

<110> Pharmabcine Inc.
<120> Anti- Ang2 antibody and Use Thereof

<130> PP-B2372

<150> KR 19/021812

<151> 2019-02-25

<160> 61

<170> PatentIn version 3.5

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Ile Lys Asp Asp Gly Ser Gln Thr
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Thr Thr Glu Gly Leu Met Asn Gly Leu His Phe Asp Met
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Gly Tyr Ser Phe Thr Ser Tyr Trp
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Gln Ser Leu Leu His Ser Leu Gly Asp Asn Tyr
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Leu Gly Ser
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Met Gln Ser Leu Gln Thr Pro Pro Tyr Thr
1 5 10

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Gly Phe Thr Phe Ser Ser Tyr Ser
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<400> 14
Ile Ser Ala Ser Asp Gly Ala Thr
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<400> 15

Ala	Lys	Ile	Leu	Ala	Gly	Tyr	Ser	Gly	Pro	Met	Gly	Gly	Met	Asp	Val
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Arg	Asp	Ile	Ser	Asn	Tyr
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<400> 17

Gly	Ala	Ser
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<400> 18

Gln	Gln	Tyr	Tyr	Ser	Tyr	Pro	Leu	Thr
1				5				

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Gly Phe Ala Phe Gly Arg Tyr Glu
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Ile Asp Thr Gly Gly Gly Ala Lys
1 5

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<400> 21
Thr Thr Glu Gly Leu Met Asn Gly Leu His Phe Asp Met
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Gln Ala Ile Ser Thr Trp
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<400> 23
Thr Ala Ser
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Gln Gln Leu Asn Ser Tyr Pro Tyr Thr
1 5

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<400> 25
Gly Phe Thr Phe Asp Asp Cys Ala
1 5

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<400> 26

Ile Ser Gly Asn Ser Lys Asn Val
1 5

<210> 27

<211> 11

<212> PRT

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<400> 27

Ala Arg Asp Pro Ala Tyr Ser Gln Phe Asp Tyr
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<400> 28

Ser Ser Asn Val Gly Gly Tyr Pro
1 5

<210> 29

<211> 3

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<400> 29

Thr Asp Tyr
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<210> 30

<211> 11

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<400> 30

Ala Thr Trp Asp Asp Asn Leu Asn Gly Tyr Val
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tcctgcgcag cctctggatt ctctttgat gattatgcca tgcactgggt ccggcaagct 120
ccaggaagg ggctggagtg ggtggccacc ataaaggacg atggaagtca gacatactat 180
gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagag ctactgttt 240
ctgcaaatga acagtctgag agccgaggac acggccgtgt attactgtac cacagaagga 300
ttaatgaatg gacttcattt tgatatgtgg ggccaaggga caatgggtcac cgtctcctca 360
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<400> 32

Gln Met Gln Leu Val Gln Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe Asp Asp Tyr
20 25 30

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

	35		40		45	
Ala Thr Ile Lys Asp Asp Gly Ser Gln Thr Tyr Tyr Val Asp Ser Val						
50		55		60		
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Ser Ser Leu Phe						
65	70	75	80			
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys						
	85	90	95			
Thr Thr Glu Gly Leu Met Asn Gly Leu His Phe Asp Met Trp Gly Gln						
	100	105	110			
Gly Thr Met Val Thr Val Ser Ser						
115	120					

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tcctgcactg ggagcagctc caacatcggg gcaggttatg atgtacactg gtaccagcag	120
tttccaggaa cagcccccaa actcctcatc tctggtaaca ataatcggcc ctcagggctc	180
cctgaccgat tctctggctc caagtctggc acctcagcct ccctggccat cactggactc	240
caggctgagg atgaggctga ttattactgc cagtcctatg acagcaggct ggggtgtggtc	300
ttcggcggag ggaccaagct gaccgtccta ggt	333

<210> 34
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<400> 34	
Leu Val Leu Thr Gln Pro Pro Ser Val Ser Gly Ala Pro Gly Gln Gly	
1	15
5	10

