

SEQUENCE LISTING

<110> Molecular Partners AG

<120> MULTISPECIFIC PROTEINS

<130> AD1389 PCT S3

<150> EP 20 17 4847.2

<151> 2020-05-14

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<151> 2020-06-22

<160> 67

<170> BiSSAP 1.3.6

<210> 1

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> N-terminal HSA binding domain

<400> 1

Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln
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Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
			20					25					30		
Lys	Asp	Tyr	Phe	Ser	His	Thr	Pro	Leu	His	Leu	Ala	Ala	Arg	Asn	Gly
		35					40					45			
His	Leu	Lys	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
	50					55					60				
Ala	Lys	Asp	Phe	Ala	Gly	Lys	Thr	Pro	Leu	His	Leu	Ala	Ala	Ala	Asp
65				70					75						80
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val
				85				90						95	
Asn	Ala	Gln	Asp	Ile	Phe	Gly	Lys	Thr	Pro	Ala	Asp	Ile	Ala	Ala	Asp
			100				105						110		
Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala		
		115					120					125			

<210> 2

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> FAP binding domain

<400> 2

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Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln Asp Asp
1      5      10      15
Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala Lys Asp
      20      25      30
Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly His Leu
      35      40      45
Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
      50      55      60
Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu Ala Ala Arg Thr Gly His
65      70      75      80
Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
      85      90      95
Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp Gln Gly
      100      105      110
His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
      115      120      125
Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Asp Ala
      130      135      140
Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
145      150      155
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<210> 3

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> CD40 binding domain

<400> 3

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Asp Leu Gly Lys Lys Leu Leu Gln Ala Ala Arg Ala Gly Gln Leu Asp
1      5      10      15
Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp
      20      25      30
Thr Trp Gly Phe Thr Pro Leu His Ile Ala Ala Glu Ser Gly His Leu
      35      40      45
Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
      50      55      60
Asp Val Gln Gly Arg Thr Pro Leu His Ile Ala Ala His Ser Gly His
65      70      75      80
Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
      85      90      95
Lys Asp Phe Arg Gly Trp Thr Pro Leu His Leu Ala Ala Trp Ser Gly
      100      105      110
His Leu Glu Ile Val Glu Ile Leu Leu Lys Ala Gly Ala Asp Val Asn
      115      120      125
Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Arg Ala
      130      135      140
Gly His Gln Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
145      150      155
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<210> 4

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

<220>
<223> Linker

<400> 4
Gly Ser Pro Thr Pro Thr Pro Thr Thr Pro Thr Pro Thr Pro Thr Thr
1 5 10 15
Pro Thr Pro Thr Pro Thr Gly Ser
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<210> 5
<211> 669
<212> PRT
<213> Artificial Sequence

<220>
<223> Full sequence of FAP/CD40 bispecific

<400> 5
Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1 5 10 15
Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20 25 30
Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly
35 40 45
His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50 55 60
Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Ala Asp
65 70 75 80
Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85 90 95
Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp
100 105 110
Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala Gly Ser
115 120 125
Pro Thr Pro Thr Pro Thr Thr Pro Thr Pro Thr Pro Thr Thr Pro Thr
130 135 140
Pro Thr Pro Thr Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala
145 150 155 160
Arg Ala Gly Gln Asp Asp Glu Val Arg Ile Leu Leu Ala Ala Gly Ala
165 170 175
Asp Val Asn Ala Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala
180 185 190
Ala Phe Glu Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly
195 200 205
Ala Asp Val Asn Ala Lys Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu
210 215 220
Ala Ala Arg Thr Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala
225 230 235 240

Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	His	Ile	Gly	Ala	Thr	Pro	Leu	His
				245					250					255	
Leu	Ala	Ala	Trp	Gln	Gly	His	Pro	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys
			260					265					270		
Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala
			275					280					285		
Asp	Leu	Ala	Ala	Asp	Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln
						295					300				
Lys	Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr
305					310					315					320
Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys
				325					330					335	
Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp	Glu	Val	Arg	Glu	Leu
			340					345					350		
Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Thr	Trp	Gly	Phe	Thr
			355				360					365			
Pro	Leu	His	Ile	Ala	Ala	Glu	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val
						375					380				
Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Val	Gln	Gly	Arg
385					390					395					400
Thr	Pro	Leu	His	Ile	Ala	Ala	His	Ser	Gly	His	Leu	Glu	Ile	Val	Glu
				405					410					415	
Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Phe	Arg	Gly
			420					425					430		
Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Ser	Gly	His	Leu	Glu	Ile	Val
			435				440					445			
Glu	Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser
						455					460				
Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly	His	Gln	Asp	Ile
465					470				475						480
Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr
				485					490					495	
Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser
			500					505					510		
Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp
			515				520					525			
Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
						535					540				
Thr	Trp	Gly	Phe	Thr	Pro	Leu	His	Ile	Ala	Ala	Glu	Ser	Gly	His	Leu
545					550					555					560
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
				565					570					575	
Asp	Val	Gln	Gly	Arg	Thr	Pro	Leu	His	Ile	Ala	Ala	His	Ser	Gly	His
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<210> 6
 <211> 669
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Full sequence of FAP/CD40 bispecific

<400> 6
 Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
 1 5 10 15
 Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
 20 25 30
 Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly
 35 40 45
 His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
 50 55 60
 Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Ala Asp
 65 70 75 80
 Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
 85 90 95
 Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp
 100 105 110
 Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala Gly Ser
 115 120 125
 Pro Thr Pro Thr Pro Thr Thr Pro Thr Pro Thr Pro Thr Thr Pro Thr
 130 135 140
 Pro Thr Pro Thr Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala
 145 150 155 160
 Arg Ala Gly Gln Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala
 165 170 175
 Asp Val Asn Ala Lys Asp Val Leu Gly Trp Thr Pro Leu His Leu Ala
 180 185 190
 Ala Phe Glu Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly
 195 200 205
 Ala Asp Val Asn Ala Lys Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu
 210 215 220
 Ala Ala Arg Thr Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala
 225 230 235 240
 Gly Ala Asp Val Asn Ala Lys Asp His Ile Gly Ala Thr Pro Leu His
 245 250 255
 Leu Ala Ala Trp Gln Gly His Pro Glu Ile Val Glu Val Leu Leu Lys
 260 265 270
 Ala Gly Ala Asp Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala
 275 280 285
 Asp Leu Ala Ala Asp Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln
 290 295 300
 Lys Ala Ala Gly Ser Pro Thr Pro Thr Pro Thr Thr Pro Thr Pro Thr
 305 310 315 320
 Pro Thr Thr Pro Thr Pro Thr Pro Thr Gly Ser Asp Leu Gly Lys Lys
 325 330 335
 Leu Leu Gln Ala Ala Arg Ala Gly Gln Leu Asp Glu Val Arg Glu Leu

Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala		
			20					25					30				
Lys	Asp	Tyr	Phe	Ser	His	Thr	Pro	Leu	His	Leu	Ala	Ala	Arg	Asn	Gly		
		35					40					45					
His	Leu	Lys	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn		
	50					55					60						
Ala	Lys	Asp	Phe	Ala	Gly	Lys	Thr	Pro	Leu	His	Leu	Ala	Ala	Ala	Asp		
65					70					75					80		
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val		
			85					90						95			
Asn	Ala	Gln	Asp	Ile	Phe	Gly	Lys	Thr	Pro	Ala	Asp	Ile	Ala	Ala	Asp		
			100					105					110				
Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser		
		115					120					125					
Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr		
	130					135						140					
Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Glu	Lys	Leu	Leu	Val	Ala	Ala		
145					150					155					160		
Leu	Tyr	Gly	Gln	Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala		
			165					170						175			
Asp	Val	Asn	Ala	Lys	Asp	Gln	Trp	Gly	Leu	Thr	Pro	Leu	His	Lys	Ala		
			180					185						190			
Ala	Leu	Gln	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly		
		195					200					205					
Ala	Asp	Val	Asn	Ala	Lys	Asp	Glu	Arg	Gly	His	Thr	Pro	Leu	His	Trp		
	210					215					220						
Ala	Ala	Arg	Phe	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala		
225					230					235					240		
Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Gln	Lys	Gly	Tyr	Thr	Pro	Ala	Asp		
				245					250					255			
Leu	Ala	Ala	Leu	Trp	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys		
			260					265						270			
Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro		
		275					280						285				
Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu		
	290					295						300					
Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp	Glu	Val	Arg	Glu	Leu	Leu		
305					310					315					320		
Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Thr	Leu	Gly	Ser	Thr	Pro		
				325					330					335			
Leu	His	Leu	Ala	Ala	Trp	Glu	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu		
			340					345						350			
Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Ile	Glu	Gly	Arg	Thr		
		355					360						365				
Pro	Leu	His	Leu	Ala	Ala	Arg	Val	Gly	His	Leu	Glu	Ile	Val	Glu	Val		
	370					375						380					
Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Ala	Tyr	Gly	Phe		
385					390					395					400		
Thr	Pro	Leu	His	Leu	Ala	Ala	Glu	Ser	Gly	His	Leu	Glu	Ile	Val	Glu		
				405					410					415			
Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly		
			420				425						430				
Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly	His	Gln	Asp	Ile	Ala		
		435					440						445				

Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr
450						455					460				
Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp
465						470					475				480
Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp	Glu
				485					490					495	
Val	Arg	Glu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Thr	
		500				505						510			
Leu	Gly	Ser	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Glu	Gly	His	Leu	Glu
	515					520						525			
Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
530						535					540				
Ile	Glu	Gly	Arg	Thr	Pro	Leu	His	Leu	Ala	Ala	Arg	Val	Gly	His	Leu
545					550					555					560
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
				565					570						575
Asp	Ala	Tyr	Gly	Phe	Thr	Pro	Leu	His	Leu	Ala	Ala	Glu	Ser	Gly	His
		580						585					590		
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
		595					600					605			
Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly
610						615					620				
His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala				
625					630					635					

