Ser Ala Cys Gly Lys Arg Ala Cys
210 215 220

Thr Glu Asn Asn Glu Cys Cys His Pro Glu Cys Leu Gly Ser Cys Ser
225 230 235 240

Ala Pro Asp Asn Asp Thr Ala Cys Val Ala Cys Arg His Tyr Tyr Tyr
245 250 255

Ala Gly Val Cys Val Pro Ala Cys Pro Pro Asn Thr Tyr Arg Phe Glu
260 265 270

Gly Trp Arg Cys Val Asp Arg Asp Phe Cys Ala Asn Ile Leu Ser Ala
275 280 285

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

Gln Glu Cys Pro Ser Gly Phe Ile Arg Asn Gly Ser Gln Ser Met Tyr
305 310 315 320

Cys Ile Pro Cys Glu Gly Pro Cys Pro Lys Val Cys Glu Glu Glu Lys
325 330 335

Lys Thr Lys Thr Ile Asp Ser Val Thr Ser Ala Gln Met Leu Gln Gly
340 345 350

Cys Thr Ile Phe Lys Gly Asn Leu Leu Ile Asn Ile Arg Arg Gly Asn
355 360 365

Asn Ile Ala Ser Glu Leu Glu Asn Phe Met Gly Leu Ile Glu Val Val
370 375 380

Thr Gly Tyr Val Lys Ile Arg His Ser His Ala Leu Val Ser Leu Ser
385 390 395 400

Phe Leu Lys Asn Leu Arg Leu Ile Leu Gly Glu Glu Gln Leu Glu Gly
405 410 415

Asn Tyr Ser Phe Tyr Val Leu Asp Asn Gln Asn Leu Gln Gln Leu Trp
420 425 430

Asp Trp Asp His Arg Asn Leu Thr Ile Lys Ala Gly Lys Met Tyr Phe
435 440 445

Ala Phe Asn Pro Lys Leu Cys Val Ser Glu Ile Tyr Arg Met Glu Glu
450 455 460

Val Thr Gly Thr Lys Gly Arg Gln Ser Lys Gly Asp Ile Asn Thr Arg
465 470 475 480

Asn Asn Gly Glu Arg Ala Ser Cys Glu Ser Asp Val Leu His Phe Thr
485 490 495

Ser Thr Thr Thr Trp Lys Asn Arg Ile Ile Ile Thr Trp His Arg Tyr
500 505 510

Arg Pro Pro Asp Tyr Arg Asp Leu Ile Ser Phe Thr Val Tyr Tyr Lys

515	520	525
Glu Ala Pro Phe Lys Asn Val Thr Glu Tyr Asp Gly Gln Asp Ala Cys		
530	535	540
Gly Ser Asn Ser Trp Asn Met Val Asp Val Asp Leu Pro Pro Asn Lys		
545	550	555
		560
Asp Val Glu Pro Gly Ile Leu Leu His Gly Leu Lys Pro Trp Thr Gln		
	565	570
		575
Tyr Ala Val Tyr Val Lys Ala Val Thr Leu Thr Met Val Glu Asn Asp		
	580	585
		590
His Ile Arg Gly Ala Lys Ser Glu Ile Leu Tyr Ile Arg Thr Asn Ala		
	595	600
		605
Ser Val Pro Ser Ile Pro Leu Asp Val Leu Ser Ala Ser Asn Ser Ser		
	610	615
		620
Ser Gln Leu Ile Val Lys Trp Asn Pro Pro Ser Leu Pro Asn Gly Asn		
625	630	635
		640
Leu Ser Tyr Tyr Ile Val Arg Trp Gln Arg Gln Pro Gln Asp Gly Tyr		
	645	650
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Leu Tyr Arg His Asn Tyr Cys Ser Lys Asp Lys Ile Pro Ile Arg Lys		
	660	665
		670
Tyr Ala Asp Gly Thr Ile Asp Ile Glu Glu Val Thr Glu Asn Pro Lys		
	675	680
		685
Thr Glu Val Cys Gly Gly Glu Lys Gly Pro Cys Cys Ala Cys Pro Lys		
	690	695
		700