Val Thr Ile Ser Cys Thr Gly Ser Ser Ser Asn Ile Gly Ala Gly Tyr
20 25 30

Asp Val His Trp Tyr Gln Gln Phe Pro Gly Thr Ala Pro Lys Leu Leu
35 40 45

Ile Ser Gly Asn Asn Asn Arg Pro Ser Gly Leu Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu Gln
65 70 75 80

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

Gly Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105 110

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cccgggaaag aactggagtg gatggggagc atctatcctg ggaactctga taccagatac 180
agccccatcct tccaaggcca cgtcaccatc tcagccgaca gctccagcag caccgcctac 240
ctgcagtgga gcagcctgaa ggcctcggac accgccatgt attactgtac cacagaagga 300
ttaatgaatg gacttcattt tgatatgtgg ggccaaggga caatgggtcac cgtctcctca 360
360

<210> 36
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
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<400> 36
 Gln Val Gln Leu Val Glu Ser Gly Ala Glu Val Lys Arg Pro Gly Glu
 1 5 10 15
 Ser Leu Arg Ile Ser Cys Lys Thr Ser Gly Tyr Ser Phe Thr Ser Tyr
 20 25 30
 Trp Ile His Trp Val Arg Gln Met Pro Gly Lys Glu Leu Glu Trp Met
 35 40 45
 Gly Ser Ile Tyr Pro Gly Asn Ser Asp Thr Arg Tyr Ser Pro Ser Phe
 50 55 60
 Gln Gly His Val Thr Ile Ser Ala Asp Ser Ser Ser Ser Thr Ala Tyr
 65 70 75 80
 Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
 85 90 95
 Thr Thr Glu Gly Leu Met Asn Gly Leu His Phe Asp Met Trp Gly Gln
 100 105 110
 Gly Thr Met Val Thr Val Ser Ser
 115 120

<210> 37
 <211> 342
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Sequence

<400> 37
 gatattgtga tgaccagac tccactctcc ctgccgtca cccctggaga gccggcctcc 60
 atctcctgta ggtcaagtca gaggctcctg catagtcttg gagacaatta tttggattgg 120
 tatctacaga agccagggca gtctccgcaa ctctgatct atttgggttc taagcgggcc 180
 gccgggggtcc ccgacagggt cagtggcagt ggctcaggca cagactttac actcaaaatc 240
 agcagagtgg aggctgagga tgttgaggtt tattattgca tgcaatctct acaaactccc 300
 ccgtacactt ttggccaggg gaccaagctg gagatcaaac gt 342

<210> 38
 <211> 114
 <212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Sequence

<400> 38

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Leu Gly Asp Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

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

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

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

Leu Gln Thr Pro Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
100 105 110

Lys Arg

<210> 39

<211> 369

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Sequence

<400> 39

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tcctgtgcag cctctggatt caccttcagt agctatagca tgaactgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcatcc attagtgcta gtgatgggtc cacatactac 180

gcagactccg tgagggggccg gttcaccatc tccagagaca attccaggag cacactgtat 240

ctgcaaatga acagtctgag agccgaggac acggccgtgt attactgtgc gaaaattctc 300

gcgggatata gtggcccaat gggcggaatg gacgtctggg gccaaaggac cacggtcacc 360

gtctcctca

369

<210> 40
<211> 123
<212> PRT
<213> Artificial Sequence

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<223> Synthetic Sequence

<400> 40
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ser Ile Ser Ala Ser Asp Gly Ala Thr Tyr Tyr Ala Asp Ser Val
50 55 60
Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Ser Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Lys Ile Leu Ala Gly Tyr Ser Gly Pro Met Gly Gly Met Asp Val
100 105 110
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 41
<211> 324
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Sequence

<400> 41
Gly Ala Cys Ala Thr Cys Cys Ala Gly Ala Thr Gly Ala Cys Cys Cys
1 5 10 15
Ala Gly Thr Cys Thr Cys Cys Ala Thr Cys Cys Thr Cys Ala Cys Thr