<210> 8

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> FAP binding domain

<400> 8

Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln	Asp	Asp
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Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
		20						25				30			
Val	Leu	Gly	Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Phe	Glu	Gly	His	Leu
	35					40					45				
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
	50					55					60				
Asp	Lys	Lys	Gly	Trp	Thr	Pro	Leu	Gln	Leu	Ala	Ala	Arg	Thr	Gly	His
65				70						75				80	
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
			85					90					95		
Lys	Asp	His	Ile	Gly	Ala	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Gln	Gly
		100					105						110		
His	Pro	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
	115						120					125			
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Asp	Ala
130						135					140				
Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala			

145

150

155

<210> 9

<211> 124

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<213> Artificial Sequence

<220>

<223> FAP binding domain

<400> 9

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Asp Leu Gly Glu Lys Leu Leu Val Ala Ala Leu Tyr Gly Gln Asp Asp
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Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp
      20      25      30
Gln Trp Gly Leu Thr Pro Leu His Lys Ala Ala Leu Gln Gly His Leu
      35      40      45
Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
      50      55      60
Asp Glu Arg Gly His Thr Pro Leu His Trp Ala Ala Arg Phe Gly His
65      70      75      80
Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
      85      90      95
Gln Asp Gln Lys Gly Tyr Thr Pro Ala Asp Leu Ala Ala Leu Trp Gly
      100     105     110
His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
      115     120

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<210> 10

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> CD40 binding domain

<400> 10

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

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		115					120				125								
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala				
	130					135					140								
Gly	His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala							
145					150					155									

<210> 11
 <211> 30
 <212> PRT
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<220>
 <223> N-terminal Capping sequence

<400> 11																			
Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp				
1				5					10					15					
Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala						
			20					25					30						

<210> 12
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 <213> Artificial Sequence

<220>
 <223> N-terminal Capping sequence

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1				5					10					15					
Glu	Val	Arg	Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala						
			20					25					30						

<210> 13
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> N-terminal Capping sequence

<400> 13																			
Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp				
1				5					10					15					
Glu	Val	Arg	Ile	Leu	Leu	Ala	Ala	Gly	Ala	Asp	Val	Asn	Ala						
			20					25					30						

<210> 14
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<213> Artificial Sequence

<220>

<223> N-terminal Capping sequence

<400> 14

Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln	Asp	Asp
1				5					10					15	
Glu	Val	Arg	Ile	Leu	Leu	Ala	Ala	Gly	Ala	Asp	Val	Asn	Ala		
			20					25					30		

<210> 15

<211> 30

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<213> Artificial Sequence

<220>

<223> N-terminal Capping sequence

<400> 15

Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln	Asp	Asp
1				5					10					15	
Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala		
			20					25					30		

<210> 16

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<213> Artificial Sequence

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<223> N-terminal Capping sequence

<400> 16

Asp	Leu	Gly	Ser	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp
1				5					10					15	
Thr	Val	Arg	Thr	Leu	Leu	Gln	Ala	Gly	Ala	Asp	Val	Asn	Ala		
			20					25					30		

<210> 17

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<220>

<221> VARIANT

<222> 4

<223> Xaa can be any naturally occurring amino acid

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<221> VARIANT

<222> 5

<223> Xaa can be any naturally occurring amino acid

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<223> Xaa can be any naturally occurring amino acid

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<221> VARIANT

<222> 24

<223> Xaa can be any naturally occurring amino acid

<400> 17

Asp Leu Gly Xaa Xaa Leu Leu Gln Ala Ala Xaa Xaa Gly Gln Leu Asp

1 5 10 15

Xaa Val Arg Xaa Leu Xaa Xaa Xaa Gly Ala Asp Val Asn Ala

20 25 30

<210> 18

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> C-terminal Capping sequence

<400> 18

Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly
1				5					10					15	
His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala				
			20				25								

<210> 19

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> C-terminal Capping sequence

<400> 19

Gln	Asp	Ile	Phe	Gly	Lys	Thr	Pro	Ala	Asp	Ile	Ala	Ala	Asp	Ala	Gly
1				5					10					15	
His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala				
			20				25								

<210> 20

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> C-terminal Capping sequence

<400> 20

Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Asp	Ala	Gly
1				5					10					15	
His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala				
			20				25								

<210> 21

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> C-terminal Capping sequence

<400> 21

Gln	Asp	Thr	Gln	Gly	Thr	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly
1				5					10					15	
His	Gln	Gln	Ile	Ala	Ser	Val	Leu	Gln	Gln	Ala	Ala				
			20				25								

<210> 22
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> C-terminal Capping sequence

<220>
<221> VARIANT
<222> 1
<223> Xaa can be any naturally occurring amino acid

<220>
<221> VARIANT
<222> 3
<223> Xaa can be any naturally occurring amino acid

<220>
<221> VARIANT
<222> 4
<223> Xaa can be any naturally occurring amino acid

<220>
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<222> 6
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<220>
<221> VARIANT
<222> 11
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<220>
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<222> 15
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<220>
<221> VARIANT
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<220>
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<222> 22
<223> Xaa can be any naturally occurring amino acid

<220>
<221> VARIANT
<222> 26
<223> Xaa can be any naturally occurring amino acid

<400> 22

Xaa	Asp	Xaa	Xaa	Gly	Xaa	Thr	Pro	Ala	Asp	Xaa	Ala	Ala	Arg	Xaa	Gly
1				5					10					15	
His	Gln	Xaa	Ile	Ala	Xaa	Val	Leu	Gln	Xaa	Ala	Ala				
			20					25							

<210> 23

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Ankyrin repeat module

<220>

<221> VARIANT

<222> 1

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 3

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 4

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 6

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 13

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 14

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 15

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 17

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 18

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 19

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 22

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 26

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 27

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<400> 23

Xaa	Asp	Xaa	Xaa	Gly	Xaa	Thr	Pro	Leu	His	Leu	Ala	Xaa	Xaa	Xaa	Gly
1				5				10						15	
Xaa	Xaa	Xaa	Ile	Val	Xaa	Val	Leu	Leu	Xaa	Xaa	Gly	Ala	Asp	Val	Asn
			20				25						30		
Ala															

<210> 24

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Ankyrin repeat module

<220>

<221> VARIANT

<222> 1

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

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<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 4

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 6

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

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<222> 13

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 14

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 15

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 27

<223> Xaa is selected from the group consisting of asparagine, histidine, or tyrosine

<400> 24

Xaa	Asp	Xaa	Xaa	Gly	Xaa	Thr	Pro	Leu	His	Leu	Ala	Xaa	Xaa	Xaa	Gly
1				5				10					15		
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Xaa	Gly	Ala	Asp	Val	Asn

Ala

<210> 25

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Ankyrin repeat module

<220>

<221> VARIANT

<222> 1

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 3

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 4

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 6

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 11

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 14

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 15

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 27

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<400> 25

Xaa	Asp	Xaa	Xaa	Gly	Xaa	Thr	Pro	Leu	His	Xaa	Ala	Ala	Xaa	Xaa	Gly
1				5					10					15	
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Xaa	Gly	Ala	Asp	Val	Asn
			20					25					30		
Ala															

<210> 26

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Ankyrin repeat module

<220>

<221> VARIANT

<222> 3

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 4

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 6

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 14

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 15

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<400> 26

Lys	Asp	Xaa	Xaa	Gly	Xaa	Thr	Pro	Leu	His	Leu	Ala	Ala	Xaa	Xaa	Gly
1				5					10					15	
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
			20					25					30		

Ala

<210> 27

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Ankyrin repeat module

<220>

<221> VARIANT

<222> 3

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

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<222> 4

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 6

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 11

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 14

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<220>

<221> VARIANT

<222> 15

<223> Xaa can be any naturally occurring amino acid, preferably not cysteine, glycine, or proline

<400> 27

Lys Asp Xaa Xaa Gly Xaa Thr Pro Leu His Xaa Ala Ala Xaa Xaa Gly
 1 5 10 15
 His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
 20 25 30
 Ala

<210> 28
 <211> 157
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> FAP binding domain

<400> 28
 Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln Asp Asp
 1 5 10 15
 Glu Val Arg Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp
 20 25 30
 Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly His Leu
 35 40 45
 Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
 50 55 60
 Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu Ala Ala Arg Thr Gly His
 65 70 75 80
 Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
 85 90 95
 Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp Gln Gly
 100 105 110
 His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
 115 120 125
 Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Asp Ala
 130 135 140
 Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
 145 150 155

<210> 29
 <211> 157
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> FAP binding domain

<400> 29
 Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln Asp Asp
 1 5 10 15
 Glu Val Arg Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp
 20 25 30
 Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly His Leu
 35 40 45

Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
50						55					60				
Asp	Lys	Lys	Gly	Trp	Thr	Pro	Leu	Gln	Leu	Ala	Ala	Arg	Thr	Gly	His
65					70					75					80
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
				85					90					95	
Lys	Asp	His	Ile	Gly	Ala	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Gln	Gly
			100				105						110		
His	Pro	Glu	Ile	Val	Glu	Val	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	
		115					120				125				
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Asp	Ala
	130					135					140				
Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala			
145					150					155					

<210> 30

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> FAP binding domain

<400> 30

Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln	Asp	Asp
1				5					10					15	
Glu	Val	Arg	Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
			20					25					30		
Val	Leu	Gly	Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Phe	Glu	Gly	His	Leu
		35					40					45			
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
	50					55					60				
Asp	Lys	Lys	Gly	Trp	Thr	Pro	Leu	Gln	Leu	Ala	Ala	Arg	Thr	Gly	His
65					70					75					80
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
				85					90					95	
Lys	Asp	His	Ile	Gly	Ala	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Gln	Gly
			100				105						110		
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
		115					120					125			
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Asp	Ala
	130					135					140				
Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala			
145					150					155					