Thr Glu Ala Glu Lys Gln Ala Glu Lys Glu Glu Ala Glu Tyr Arg Lys
705 710 715 720

Val Phe Glu Asn Phe Leu His Asn Ser Ile Phe Val Pro Arg Pro Glu
725 730 735

Arg Lys Arg Arg Asp Val Met Gln Val Ala Asn Thr Thr Met Ser Ser
740 745 750

Arg Ser Arg Asn Thr Thr Val Ala Asp Thr Tyr Asn Ile Thr Asp Leu
755 760 765

Glu Glu Leu Glu Thr Glu Tyr Pro Phe Phe Glu Ser Arg Val Asp Asn
770 775 780

Lys Glu Arg Thr Val Ile Ser Asn Leu Arg Pro Phe Thr Leu Tyr Arg
785 790 795 800

Ile Asp Ile His Ser Cys Asn His Glu Ala Glu Lys Leu Gly Cys Ser
805 810 815

Ala Ser Asn Phe Val Phe Ala Arg Thr Met Pro Ala Glu Gly Ala Asp
820 825 830

Asp Ile Pro Gly Pro Val Thr Trp Glu Pro Arg Pro Glu Asn Ser Ile
835 840 845

Phe Leu Lys Trp Pro Glu Pro Glu Asn Pro Asn Gly Leu Ile Leu Met
850 855 860

Tyr Glu Ile Lys Tyr Gly Ser Gln Val Glu Asp Gln Arg Glu Cys Val
865 870 875 880

Ser Arg Gln Glu Tyr Arg Lys Tyr Gly Gly Ala Lys Leu Asn Arg Leu
885 890 895

Asn Pro Gly Asn Tyr Thr Ala Arg Ile Gln Ala Thr Ser Leu Ser Gly
900 905 910

Asn Gly Ser Trp Thr Asp Pro Val Phe Phe Tyr Val Gln Ala Lys Thr
915 920 925

Gly Tyr Glu Asn Phe Ile His Leu Ile Ile Ala Leu Pro Val Ala Val
930 935 940

Leu Leu Ile Val Gly Gly Leu Val Ile Met Leu Tyr Val Phe His Arg
945 950 955 960

Lys Arg Asn Asn Ser Arg Leu Gly Asn Gly Val Leu Tyr Ala Ser Val
965 970 975

Asn Pro Glu Tyr Phe Ser Ala Ala Asp Val Tyr Val Pro Asp Glu Trp
980 985 990

Glu Val Ala Arg Glu Lys Ile Thr Met Ser Arg Glu Leu Gly Gln Gly
995 1000 1005

Ser Phe Gly Met Val Tyr Glu Gly Val Ala Lys Gly Val Val Lys
1010 1015 1020

Asp Glu Pro Glu Thr Arg Val Ala Ile Lys Thr Val Asn Glu Ala
1025 1030 1035

Ala Ser Met Arg Glu Arg Ile Glu Phe Leu Asn Glu Ala Ser Val
1040 1045 1050

Met Lys	Glu Phe Asn Cys His	His Val Val Arg Leu	Leu Gly Val
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Val Ser	Gln Gly Gln Pro Thr	Leu Val Ile Met Glu	Leu Met Thr
1070	1075	1080	
Arg Gly	Asp Leu Lys Ser Tyr	Leu Arg Ser Leu Arg	Pro Glu Met
1085	1090	1095	
Glu Asn	Asn Pro Val Leu Ala	Pro Pro Ser Leu Ser	Lys Met Ile
1100	1105	1110	
Gln Met	Ala Gly Glu Ile Ala	Asp Gly Met Ala Tyr	Leu Asn Ala
1115	1120	1125	
Asn Lys	Phe Val His Arg Asp	Leu Ala Ala Arg Asn	Cys Met Val
1130	1135	1140	
Ala Glu	Asp Phe Thr Val Lys	Ile Gly Asp Phe Gly	Met Thr Arg
1145	1150	1155	
Asp Ile	Tyr Glu Thr Asp Tyr	Tyr Arg Lys Gly Gly	Lys Gly Leu
1160	1165	1170	
Leu Pro	Val Arg Trp Met Ser	Pro Glu Ser Leu Lys	Asp Gly Val
1175	1180	1185	
Phe Thr	Thr Tyr Ser Asp Val	Trp Ser Phe Gly Val	Val Leu Trp
1190	1195	1200	
Glu Ile	Ala Thr Leu Ala Glu	Gln Pro Tyr Gln Gly	Leu Ser Asn
1205	1210	1215	
Glu Gln	Val Leu Arg Phe Val	Met Glu Gly Gly Leu	Leu Asp Lys

1220	1225	1230
Pro Asp Asn Cys Pro Asp Met	Leu Phe Glu Leu Met	Arg Met Cys
1235	1240	1245
Trp Gln Tyr Asn Pro Lys Met	Arg Pro Ser Phe Leu	Glu Ile Ile
1250	1255	1260
Ser Ser Ile Lys Asp Glu Met	Glu Pro Gly Phe Arg	Glu Val Ser
1265	1270	1275
Phe Tyr Tyr Ser Glu Glu Asn	Lys Leu Pro Glu Pro	Glu Glu Leu
1280	1285	1290
Asp Leu Glu Pro Glu Asn Met	Glu Ser Val Pro Leu	Asp Pro Ser
1295	1300	1305
Ala Ser Ser Ser Ser Leu Pro	Leu Pro Asp Arg His	Ser Gly His
1310	1315	1320
Lys Ala Glu Asn Gly Pro Gly	Pro Gly Val Leu Val	Leu Arg Ala
1325	1330	1335
Ser Phe Asp Glu Arg Gln Pro	Tyr Ala His Met Asn	Gly Gly Arg
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<210> 19

<211> 4128

<212> DNA

<213> *Macaca fascicularis*

<220>

<223> Macaca fascicularis IGF-I receptor

<400> 19

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