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Gly	Thr	Cys	Thr	Gly	Cys	Ala	Thr	Cys	Thr	Gly	Thr	Ala	Gly	Gly	Ala
		35					40					45			
Gly	Ala	Cys	Ala	Gly	Ala	Gly	Thr	Cys	Ala	Cys	Cys	Ala	Thr	Cys	Ala
	50					55					60				
Cys	Thr	Thr	Gly	Thr	Cys	Gly	Gly	Gly	Cys	Gly	Ala	Gly	Thr	Cys	Gly
	65					70					75				80
Gly	Gly	Ala	Cys	Ala	Thr	Thr	Ala	Gly	Cys	Ala	Ala	Cys	Thr	Ala	Thr
			85						90					95	
Thr	Thr	Ala	Gly	Cys	Cys	Thr	Gly	Gly	Thr	Ala	Thr	Cys	Ala	Gly	Cys
			100					105					110		
Ala	Gly	Ala	Ala	Ala	Cys	Cys	Ala	Gly	Gly	Gly	Ala	Ala	Ala	Gly	Cys
		115					120					125			
Cys	Cys	Cys	Thr	Ala	Ala	Gly	Thr	Cys	Cys	Cys	Thr	Gly	Ala	Thr	Cys
	130					135					140				
Thr	Ala	Thr	Gly	Gly	Ala	Gly	Cys	Ala	Thr	Cys	Cys	Ala	Ala	Thr	Thr
	145					150					155				160
Thr	Ala	Cys	Ala	Ala	Ala	Gly	Thr	Gly	Gly	Gly	Gly	Thr	Cys	Thr	Cys
			165						170					175	
Ala	Thr	Cys	Ala	Cys	Ala	Gly	Thr	Thr	Cys	Ala	Gly	Cys	Gly	Gly	Cys
			180					185					190		
Ala	Gly	Thr	Gly	Gly	Ala	Thr	Cys	Cys	Gly	Gly	Gly	Ala	Cys	Ala	Gly
		195					200					205			
Ala	Thr	Thr	Thr	Cys	Ala	Cys	Cys	Cys	Thr	Cys	Ala	Cys	Cys	Ala	Thr
		210				215					220				
Cys	Ala	Ala	Cys	Ala	Gly	Cys	Cys	Thr	Gly	Cys	Ala	Gly	Cys	Cys	Thr
	225					230					235				240
Gly	Ala	Ala	Gly	Ala	Thr	Thr	Cys	Thr	Gly	Cys	Ala	Ala	Cys	Thr	Thr
			245						250					255	
Ala	Thr	Thr	Ala	Cys	Thr	Gly	Thr	Cys	Ala	Ala	Cys	Ala	Gly	Thr	Ala
			260					265					270		
Cys	Thr	Ala	Thr	Ala	Gly	Thr	Thr	Ala	Cys	Cys	Cys	Gly	Cys	Thr	Cys
		275					280					285			
Ala	Cys	Thr	Thr	Thr	Thr	Gly	Gly	Cys	Gly	Gly	Ala	Gly	Gly	Gly	Ala
	290					295					300				

Cys Cys Ala Ala Gly Gly Thr Gly Gly Ala Thr Ala Thr Cys Ala Ala
 305 310 315 320

Ala Cys Gly Thr

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 <211> 108
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 <213> Artificial Sequence

<220>
 <223> Synthetic Sequence

<400> 42
 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 Arg Asp Ile Ser Asn Tyr
 20 25 30

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

Tyr Gly Ala Ser Asn Leu Gln Ser Gly Val Ser Ser Gln Phe Ser Gly
 50 55 60

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

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

Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys Arg
 100 105

<210> 43
 <211> 360
 <212> DNA
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<400> 43
 caggtgcagc tgggtggagtc tgggggaggc ttggtacagc ctggagggtc cctgagactc 60
 tcctgtgaag cctctggatt cgccttcggt cgttatgaga tgaattgggt ccgccaggct 120

ccagggaagg ggctggagtg gattgcatat attgatactg gtggtggtgc caaagtctat 180
gcagactctg tgaagggccg attcaccatc tccagagacg acagcaaaaa ctccctgtat 240
ctgcaaatga acagtctgag agccgaggac acggccgtgt attactgtac cacagaagga 300
ttaatgaatg gacttcattt tgatatgtgg ggccaaggga caatgatcac cgtctcctca 360
360