<210> 31

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> FAP binding domain

<400> 31

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Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln Asp Asp
1      5      10      15
Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala Lys Asp
      20      25      30
Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly His Leu
      35      40      45
Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
      50      55      60
Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu Ala Ala Arg Thr Gly His
      65      70      75      80
Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
      85      90      95
Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp Gln Gly
      100      105      110
His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
      115      120      125
Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Asp Ala
      130      135      140
Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
      145      150      155
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<210> 32

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> FAP binding domain

<400> 32

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Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln Asp Asp
1      5      10      15
Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp
      20      25      30
Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly His Leu
      35      40      45
Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
      50      55      60
Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu Ala Ala Arg Thr Gly His
      65      70      75      80
Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
      85      90      95
Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp Gln Gly
      100      105      110
His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
      115      120      125
Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Asp Ala
      130      135      140
Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
      145      150      155
```

<210> 33
 <211> 157
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> FAP binding domain

<400> 33
 Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln Asp Asp
 1 5 10 15
 Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala Lys Asp
 20 25 30
 Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly His Leu
 35 40 45
 Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
 50 55 60
 Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu Ala Ala Arg Thr Gly His
 65 70 75 80
 Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
 85 90 95
 Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp Gln Gly
 100 105 110
 His Pro Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
 115 120 125
 Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Asp Ala
 130 135 140
 Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
 145 150 155

<210> 34
 <211> 157
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> FAP binding domain

<400> 34
 Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln Asp Asp
 1 5 10 15
 Glu Val Arg Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp
 20 25 30
 Val Leu Gly Trp Thr Pro Leu His Leu Ala Ala Phe Glu Gly His Leu
 35 40 45
 Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
 50 55 60
 Asp Lys Lys Gly Trp Thr Pro Leu Gln Leu Ala Ala Arg Thr Gly His
 65 70 75 80
 Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
 85 90 95
 Lys Asp His Ile Gly Ala Thr Pro Leu His Leu Ala Ala Trp Gln Gly

			100					105				110			
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
		115						120				125			
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Asp	Ala
	130					135					140				
Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Leu	Asn			
145					150				155						

<210> 35
 <211> 124
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> FAP binding domain

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

<210> 36
 <211> 157
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> FAP binding domain

<400> 36															
Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln	Asp	Asp
1				5				10					15		
Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
		20						25				30			
Glu	Val	Gly	Arg	Thr	Pro	Leu	His	Leu	Ala	Ala	Gln	Ile	Gly	His	Leu
	35					40					45				
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
	50				55				60						
Asn	Arg	Trp	Gly	Val	Thr	Pro	Leu	His	Val	Ala	Ala	Trp	Val	Gly	His

65					70					75				80	
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
				85					90					95	
Lys	Asp	Gln	Gln	Gly	Ala	Thr	Pro	Leu	His	Leu	Ala	Ala	Ile	Arg	Gly
			100					105					110		
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
		115					120					125			
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Asp	Ala
	130					135					140				
Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Leu	Asn			
145					150					155					

<210> 37
 <211> 157
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> FAP binding domain

<400> 37															
Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln	Asp	Asp
1				5					10					15	
Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
			20					25					30		
Glu	Trp	Gly	Lys	Thr	Pro	Leu	His	Leu	Ala	Ala	Ile	Arg	Gly	His	Leu
		35					40					45			
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
	50					55					60				
Asp	Thr	His	Gly	Ile	Thr	Pro	Leu	His	Leu	Ala	Ala	Phe	Val	Gly	His
65					70				75					80	
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
			85					90						95	
Lys	Asp	Tyr	Leu	Gly	Arg	Thr	Pro	Leu	His	Ile	Ala	Ala	Ala	Lys	Gly
		100					105						110		
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	
	115						120				125				
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Asp	Ala
	130					135					140				
Gly	His	Glu	Asp	Ile	Val	Glu	Val	Leu	Gln	Lys	Leu	Asn			
145					150					155					

<210> 38
 <211> 159
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> FAP binding domain

<400> 38															
Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln

1				5					10					15	
Asp	Asp	Glu	Val	Arg	Ile	Leu	Leu	Ala	Ala	Gly	Ala	Asp	Val	Asn	Ala
			20					25					30		
Lys	Asp	Val	Leu	Gly	Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Phe	Glu	Gly
		35					40					45			
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
	50					55					60				
Ala	Lys	Asp	Lys	Lys	Gly	Trp	Thr	Pro	Leu	Gln	Leu	Ala	Ala	Arg	Thr
65					70					75				80	
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val
				85				90						95	
Asn	Ala	Lys	Asp	His	Ile	Gly	Ala	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp
			100					105					110		
Gln	Gly	His	Pro	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp
		115					120					125			
Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala
	130					135					140				
Asp	Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	
145					150					155					

<210> 39

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> HSA binding domain

<400> 39

Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln
1				5					10					15	
Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
			20					25					30		
Lys	Asp	Tyr	Phe	Ser	His	Thr	Pro	Leu	His	Leu	Ala	Ala	Arg	Asn	Gly
		35					40					45			
His	Leu	Lys	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
	50					55					60				
Ala	Lys	Asp	Phe	Ala	Gly	Lys	Thr	Pro	Leu	His	Leu	Ala	Ala	Asn	Glu
65					70					75				80	
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val
				85				90						95	
Asn	Ala	Gln	Asp	Ile	Phe	Gly	Lys	Thr	Pro	Ala	Asp	Ile	Ala	Ala	Asp
			100					105					110		
Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala		
		115					120					125			

<210> 40

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> HSA binding domain

<400> 40

```
Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1          5          10          15
Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20          25          30
Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly
35          40          45
His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50          55          60
Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Asp Ala
65          70          75          80
Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85          90          95
Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp
100         105         110
Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
115         120         125
```

<210> 41

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> HSA binding domain

<400> 41

```
Gly Ser Asp Leu Gly Lys Lys Leu Leu Glu Ala Ala Arg Ala Gly Gln
1          5          10          15
Asp Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
20          25          30
Lys Asp Tyr Phe Ser His Thr Pro Leu His Leu Ala Ala Arg Asn Gly
35          40          45
His Leu Lys Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50          55          60
Ala Lys Asp Phe Ala Gly Lys Thr Pro Leu His Leu Ala Ala Ala Asp
65          70          75          80
Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85          90          95
Asn Ala Gln Asp Ile Phe Gly Lys Thr Pro Ala Asp Ile Ala Ala Asp
100         105         110
Ala Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Leu Asn
115         120         125
```

<210> 42

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> HSA binding domain

<400> 42

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

<210> 43

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> CD40 binding domain

<400> 43

```
Asp Leu Gly Lys Lys Leu Leu Gln Ala Ala Arg Ala Gly Gln Leu Asp
1          5          10          15
Glu Val Arg Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp
          20          25          30
Thr Trp Gly Phe Thr Pro Leu His Ile Ala Ala Glu Ser Gly His Leu
          35          40          45
Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
          50          55          60
Asp Val Gln Gly Arg Thr Pro Leu His Ile Ala Ala His Ser Gly His
65          70          75          80
Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
          85          90          95
Lys Asp Phe Arg Gly Trp Thr Pro Leu His Leu Ala Ala Trp Ser Gly
          100          105          110
His Leu Glu Ile Val Glu Ile Leu Leu Lys Ala Gly Ala Asp Val Asn
          115          120          125
Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Arg Ala
          130          135          140
Gly His Gln Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
          145          150          155
```

<210> 44

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> CD40 binding domain

<400> 44

```
Asp Leu Gly Lys Lys Leu Leu Gln Ala Ala Arg Ala Gly Gln Leu Asp
1      5      10      15
Glu Val Arg Ile Leu Leu Ala Ala Gly Ala Asp Val Asn Ala Lys Asp
20     25     30
Thr Trp Gly Phe Thr Pro Leu His Ile Ala Ala Glu Ser Gly His Leu
35     40     45
Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
50     55     60
Asp Val Gln Gly Arg Thr Pro Leu His Ile Ala Ala His Ser Gly His
65     70     75     80
Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
85     90     95
Lys Asp Phe Arg Gly Trp Thr Pro Leu His Leu Ala Ala Trp Ser Gly
100    105    110
His Leu Glu Ile Val Glu Ile Leu Leu Lys Ala Gly Ala Asp Val Asn
115    120    125
Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Arg Ala
130    135    140
Gly His Gln Asp Ile Ala Glu Val Leu Gln Lys Ala Ala
145    150    155
```

<210> 45

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> CD40 binding domain

<400> 45

```
Asp Leu Gly Lys Lys Leu Leu Gln Ala Ala Arg Ala Gly Gln Leu Asp
1      5      10      15
Glu Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp
20     25     30
Thr Trp Gly Phe Thr Pro Leu His Ile Ala Ala Glu Ser Gly His Leu
35     40     45
Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys
50     55     60
Asp Val Gln Gly Arg Thr Pro Leu His Ile Ala Ala His Ser Gly His
65     70     75     80
Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala
85     90     95
Lys Asp Phe Arg Gly Trp Thr Pro Leu His Leu Ala Ala Trp Ser Gly
100    105    110
His Leu Glu Ile Val Glu Ile Leu Leu Lys Ala Gly Ala Asp Val Asn
115    120    125
```

Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala
130						135					140				
Gly	His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Leu	Asn			
145					150					155					

<210> 46

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> CD40 binding domain

<400> 46

Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp
1			5					10					15		
Glu	Val	Arg	Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
		20					25					30			
Thr	Trp	Gly	Phe	Thr	Pro	Leu	His	Ile	Ala	Ala	Glu	Ser	Gly	His	Leu
		35				40					45				
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
50					55					60					
Asp	Val	Gln	Gly	Arg	Thr	Pro	Leu	His	Ile	Ala	Ala	His	Ser	Gly	His
65				70					75					80	
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
			85					90					95		
Lys	Asp	Phe	Arg	Gly	Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Ser	Gly
		100					105						110		
His	Leu	Glu	Ile	Val	Glu	Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
		115				120						125			
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala
130						135					140				
Gly	His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Leu	Asn			
145					150					155					

<210> 47

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> CD40 binding domain

<400> 47

Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp
1			5					10					15		
Glu	Val	Arg	Ile	Leu	Leu	Ala	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
		20					25					30			
Thr	Trp	Gly	Phe	Thr	Pro	Leu	His	Ile	Ala	Ala	Glu	Ser	Gly	His	Leu
		35				40					45				
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
50					55					60					

Asp	Val	Gln	Gly	Arg	Thr	Pro	Leu	His	Ile	Ala	Ala	His	Ser	Gly	His
65					70					75					80
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
				85					90					95	
Lys	Asp	Phe	Arg	Gly	Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Ser	Gly
			100					105					110		
His	Leu	Glu	Ile	Val	Glu	Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
		115					120					125			
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala
	130					135					140				
Gly	His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Leu	Asn			
145					150					155					

<210> 48

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> CD40 binding domain

<400> 48

Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp
1				5					10					15	
Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
			20					25					30		
Glu	Phe	Gly	Gln	Thr	Pro	Leu	His	Ile	Ala	Ala	Lys	Ser	Gly	His	Leu
		35					40					45			
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
	50					55					60				
Asp	Val	Tyr	Gly	Arg	Thr	Pro	Leu	His	Leu	Ala	Ala	Gln	Tyr	Gly	His
65					70					75					80
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
				85					90					95	
Lys	Asp	Thr	Gln	Gly	Val	Thr	Pro	Leu	His	Val	Ala	Ala	Phe	Lys	Gly
			100					105					110		
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
		115					120					125			
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala
	130					135					140				
Gly	His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala			
145					150					155					

<210> 49

<211> 157

<212> PRT

<213> Artificial Sequence

<220>

<223> CD40 binding domain

<400> 49

Asp	Leu	Gly	Lys	Lys	Leu	Leu	Trp	Ala	Ala	Ala	Ala	Gly	Gln	Leu	Asp
1				5					10					15	
Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
			20					25					30		
His	Val	Gly	Tyr	Thr	Pro	Leu	His	Ile	Ala	Ala	Leu	Ala	Gly	His	Leu
		35					40					45			
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Glu	Asp	Val	Asn	Ala	Lys
	50					55					60				
Asp	His	Lys	Gly	Arg	Thr	Pro	Leu	His	Val	Ala	Ala	Val	Gly	His	
65					70				75					80	
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
				85					90					95	
Lys	Asp	Gln	Gln	Gly	Val	Thr	Pro	Leu	His	Ile	Ala	Ala	Ile	Thr	Gly
			100					105					110		
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
		115					120					125			
Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala
	130					135					140				
Gly	His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala			
145					150					155					

<210> 50

<211> 159

<212> PRT

<213> Artificial Sequence

<220>

<223> CD40 binding domain

<400> 50

Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln
1				5					10					15	
Leu	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
			20					25					30		
Lys	Asp	Thr	Trp	Gly	Phe	Thr	Pro	Leu	His	Ile	Ala	Ala	Glu	Ser	Gly
		35					40					45			
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
	50					55					60				
Ala	Lys	Asp	Val	Gln	Gly	Arg	Thr	Pro	Leu	His	Ile	Ala	Ala	His	Ser
65					70				75					80	
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val
				85					90					95	
Asn	Ala	Lys	Asp	Phe	Arg	Gly	Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp
			100					105					110		
Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp
		115					120					125			
Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala
	130					135					140				
Arg	Ala	Gly	His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	
145					150					155					

<210> 51

<211> 277

<212> PRT
<213> Homo sapiens

<220>
<223> Human CD40

<400> 51

Met	Val	Arg	Leu	Pro	Leu	Gln	Cys	Val	Leu	Trp	Gly	Cys	Leu	Leu	Thr
1			5					10					15		
Ala	Val	His	Pro	Glu	Pro	Pro	Thr	Ala	Cys	Arg	Glu	Lys	Gln	Tyr	Leu
			20				25					30			
Ile	Asn	Ser	Gln	Cys	Cys	Ser	Leu	Cys	Gln	Pro	Gly	Gln	Lys	Leu	Val
		35				40					45				
Ser	Asp	Cys	Thr	Glu	Phe	Thr	Glu	Thr	Glu	Cys	Leu	Pro	Cys	Gly	Glu
	50					55				60					
Ser	Glu	Phe	Leu	Asp	Thr	Trp	Asn	Arg	Glu	Thr	His	Cys	His	Gln	Lys
65				70				75						80	
His	Tyr	Cys	Asp	Pro	Asn	Leu	Gly	Leu	Arg	Val	Gln	Gln	Lys	Gly	Thr
			85					90						95	
Ser	Glu	Thr	Asp	Thr	Ile	Cys	Thr	Cys	Glu	Glu	Gly	Trp	His	Cys	Thr
			100				105					110			
Ser	Glu	Ala	Cys	Glu	Ser	Cys	Val	Leu	His	Arg	Ser	Cys	Ser	Pro	Gly
	115					120					125				
Phe	Gly	Val	Lys	Gln	Ile	Ala	Thr	Gly	Val	Ser	Asp	Thr	Ile	Cys	Glu
	130				135					140					
Pro	Cys	Pro	Val	Gly	Phe	Phe	Ser	Asn	Val	Ser	Ser	Ala	Phe	Glu	Lys
145				150				155						160	
Cys	His	Pro	Trp	Thr	Ser	Cys	Glu	Thr	Lys	Asp	Leu	Val	Val	Gln	Gln
			165					170						175	
Ala	Gly	Thr	Asn	Lys	Thr	Asp	Val	Val	Cys	Gly	Pro	Gln	Asp	Arg	Leu
			180				185						190		
Arg	Ala	Leu	Val	Val	Ile	Pro	Ile	Ile	Phe	Gly	Ile	Leu	Phe	Ala	Ile
	195					200						205			
Leu	Leu	Val	Leu	Val	Phe	Ile	Lys	Lys	Val	Ala	Lys	Lys	Pro	Thr	Asn
	210				215					220					
Lys	Ala	Pro	His	Pro	Lys	Gln	Glu	Pro	Gln	Glu	Ile	Asn	Phe	Pro	Asp
225				230				235						240	
Asp	Leu	Pro	Gly	Ser	Asn	Thr	Ala	Ala	Pro	Val	Gln	Glu	Thr	Leu	His
			245				250						255		
Gly	Cys	Gln	Pro	Val	Thr	Gln	Glu	Asp	Gly	Lys	Glu	Ser	Arg	Ile	Ser
		260					265						270		
Val	Gln	Glu	Arg	Gln											
		275													

<210> 52
<211> 760
<212> PRT
<213> Homo sapiens

<220>
<223> Human FAP

<400> 52

Met	Lys	Thr	Trp	Val	Lys	Ile	Val	Phe	Gly	Val	Ala	Thr	Ser	Ala	Val
1				5					10					15	
Leu	Ala	Leu	Leu	Val	Met	Cys	Ile	Val	Leu	Arg	Pro	Ser	Arg	Val	His
			20					25					30		
Asn	Ser	Glu	Glu	Asn	Thr	Met	Arg	Ala	Leu	Thr	Leu	Lys	Asp	Ile	Leu
		35					40					45			
Asn	Gly	Thr	Phe	Ser	Tyr	Lys	Thr	Phe	Phe	Pro	Asn	Trp	Ile	Ser	Gly
	50					55					60				
Gln	Glu	Tyr	Leu	His	Gln	Ser	Ala	Asp	Asn	Asn	Ile	Val	Leu	Tyr	Asn
65					70					75					80
Ile	Glu	Thr	Gly	Gln	Ser	Tyr	Thr	Ile	Leu	Ser	Asn	Arg	Thr	Met	Lys
				85					90					95	
Ser	Val	Asn	Ala	Ser	Asn	Tyr	Gly	Leu	Ser	Pro	Asp	Arg	Gln	Phe	Val
			100					105					110		
Tyr	Leu	Glu	Ser	Asp	Tyr	Ser	Lys	Leu	Trp	Arg	Tyr	Ser	Tyr	Thr	Ala
	115						120					125			
Thr	Tyr	Tyr	Ile	Tyr	Asp	Leu	Ser	Asn	Gly	Glu	Phe	Val	Arg	Gly	Asn
	130					135					140				
Glu	Leu	Pro	Arg	Pro	Ile	Gln	Tyr	Leu	Cys	Trp	Ser	Pro	Val	Gly	Ser
145					150					155					160
Lys	Leu	Ala	Tyr	Val	Tyr	Gln	Asn	Asn	Ile	Tyr	Leu	Lys	Gln	Arg	Pro
				165					170					175	
Gly	Asp	Pro	Pro	Phe	Gln	Ile	Thr	Phe	Asn	Gly	Arg	Glu	Asn	Lys	Ile