<210> 44
<211> 120
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<213> Artificial Sequence

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<400> 44
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe Ala Phe Gly Arg Tyr
20 25 30
Glu Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45
Ala Tyr Ile Asp Thr Gly Gly Gly Ala Lys Val Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Thr Thr Glu Gly Leu Met Asn Gly Leu His Phe Asp Met Trp Gly Gln
100 105 110
Gly Thr Met Ile Thr Val Ser Ser
115 120

<210> 45
<211> 324
<212> DNA
<213> Artificial Sequence

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<400> 45
gacatccaga tgaccagtc tccttcacc ctgtctgcat ctgtaggaga cagagtcgcc 60
atcacttgcc gggccagtca ggctattagt acctgggtgg cctgggtatca gcagaaacct 120
ggtaaagccc ctaaactcct gatctatacg gcgtctactt tagaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcaacag cctgcagcct 240
gatgattttg caacttatta ctgtcaacag cttaatagtt acccttacac tttcggcgga 300
gggaccaagg tggagatcaa acgt 324

<210> 46
<211> 108
<212> PRT
<213> Artificial Sequence
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<223> Synthetic Sequence

<400> 46
Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Ala Ile Thr Cys Arg Ala Ser Gln Ala Ile Ser Thr Trp
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Tyr Thr Ala Ser Thr Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro
65 70 75 80
Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Leu Asn Ser Tyr Pro Tyr
85 90 95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105

<210> 47
<211> 354
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic Sequence

<400> 47

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tcctgtgcag cctctggatt cacctttgat gattgtgcca tgcactgggt ccgacaagct 120
ccagggaagg gcctggagtg ggtctcaggt attagtggga atagtaaaaa cgtagcctat 180
gcggactctg tgaagggccg attcagcatc tccagagacg acgccaagaa ctccctgtat 240
ctgcaaataga acagtctgag agccgaggac acggccgtgt attactgtgc gagagatccg 300
gcatacagcc agtttgacta ctggggccag ggaaccctga tcaccgtctc ctca 354

<210> 48

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Sequence

<400> 48

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg 15
1 5 10
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Cys 30
20 25 30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 45
35 40 45
Ser Gly Ile Ser Gly Asn Ser Lys Asn Val Ala Tyr Ala Asp Ser Val 60
50 55 60
Lys Gly Arg Phe Ser Ile Ser Arg Asp Asp Ala Lys Asn Ser Leu Tyr 80
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 95
85 90 95
Ala Arg Asp Pro Ala Tyr Ser Gln Phe Asp Tyr Trp Gly Gln Gly Thr 110
100 105 110
Leu Ile Thr Val Ser Ser 115

<210> 49
 <211> 333
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Sequence

<400> 49
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 tcttgctctg gaagcagctc caacgtcgga ggatattcctg tcaactggta ccagcaggtc 120
 ccaggagcgg cccccaaact cctcatgtat actgattata agcggccctc aggtgtccct 180
 gaccgattct ttggctccaa gtctggcact tcagcctccc tggccatcag tggcctccag 240
 tctgaagatg aggctgatta ttactgtgct acatgggacg acaacctgaa tggctatgtc 300
 ttcggaactg ggaccaaggt caccgtccta ggt 333

<210> 50
 <211> 111
 <212> PRT
 <213> Artificial Sequence

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<400> 50
 Gln Ser Ala Leu Thr Gln Pro Pro Ser Leu Ser Ala Thr Pro Gly Gln
 1 5 10 15
 Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Val Gly Gly Tyr
 20 25 30
 Pro Val Asn Trp Tyr Gln Gln Val Pro Gly Ala Ala Pro Lys Leu Leu
 35 40 45
 Met Tyr Thr Asp Tyr Lys Arg Pro Ser Gly Val Pro Asp Arg Phe Phe
 50 55 60
 Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
 65 70 75 80
 Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Thr Trp Asp Asp Asn Leu
 85 90 95
 Asn Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
 100 105 110