			180					185					190		
Phe	Asn	Gly	Ile	Pro	Asp	Trp	Val	Tyr	Glu	Glu	Glu	Met	Leu	Ala	Thr
	195						200					205			
Lys	Tyr	Ala	Leu	Trp	Trp	Ser	Pro	Asn	Gly	Lys	Phe	Leu	Ala	Tyr	Ala
	210					215					220				
Glu	Phe	Asn	Asp	Thr	Asp	Ile	Pro	Val	Ile	Ala	Tyr	Ser	Tyr	Tyr	Gly
225					230					235					240
Asp	Glu	Gln	Tyr	Pro	Arg	Thr	Ile	Asn	Ile	Pro	Tyr	Pro	Lys	Ala	Gly
				245					250					255	
Ala	Lys	Asn	Pro	Val	Val	Arg	Ile	Phe	Ile	Ile	Asp	Thr	Thr	Tyr	Pro
			260					265					270		
Ala	Tyr	Val	Gly	Pro	Gln	Glu	Val	Pro	Val	Pro	Ala	Met	Ile	Ala	Ser
	275						280					285			
Ser	Asp	Tyr	Tyr	Phe	Ser	Trp	Leu	Thr	Trp	Val	Thr	Asp	Glu	Arg	Val
	290					295					300				
Cys	Leu	Gln	Trp	Leu	Lys	Arg	Val	Gln	Asn	Val	Ser	Val	Leu	Ser	Ile
305					310					315					320
Cys	Asp	Phe	Arg	Glu	Asp	Trp	Gln	Thr	Trp	Asp	Cys	Pro	Lys	Thr	Gln
				325					330					335	
Glu	His	Ile	Glu	Glu	Ser	Arg	Thr	Gly	Trp	Ala	Gly	Gly	Phe	Phe	Val
			340					345					350		
Ser	Thr	Pro	Val	Phe	Ser	Tyr	Asp	Ala	Ile	Ser	Tyr	Tyr	Lys	Ile	Phe
		355					360					365			
Ser	Asp	Lys	Asp	Gly	Tyr	Lys	His	Ile	His	Tyr	Ile	Lys	Asp	Thr	Val
	370					375					380				
Glu	Asn	Ala	Ile	Gln	Ile	Thr	Ser	Gly	Lys	Trp	Glu	Ala	Ile	Asn	Ile
385					390					395					400
Phe	Arg	Val	Thr	Gln	Asp	Ser	Leu	Phe	Tyr	Ser	Ser	Asn	Glu	Phe	Glu
				405					410					415	
Glu	Tyr	Pro	Gly	Arg	Arg	Asn	Ile	Tyr	Arg	Ile	Ser	Ile	Gly	Ser	Tyr

Asp	Ala	His	Lys	Ser	Glu	Val	Ala	His	Arg	Phe	Lys	Asp	Leu	Gly	Glu	1	5	10	15
Glu	Asn	Phe	Lys	Ala	Leu	Val	Leu	Ile	Ala	Phe	Ala	Gln	Tyr	Leu	Gln	20	25	30	
Gln	Cys	Pro	Phe	Glu	Asp	His	Val	Lys	Leu	Val	Asn	Glu	Val	Thr	Glu	35	40	45	
Phe	Ala	Lys	Thr	Cys	Val	Ala	Asp	Glu	Ser	Ala	Glu	Asn	Cys	Asp	Lys	50	55	60	
Ser	Leu	His	Thr	Leu	Phe	Gly	Asp	Lys	Leu	Cys	Thr	Val	Ala	Thr	Leu	65	70	75	80
Arg	Glu	Thr	Tyr	Gly	Glu	Met	Ala	Asp	Cys	Cys	Ala	Lys	Gln	Glu	Pro	85	90	95	
Glu	Arg	Asn	Glu	Cys	Phe	Leu	Gln	His	Lys	Asp	Asp	Asn	Pro	Asn	Leu	100	105	110	
Pro	Arg	Leu	Val	Arg	Pro	Glu	Val	Asp	Val	Met	Cys	Thr	Ala	Phe	His	115	120	125	
Asp	Asn	Glu	Glu	Thr	Phe	Leu	Lys	Lys	Tyr	Leu	Tyr	Glu	Ile	Ala	Arg	130	135	140	
Arg	His	Pro	Tyr	Phe	Tyr	Ala	Pro	Glu	Leu	Leu	Phe	Phe	Ala	Lys	Arg	145	150	155	160
Tyr	Lys	Ala	Ala	Phe	Thr	Glu	Cys	Cys	Gln	Ala	Ala	Asp	Lys	Ala	Ala	165	170	175	
Cys	Leu	Leu	Pro	Lys	Leu	Asp	Glu	Leu	Arg	Asp	Glu	Gly	Lys	Ala	Ser	180	185	190	
Ser	Ala	Lys	Gln	Arg	Leu	Lys	Cys	Ala	Ser	Leu	Gln	Lys	Phe	Gly	Glu	195	200	205	
Arg	Ala	Phe	Lys	Ala	Trp	Ala	Val	Ala	Arg	Leu	Ser	Gln	Arg	Phe	Pro	210	215	220	
Lys	Ala	Glu	Phe	Ala	Glu	Val	Ser	Lys	Leu	Val	Thr	Asp	Leu	Thr	Lys	225	230	235	240
Val	His	Thr	Glu	Cys	Cys	His	Gly	Asp	Leu	Leu	Glu	Cys	Ala	Asp	Asp	245	250	255	
Arg	Ala	Asp	Leu	Ala	Lys	Tyr	Ile	Cys	Glu	Asn	Gln	Asp	Ser	Ile	Ser	260	265	270	
Ser	Lys	Leu	Lys	Glu	Cys	Cys	Glu	Lys	Pro	Leu	Leu	Glu	Lys	Ser	His	275	280	285	
Cys	Ile	Ala	Glu	Val	Glu	Asn	Asp	Glu	Met	Pro	Ala	Asp	Leu	Pro	Ser	290	295	300	
Leu	Ala	Ala	Asp	Phe	Val	Glu	Ser	Lys	Asp	Val	Cys	Lys	Asn	Tyr	Ala	305	310	315	320
Glu	Ala	Lys	Asp	Val	Phe	Leu	Gly	Met	Phe	Leu	Tyr	Glu	Tyr	Ala	Arg	325	330	335	
Arg	His	Pro	Asp	Tyr	Ser	Val	Val	Leu	Leu	Leu	Arg	Leu	Ala	Lys	Thr	340	345	350	
Tyr	Glu	Thr	Thr	Leu	Glu	Lys	Cys	Cys	Ala	Ala	Ala	Asp	Pro	His	Glu	355	360	365	
Cys	Tyr	Ala	Lys	Val	Phe	Asp	Glu	Phe	Lys	Pro	Leu	Val	Glu	Glu	Pro	370	375	380	
Gln	Asn	Leu	Ile	Lys	Gln	Asn	Cys	Glu	Leu	Phe	Glu	Gln	Leu	Gly	Glu	385	390	395	400
Tyr	Lys	Phe	Gln	Asn	Ala	Leu	Leu	Val	Arg	Tyr	Thr	Lys	Lys	Val	Pro	405	410	415	
Gln	Val	Ser	Thr	Pro	Thr	Leu	Val	Glu	Val	Ser	Arg	Asn	Leu	Gly	Lys	420	425	430	

Val	Gly	Ser	Lys	Cys	Cys	Lys	His	Pro	Glu	Ala	Lys	Arg	Met	Pro	Cys	
		435					440					445				
Ala	Glu	Asp	Tyr	Leu	Ser	Val	Val	Leu	Asn	Gln	Leu	Cys	Val	Leu	His	
	450					455					460					
Glu	Lys	Thr	Pro	Val	Ser	Asp	Arg	Val	Thr	Lys	Cys	Cys	Thr	Glu	Ser	
465					470					475					480	
Leu	Val	Asn	Arg	Arg	Pro	Cys	Phe	Ser	Ala	Leu	Glu	Val	Asp	Glu	Thr	
			485						490					495		
Tyr	Val	Pro	Lys	Glu	Phe	Asn	Ala	Glu	Thr	Phe	Thr	Phe	His	Ala	Asp	
		500					505						510			
Ile	Cys	Thr	Leu	Ser	Glu	Lys	Glu	Arg	Gln	Ile	Lys	Lys	Gln	Thr	Ala	
	515						520					525				
Leu	Val	Glu	Leu	Val	Lys	His	Lys	Pro	Lys	Ala	Thr	Lys	Glu	Gln	Leu	
	530					535					540					
Lys	Ala	Val	Met	Asp	Asp	Phe	Ala	Ala	Phe	Val	Glu	Lys	Cys	Cys	Lys	
545					550					555					560	
Ala	Asp	Asp	Lys	Glu	Thr	Cys	Phe	Ala	Glu	Glu	Gly	Lys	Lys	Leu	Val	
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Ala	Ala	Ser	Gln	Ala	Ala	Leu	Gly	Leu								
			580					585								

<210> 54

<211> 173

<212> PRT

<213> Homo sapiens

<220>

<223> Extracellular domain of human CD40

<400> 54

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

<210> 55
 <211> 735
 <212> PRT
 <213> Homo sapiens

<220>
 <223> Extracellular domain of human FAP

<400> 55
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 1 5 10 15
 Leu Thr Leu Lys Asp Ile Leu Asn Gly Thr Phe Ser Tyr Lys Thr Phe
 20 25 30
 Phe Pro Asn Trp Ile Ser Gly Gln Glu Tyr Leu His Gln Ser Ala Asp
 35 40 45
 Asn Asn Ile Val Leu Tyr Asn Ile Glu Thr Gly Gln Ser Tyr Thr Ile
 50 55 60
 Leu Ser Asn Arg Thr Met Lys Ser Val Asn Ala Ser Asn Tyr Gly Leu
 65 70 75 80
 Ser Pro Asp Arg Gln Phe Val Tyr Leu Glu Ser Asp Tyr Ser Lys Leu
 85 90 95
 Trp Arg Tyr Ser Tyr Thr Ala Thr Tyr Tyr Ile Tyr Asp Leu Ser Asn
 100 105 110
 Gly Glu Phe Val Arg Gly Asn Glu Leu Pro Arg Pro Ile Gln Tyr Leu
 115 120 125
 Cys Trp Ser Pro Val Gly Ser Lys Leu Ala Tyr Val Tyr Gln Asn Asn
 130 135 140
 Ile Tyr Leu Lys Gln Arg Pro Gly Asp Pro Pro Phe Gln Ile Thr Phe
 145 150 155 160
 Asn Gly Arg Glu Asn Lys Ile Phe Asn Gly Ile Pro Asp Trp Val Tyr
 165 170 175
 Glu Glu Glu Met Leu Ala Thr Lys Tyr Ala Leu Trp Trp Ser Pro Asn
 180 185 190
 Gly Lys Phe Leu Ala Tyr Ala Glu Phe Asn Asp Thr Asp Ile Pro Val
 195 200 205
 Ile Ala Tyr Ser Tyr Tyr Gly Asp Glu Gln Tyr Pro Arg Thr Ile Asn
 210 215 220
 Ile Pro Tyr Pro Lys Ala Gly Ala Lys Asn Pro Val Val Arg Ile Phe
 225 230 235 240
 Ile Ile Asp Thr Thr Tyr Pro Ala Tyr Val Gly Pro Gln Glu Val Pro
 245 250 255
 Val Pro Ala Met Ile Ala Ser Ser Asp Tyr Tyr Phe Ser Trp Leu Thr
 260 265 270
 Trp Val Thr Asp Glu Arg Val Cys Leu Gln Trp Leu Lys Arg Val Gln
 275 280 285
 Asn Val Ser Val Leu Ser Ile Cys Asp Phe Arg Glu Asp Trp Gln Thr
 290 295 300
 Trp Asp Cys Pro Lys Thr Gln Glu His Ile Glu Glu Ser Arg Thr Gly
 305 310 315 320
 Trp Ala Gly Gly Phe Phe Val Ser Thr Pro Val Phe Ser Tyr Asp Ala
 325 330 335
 Ile Ser Tyr Tyr Lys Ile Phe Ser Asp Lys Asp Gly Tyr Lys His Ile
 340 345 350

<210> 56
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Consensus GS linker

<220>
<221> VARIANT
<222> 1..5
<223> [Gly-Gly-Gly-Gly-Ser]_n, wherein n is 1, 2, 3, 4, 5, or 6

<400> 56
Gly Gly Gly Gly Ser
1 5

<210> 57
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> His-tag

<400> 57
Met Arg Gly Ser His His His His His His
1 5 10

<210> 58
<211> 2010
<212> DNA
<213> Artificial Sequence

<220>
<223> Nucleic acid encoding FAP/CD40 bispecific

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gtgcgcgagc tgttaaaagc ggggtgccgac gtcaatgccca aagactactt cagccacacg 120
cctctgcatc tggccgcacg caatgggtcat ctgaagattg tggaggtggt gctcaaagct 180
ggcgccgatg tcaatgctaa agatttcgcg ggtaaaacgc ctttgcacct ggcggctgca 240
gatggtcatt tggagattgt tgaagttctg ttgaaagcag gcgcggatgt taacgctcag 300
gacatctttg gcaagacccc agcggacatt gcggcggatg cgggccatga agatatcgcg 360
gaggttcttc agaaggcggc cggtagccca acgccaacgc ctacgacccc gactcctacg 420
cctactactc caactccgac tccaacgggt tccgatttgg gtaagaaact gttggaagcc 480
gcgcgcgctg gccaggatga cgaagttcgt atcttgcttg cggctggcgc agatgtcaac 540

gctaaggacg tgctgggttg gaccccgttg caccttgagc cattcgaagg tcatttagag	600
atcggtgagg ttctgctgaa ggcgggtgca gatgttaatg caaaagacaa aaaaggctgg	660
actccactgc agttggcggc ccgcaccggt catctggaaa ttgtcgaggt tctcttgaag	720
gctgggtgctg atgtaaatgc taaggaccac attggcgcga cccctttgca cttggcggca	780
tggcaaggtc atccggaaat cgtcgaagtc ctgttgaagg caggcgccga cgtgaatgcc	840
caagataaga gcggcaaac cccggccgat ctggctgccg atgcaggcca cgaagatatt	900
gcagagggtc tgcaaaaagc cgcgggcagc ccgacccga cgccgactac cccaacgccg	960
actccgacga ctctactcc gacccaaca ggttccgacc tgggtaaaaa actgctgcaa	1020
gcagcacgtg caggtcagct ggatgaagtt cgtgaactgc tgaaagcagg cgccgatgtt	1080
aatgcaaaag atacctgggg cttcaccccg ctgcatattg ctgctgagtc tggtcacctg	1140
gaaattgttg aagttctgct gaaagccggt gcagatgtta atgcaaaaga tgtgcaaggc	1200
agaaccccg cgcataatgc tgctcactct ggtcacctgg aaattgttga agttctgctg	1260
aaagccggtg cagatgttaa tgcaaaagat ttgagaggct ggaccccgct gcatctggct	1320
gcttggcttg gtcacctgga aattgttgaa attctgctga aagccggtgc agatgttaac	1380