<210> 51
 <211> 16
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 <213> Artificial Sequence

<220>
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<400> 51
 Ala Lys Thr Leu Ala Gly Tyr Ser Gly Pro Met Gly Gly Met Asp Val
 1 5 10 15

<210> 52
 <211> 16
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<220>
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<400> 52
 Ala Lys Ile Leu Val Gly Tyr Ser Gly Pro Met Gly Gly Met Asp Val
 1 5 10 15

<210> 53
 <211> 16
 <212> PRT
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<400> 53
 Ala Lys Ser Leu Ala Ser Tyr Ser Gly Pro Met Gly Gly Met Asp Val
 1 5 10 15

<210> 54

<211> 369
 <212> DNA
 <213> Artificial Sequence

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<400> 54
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 tcctgtgcag cctctggatt caccttcagt agctatagca tgaactgggt ccgccaggct 120
 ccagggaagg ggctggagtg ggtctcatcc attagtgcta gtgatgggtc cacatactac 180
 gcagactccg tgagggggccg gttcaccatc tccagagaca attccaggag cacactgtat 240
 ctgcaaataga acagtctgag agccgaggac acggccgtgt attactgtgc gaaaactctc 300
 gcgggatata gtggcccaat ggggtggcatg gacgtctggg gccaaaggac cacggtcacc 360
 gtctcctca 369

<210> 55
 <211> 123
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Sequence

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

100 105 110
 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 56
 <211> 369
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Sequence

<400> 56
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 tcctgtgcag cctctggatt caccttcagt agctatagca tgaactgggt ccgccaggct 120
 ccaggaagg ggctggagt ggtctcatcc attagtgcta gtgatgggtc cacatactac 180
 gcagactccg tgaggggccc gttcaccatc tccagagaca attccaggag cacactgtat 240
 ctgcaaatga acagtctgag agccgaggac acggccgtgt attactgtgc gaaaatcctc 300
 gtaggataca gtggccaat gggcggaatg gacgtctggg gccaaaggac cacggtcacc 360
 gtctcctca 369

<210> 57
 <211> 123
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Sequence

<400> 57
 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 20 25 30
 Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ser Ile Ser Ala Ser Asp Gly Ala Thr Tyr Tyr Ala Asp Ser Val
 50 55 60

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

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

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

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 58
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Sequence

<400> 58
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tcctgtgcag cctctggatt caccttcagt agctatagca tgaactgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc attagtgcta gtgatgggtgc cacatactac 180
gcagactccg tgagggggccg gttcaccatc tccagagaca attccaggag cacactgtat 240
ctgcaaataga acagtctgag agccgaggac acggccgtgt attactgtgc gaaaagcctt 300
gccagctata gtggcccaat gggcggcatg gacgtctggg gccaaaggac cacggtcacc 360
gtctcctca 369

<210> 59
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Sequence

<400> 59
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ser Ile Ser Ala Ser Asp Gly Ala Thr Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Lys Ser Leu Ala Ser Tyr Ser Gly Pro Met Gly Gly Met Asp Val
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 60
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Sequence

<400> 60
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tcctgtgcag cctctggatt caccttcagt agctatagca tgaactgggt ccgccaggct 120
ccaggggaagg ggctggagtg ggtctcatcc attagtgcta gtgatgggtgc cacatactac 180
gcagactccg tgagggggccg gttcaccatc tccagagaca attccaggag cacactgtat 240
ctgcaaataga acagtctgag agccgaggac acggccgtgt attactgtgc gaaaactctc 300
gcgggatata gtggcccaat ggggtggcatg gacgtctggg gccaaaggac cacggtcacc 360
gtctcctca 369

<210> 61
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Sequence

<400> 61
 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Ser Lys Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 20 25 30
 Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ser Ile Ser Ala Ser Asp Gly Ala Thr Tyr Tyr Ala Asp Ser Val
 50 55 60
 Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Arg Ser Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Lys Thr Leu Ala Gly Tyr Ser Gly Pro Met Gly Gly Met Asp Val
 100 105 110
 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120