gcacaggata aaagcggtaa aaccctgcc gatctggcag ctgcgcggg tcatcaagat	1440
attgctgaag tgctgcagaa ggcagcaggc tcgccgactc cgaccccgac caccacaacg	1500
ccaacaccga ccaccccgac ccctaccca acaggttccg acctgggtaa aaaactgctg	1560
caagcagcac gtgcaggta gctggatgaa gttcgtgaac tgctgaaagc aggcgccgat	1620
gttaatgcaa aagatactg gggcttcacc ccgctgcata ttgctgctga gtctggtcac	1680
ctggaaattg ttgaagttct gctgaaagcc ggtgcagatg ttaatgcaaa agatgtgcaa	1740
ggcagaacct cgctgcatat cgctgctcac tctggtcacc tggaaattgt tgaagttctg	1800
ctgaaagccg gtgcagatgt taatgcaaaa gatttcagag gctggacccc gctgcatctg	1860
gctgcttggt ctggtcacct ggaaattgtt gaaattctgc tgaaagccgg tgcagatgtt	1920
aacgcacagg ataaaagcgg taaaaccct gccgatctgg cagctcgcgc cggtcatcaa	1980
gatattgcag aagtgcctga gaaggcagca	2010

<210> 59
 <211> 307
 <212> PRT

<213> Artificial Sequence

<220>

<223> Binding protein

<400> 59

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20     25     30
Lys Asp Gln Trp Gly Leu Thr Pro Leu His Lys Ala Ala Leu Gln Gly
35     40     45
His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn
50     55     60
Ala Lys Asp Glu Arg Gly His Thr Pro Leu His Trp Ala Ala Arg Phe
65     70     75     80
Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val
85     90     95
Asn Ala Gln Asp Gln Lys Gly Tyr Thr Pro Ala Asp Leu Ala Ala Leu
100    105    110
Trp Gly His Glu Asp Ile Ala Glu Val Leu Gln Lys Ala Ala Gly Ser
115    120    125
Pro Thr Pro Thr Pro Thr Thr Pro Thr Pro Thr Pro Thr Pro Thr
130    135    140
Pro Thr Pro Thr Gly Ser Asp Leu Gly Lys Lys Leu Leu Gln Ala Ala
145    150    155    160
Arg Ala Gly Gln Leu Asp Glu Val Arg Glu Leu Leu Lys Ala Gly Ala
165    170    175
Asp Val Asn Ala Lys Asp Thr Trp Gly Phe Thr Pro Leu His Ile Ala
180    185    190
Ala Glu Ser Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala Gly
195    200    205
Ala Asp Val Asn Ala Lys Asp Val Gln Gly Arg Thr Pro Leu His Ile
210    215    220
Ala Ala His Ser Gly His Leu Glu Ile Val Glu Val Leu Leu Lys Ala
225    230    235    240
Gly Ala Asp Val Asn Ala Lys Asp Phe Arg Gly Trp Thr Pro Leu His
245    250    255
Leu Ala Ala Trp Ser Gly His Leu Glu Ile Val Glu Ile Leu Leu Lys
260    265    270
Ala Gly Ala Asp Val Asn Ala Gln Asp Lys Ser Gly Lys Thr Pro Ala
275    280    285
Asp Leu Ala Ala Arg Ala Gly His Gln Asp Ile Ala Glu Val Leu Gln
290    295    300
Lys Ala Ala
305
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<210> 60

<211> 455

<212> PRT

<213> Artificial Sequence

<220>

<223> Binding protein

<400> 60

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Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
		20						25					30		
Lys	Asp	Tyr	Phe	Ser	His	Thr	Pro	Leu	His	Leu	Ala	Ala	Arg	Asn	Gly
		35					40					45			
His	Leu	Lys	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
	50					55					60				
Ala	Lys	Asp	Phe	Ala	Gly	Lys	Thr	Pro	Leu	His	Leu	Ala	Ala	Ala	Asp
65					70					75					80
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val
				85					90					95	
Asn	Ala	Gln	Asp	Ile	Phe	Gly	Lys	Thr	Pro	Ala	Asp	Ile	Ala	Ala	Asp
			100					105					110		
Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser
		115					120					125			
Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr
	130					135					140				
Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Glu	Lys	Leu	Leu	Val	Ala	Ala
145					150					155					160
Leu	Tyr	Gly	Gln	Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala
				165				170						175	
Asp	Val	Asn	Ala	Lys	Asp	Gln	Trp	Gly	Leu	Thr	Pro	Leu	His	Lys	Ala
			180					185					190		
Ala	Leu	Gln	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly
		195					200					205			
Ala	Asp	Val	Asn	Ala	Lys	Asp	Glu	Arg	Gly	His	Thr	Pro	Leu	His	Trp
	210					215					220				
Ala	Ala	Arg	Phe	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala
225					230					235					240
Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Gln	Lys	Gly	Tyr	Thr	Pro	Ala	Asp
				245					250					255	
Leu	Ala	Ala	Leu	Trp	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys
			260				265						270		
Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro
		275					280					285			
Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu
	290					295					300				
Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp	Glu	Val	Arg	Glu	Leu	Leu
305					310					315					320
Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Thr	Trp	Gly	Phe	Thr	Pro
				325					330					335	
Leu	His	Ile	Ala	Ala	Glu	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu
			340				345						350		
Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Val	Gln	Gly	Arg	Thr
		355					360					365			
Pro	Leu	His	Ile	Ala	Ala	His	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val
	370					375					380				
Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Phe	Arg	Gly	Trp
385					390					395					400

Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Ser	Gly	His	Leu	Glu	Ile	Val	Glu
				405					410					415	
Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly
			420					425					430		
Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly	His	Gln	Asp	Ile	Ala
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Glu	Val	Leu	Gln	Lys	Ala	Ala									
	450					455									

<210> 61

<211> 603

<212> PRT

<213> Artificial Sequence

<220>

<223> Binding protein

<400> 61

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		20						25					30		
Lys	Asp	Tyr	Phe	Ser	His	Thr	Pro	Leu	His	Leu	Ala	Ala	Arg	Asn	Gly
		35					40					45			
His	Leu	Lys	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
	50					55					60				
Ala	Lys	Asp	Phe	Ala	Gly	Lys	Thr	Pro	Leu	His	Leu	Ala	Ala	Ala	Asp
65					70					75					80
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val
				85					90					95	
Asn	Ala	Gln	Asp	Ile	Phe	Gly	Lys	Thr	Pro	Ala	Asp	Ile	Ala	Ala	Asp
			100					105					110		
Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser
		115					120					125			
Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr
	130					135						140			
Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Glu	Lys	Leu	Leu	Val	Ala	Ala
145					150					155					160
Leu	Tyr	Gly	Gln	Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala
				165					170					175	
Asp	Val	Asn	Ala	Lys	Asp	Gln	Trp	Gly	Leu	Thr	Pro	Leu	His	Lys	Ala
			180					185					190		
Ala	Leu	Gln	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly
		195					200					205			
Ala	Asp	Val	Asn	Ala	Lys	Asp	Glu	Arg	Gly	His	Thr	Pro	Leu	His	Trp
	210					215					220				
Ala	Ala	Arg	Phe	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala
225					230					235					240
Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Gln	Lys	Gly	Tyr	Thr	Pro	Ala	Asp
				245					250					255	
Leu	Ala	Ala	Leu	Trp	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys
			260					265					270		
Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro

Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala		
			20					25					30				
Lys	Asp	Gln	Trp	Gly	Leu	Thr	Pro	Leu	His	Lys	Ala	Ala	Leu	Gln	Gly		
		35					40					45					
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn		
	50					55					60						
Ala	Lys	Asp	Glu	Arg	Gly	His	Thr	Pro	Leu	His	Trp	Ala	Ala	Arg	Phe		
65					70					75					80		
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val		
				85				90						95			
Asn	Ala	Gln	Asp	Gln	Lys	Gly	Tyr	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Leu		
			100					105					110				
Trp	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser		
		115					120					125					
Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr		
	130					135						140					
Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala		
145					150					155					160		
Arg	Ala	Gly	Gln	Leu	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala		
				165					170						175		
Asp	Val	Asn	Ala	Lys	Asp	Thr	Trp	Gly	Phe	Thr	Pro	Leu	His	Ile	Ala		
			180					185						190			
Ala	Glu	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly		
		195					200					205					
Ala	Asp	Val	Asn	Ala	Lys	Asp	Val	Gln	Gly	Arg	Thr	Pro	Leu	His	Ile		
	210					215					220						
Ala	Ala	His	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala		
225					230					235					240		
Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Phe	Arg	Gly	Trp	Thr	Pro	Leu	His		
				245					250						255		
Leu	Ala	Ala	Trp	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Ile	Leu	Leu	Lys		
			260					265					270				
Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala		
		275					280					285					
Asp	Leu	Ala	Ala	Arg	Ala	Gly	His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln		
	290					295					300						
Lys	Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Thr	
305					310					315						320	
Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys		
				325					330					335			
Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp	Glu	Val	Arg	Glu	Leu		
			340					345					350				
Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Thr	Trp	Gly	Phe	Thr		
		355					360					365					
Pro	Leu	His	Ile	Ala	Ala	Glu	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val		
	370					375					380						
Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Val	Gln	Gly	Arg		
385					390					395					400		
Thr	Pro	Leu	His	Ile	Ala	Ala	His	Ser	Gly	His	Leu	Glu	Ile	Val	Glu		
				405					410					415			
Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Phe	Arg	Gly		
			420				425						430				
Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Ser	Gly	His	Leu	Glu	Ile	Val		
		435					440						445				

Glu	Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser
450						455					460				
Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly	His	Gln	Asp	Ile
465					470					475					480
Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala								
				485											

<210> 63
 <211> 636
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Binding protein

<400> 63

Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln
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Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
			20					25					30		
Lys	Asp	Tyr	Phe	Ser	His	Thr	Pro	Leu	His	Leu	Ala	Ala	Arg	Asn	Gly
		35					40					45			
His	Leu	Lys	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
	50					55					60				
Ala	Lys	Asp	Phe	Ala	Gly	Lys	Thr	Pro	Leu	His	Leu	Ala	Ala	Ala	Asp
65					70					75					80
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val
				85					90					95	
Asn	Ala	Gln	Asp	Ile	Phe	Gly	Lys	Thr	Pro	Ala	Asp	Ile	Ala	Ala	Asp
			100					105					110		
Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser
		115					120					125			
Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr
		130				135						140			
Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Glu	Lys	Leu	Leu	Val	Ala	Ala
145					150					155					160
Leu	Tyr	Gly	Gln	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	
			165					170					175		
Asp	Val	Asn	Ala	Lys	Asp	Gln	Trp	Gly	Leu	Thr	Pro	Leu	His	Lys	Ala
			180					185					190		
Ala	Leu	Gln	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly
		195					200					205			
Ala	Asp	Val	Asn	Ala	Lys	Asp	Glu	Arg	Gly	His	Thr	Pro	Leu	His	Trp
	210					215					220				
Ala	Ala	Arg	Phe	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala
225					230					235					240
Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Gln	Lys	Gly	Tyr	Thr	Pro	Ala	Asp
				245					250					255	
Leu	Ala	Ala	Leu	Trp	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys
			260					265					270		
Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro
		275					280					285			
Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu

290		295		300
Leu Gln Ala Ala Arg Ala Gly Gln Leu Asp Glu Val Arg Glu Leu Leu				
305		310		320
Lys Ala Gly Ala Asp Val Asn Ala Lys Asp Thr Trp Gly Phe Thr Pro				
	325		330	335
Leu His Ile Ala Ala Glu Ser Gly His Leu Glu Ile Val Glu Val Leu				
	340		345	350
Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp Val Gln Gly Arg Thr				
	355		360	365
Pro Leu His Ile Ala Ala His Ser Gly His Leu Glu Ile Val Glu Val				
	370		375	380
Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp Phe Arg Gly Trp				
385		390		400
Thr Pro Leu His Leu Ala Ala Trp Ser Gly His Leu Glu Ile Val Glu				
	405		410	415
Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Gln Asp Lys Ser Gly				
	420		425	430
Lys Thr Pro Ala Asp Leu Ala Ala Arg Ala Gly His Gln Asp Ile Ala				
	435		440	445
Glu Val Leu Gln Lys Ala Ala Gly Ser Pro Thr Pro Thr Pro Thr Thr				
	450		455	460
Pro Thr Pro Thr Pro Thr Pro Thr Pro Thr Pro Thr Gly Ser Asp				
465		470		480
Leu Gly Lys Lys Leu Leu Gln Ala Ala Arg Ala Gly Gln Leu Asp Glu				
	485		490	495
Val Arg Glu Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp Thr				
	500		505	510
Trp Gly Phe Thr Pro Leu His Ile Ala Ala Glu Ser Gly His Leu Glu				
	515		520	525
Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys Asp				
	530		535	540
Val Gln Gly Arg Thr Pro Leu His Ile Ala Ala His Ser Gly His Leu				
545		550		560
Glu Ile Val Glu Val Leu Leu Lys Ala Gly Ala Asp Val Asn Ala Lys				
	565		570	575
Asp Phe Arg Gly Trp Thr Pro Leu His Leu Ala Ala Trp Ser Gly His				
	580		585	590
Leu Glu Ile Val Glu Ile Leu Leu Lys Ala Gly Ala Asp Val Asn Ala				
	595		600	605
Gln Asp Lys Ser Gly Lys Thr Pro Ala Asp Leu Ala Ala Arg Ala Gly				
	610		615	620
His Gln Asp Ile Ala Glu Val Leu Gln Lys Ala Ala				
625		630		635

<210> 64

<211> 784

<212> PRT

<213> Artificial Sequence

<220>

<223> Binding protein

<400> 64

Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln	1	5	10	15
Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	20	25	30	
Lys	Asp	Tyr	Phe	Ser	His	Thr	Pro	Leu	His	Leu	Ala	Ala	Arg	Asn	Gly	35	40	45	
His	Leu	Lys	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	50	55	60	
Ala	Lys	Asp	Phe	Ala	Gly	Lys	Thr	Pro	Leu	His	Leu	Ala	Ala	Ala	Asp	65	70	75	80
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	85	90	95	
Asn	Ala	Gln	Asp	Ile	Phe	Gly	Lys	Thr	Pro	Ala	Asp	Ile	Ala	Ala	Asp	100	105	110	
Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser	115	120	125	
Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	130	135	140	
Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Glu	Lys	Leu	Leu	Val	Ala	Ala	145	150	155	160
Leu	Tyr	Gly	Gln	Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	165	170	175	
Asp	Val	Asn	Ala	Lys	Asp	Gln	Trp	Gly	Leu	Thr	Pro	Leu	His	Lys	Ala	180	185	190	
Ala	Leu	Gln	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	195	200	205	
Ala	Asp	Val	Asn	Ala	Lys	Asp	Glu	Arg	Gly	His	Thr	Pro	Leu	His	Trp	210	215	220	
Ala	Ala	Arg	Phe	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	225	230	235	240
Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Gln	Lys	Gly	Tyr	Thr	Pro	Ala	Asp	245	250	255	
Leu	Ala	Ala	Leu	Trp	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	260	265	270	
Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	275	280	285	
Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	290	295	300	
Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp	Glu	Val	Arg	Glu	Leu	Leu	305	310	315	320
Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Thr	Trp	Gly	Phe	Thr	Pro	325	330	335	
Leu	His	Ile	Ala	Ala	Glu	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	340	345	350	
Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Val	Gln	Gly	Arg	Thr	355	360	365	
Pro	Leu	His	Ile	Ala	Ala	His	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val	370	375	380	
Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Phe	Arg	Gly	Trp	385	390	395	400
Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	405	410	415	
Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly	420	425	430	

$\langle 220 \rangle$

<223> Binding protein

<400> 65

Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	Arg	Ala	Gly	Gln	1	5	10	15
Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	20	25	30	
Lys	Asp	Tyr	Phe	Ser	His	Thr	Pro	Leu	His	Leu	Ala	Ala	Arg	Asn	Gly	35	40	45	
His	Leu	Lys	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	50	55	60	
Ala	Lys	Asp	Phe	Ala	Gly	Lys	Thr	Pro	Leu	His	Leu	Ala	Ala	Ala	Asp	65	70	75	80
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	85	90	95	
Asn	Ala	Gln	Asp	Ile	Phe	Gly	Lys	Thr	Pro	Ala	Asp	Ile	Ala	Ala	Asp	100	105	110	
Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser	115	120	125	
Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	130	135	140	
Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala	145	150	155	160
Arg	Ala	Gly	Gln	Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	165	170	175	
Asp	Val	Asn	Ala	Lys	Asp	Tyr	Phe	Ser	His	Thr	Pro	Leu	His	Leu	Ala	180	185	190	
Ala	Arg	Asn	Gly	His	Leu	Lys	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	195	200	205	
Ala	Asp	Val	Asn	Ala	Lys	Asp	Phe	Ala	Gly	Lys	Thr	Pro	Leu	His	Leu	210	215	220	
Ala	Ala	Ala	Asp	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	225	230	235	240
Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Ile	Phe	Gly	Lys	Thr	Pro	Ala	Asp	245	250	255	
Ile	Ala	Ala	Asp	Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	260	265	270	
Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	275	280	285	
Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Glu	Lys	Leu	290	295	300	
Leu	Val	Ala	Ala	Leu	Tyr	Gly	Gln	Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	305	310	315	320
Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Gln	Trp	Gly	Leu	Thr	Pro	325	330	335	
Leu	His	Lys	Ala	Ala	Leu	Gln	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	340	345	350	
Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Glu	Arg	Gly	His	Thr	355	360	365	
Pro	Leu	His	Trp	Ala	Ala	Arg	Phe	Gly	His	Leu	Glu	Ile	Val	Glu	Val	370	375	380	
Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Gln	Lys	Gly	Tyr	385	390	395	400
Thr	Pro	Ala	Asp	Leu	Ala	Ala	Leu	Trp	Gly	His	Glu	Asp	Ile	Ala	Glu				

				405				410					415				
Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro		
			420					425					430				
Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu		
		435					440					445					
Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp	Glu	Val		
	450					455					460						
Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Thr	Trp		
465				470						475					480		
Gly	Phe	Thr	Pro	Leu	His	Ile	Ala	Ala	Glu	Ser	Gly	His	Leu	Glu	Ile		
			485					490						495			
Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Val		
		500					505						510				
Gln	Gly	Arg	Thr	Pro	Leu	His	Ile	Ala	Ala	His	Ser	Gly	His	Leu	Glu		
	515					520						525					
Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp		
	530					535					540						
Phe	Arg	Gly	Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Ser	Gly	His	Leu		
545					550					555					560		
Glu	Ile	Val	Glu	Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln		
			565						570					575			
Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly	His		
		580						585				590					
Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser	Pro	Thr	Pro		
	595					600					605						
Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro		
	610					615					620						
Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly		
625				630						635					640		
Gln	Leu	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn		
			645						650					655			
Ala	Lys	Asp	Thr	Trp	Gly	Phe	Thr	Pro	Leu	His	Ile	Ala	Ala	Glu	Ser		
		660						665				670					
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val		
	675						680					685					
Asn	Ala	Lys	Asp	Val	Gln	Gly	Arg	Thr	Pro	Leu	His	Ile	Ala	Ala	His		
	690					695					700						
Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp		
705				710					715						720		
Val	Asn	Ala	Lys	Asp	Phe	Arg	Gly	Trp	Thr	Pro	Leu	His	Leu	Ala	Ala		
			725					730						735			
Trp	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Ile	Leu	Leu	Lys	Ala	Gly	Ala		
		740						745					750				
Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala		
	755					760						765					
Ala	Arg	Ala	Gly	His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala		
	770					775					780						

<210> 66

<211> 669

<212> PRT

<213> Artificial Sequence

<220>

<223> Binding protein

<400> 66

Gly	Ser	Asp	Leu	Gly	Glu	Lys	Leu	Leu	Val	Ala	Ala	Leu	Tyr	Gly	Gln
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Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
		20						25					30		
Lys	Asp	Gln	Trp	Gly	Leu	Thr	Pro	Leu	His	Lys	Ala	Ala	Leu	Gln	Gly
		35					40					45			
His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn
	50					55					60				
Ala	Lys	Asp	Glu	Arg	Gly	His	Thr	Pro	Leu	His	Trp	Ala	Ala	Arg	Phe
65					70					75					80
Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val
				85					90					95	
Asn	Ala	Gln	Asp	Gln	Lys	Gly	Tyr	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Leu
			100					105					110		
Trp	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser
		115					120					125			
Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr
	130					135					140				
Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala
145					150					155					160
Arg	Ala	Gly	Gln	Leu	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala
				165					170					175	
Asp	Val	Asn	Ala	Lys	Asp	Thr	Trp	Gly	Phe	Thr	Pro	Leu	His	Ile	Ala
			180					185					190		
Ala	Glu	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly
		195					200					205			
Ala	Asp	Val	Asn	Ala	Lys	Asp	Val	Gln	Gly	Arg	Thr	Pro	Leu	His	Ile
	210					215					220				
Ala	Ala	His	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala
225					230					235					240
Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Phe	Arg	Gly	Trp	Thr	Pro	Leu	His
				245					250					255	
Leu	Ala	Ala	Trp	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Ile	Leu	Leu	Lys
			260					265					270		
Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala
		275					280					285			
Asp	Leu	Ala	Ala	Arg	Ala	Gly	His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln
	290					295					300				
Lys	Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr
305					310						315				320
Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys
				325					330					335	
Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp	Glu	Val	Arg	Glu	Leu
			340					345					350		
Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Thr	Trp	Gly	Phe	Thr
		355					360					365			
Pro	Leu	His	Ile	Ala	Ala	Glu	Ser	Gly	His	Leu	Glu	Ile	Val	Glu	Val
	370					375						380			

Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Val	Gln	Gly	Arg
385					390					395					400
Thr	Pro	Leu	His	Ile	Ala	Ala	His	Ser	Gly	His	Leu	Glu	Ile	Val	Glu
				405					410					415	
Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Phe	Arg	Gly
			420					425					430		
Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Ser	Gly	His	Leu	Glu	Ile	Val
		435				440						445			
Glu	Ile	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser
	450				455					460					
Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly	His	Gln	Asp	Ile
465					470				475						480
Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr
				485					490						495
Thr	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser
			500					505					510		
Asp	Leu	Gly	Lys	Lys	Leu	Leu	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp
		515					520					525			
Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp
	530					535					540				
Thr	Trp	Gly	Phe	Thr	Pro	Leu	His	Ile	Ala	Ala	Glu	Ser	Gly	His	Leu
545					550				555						560
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys
				565					570					575	
Asp	Val	Gln	Gly	Arg	Thr	Pro	Leu	His	Ile	Ala	Ala	His	Ser	Gly	His
			580					585					590		
Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala
		595					600					605			
Lys	Asp	Phe	Arg	Gly	Trp	Thr	Pro	Leu	His	Leu	Ala	Ala	Trp	Ser	Gly
	610					615					620				
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Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala
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<212> PRT

<213> Artificial Sequence

<220>

<223> Binding protein

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

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Gly	His	Leu	Glu	Ile 85	Val	Glu	Val	Leu	Leu 90	Lys	Ala	Gly	Ala	Asp 95	Val
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Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala	Gly	Ser
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Pro 145	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu	Leu	Glu	Ala	Ala
Arg	Ala	Gly	Gln	Asp	Asp	Glu	Val	Arg	Glu	Leu	Leu	Lys	Ala	Gly	Ala
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Ala	Asp	Val	Asn	Ala	Lys	Asp	Lys	Asp	Gly	Tyr	Thr	Pro	Leu	His	Leu
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Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp
Leu	Ala	Ala	Asp	Ala	Gly	His	Glu	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys
Ala	Ala	Gly	Ser	Pro	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro
Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp	Leu	Gly	Lys	Lys	Leu
Leu 305	Gln	Ala	Ala	Arg	Ala	Gly	Gln	Leu	Asp	Glu	Val	Arg	Glu	Leu	Leu
Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Thr	Leu	Gly	Ser	Thr	Pro
Leu	His	Leu	Ala	Ala	Trp	Glu	Gly	His	Leu	Glu	Ile	Val	Glu	Val	Leu
Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Ile	Glu	Gly	Arg	Thr
Pro	Leu	His	Leu	Ala	Ala	Arg	Val	Gly	His	Leu	Glu	Ile	Val	Glu	Val
Leu 385	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	Ala	Tyr	Gly	Phe
Thr	Pro	Leu	His	Leu	Ala	Ala	Glu	Ser	Gly	His	Leu	Glu	Ile	Val	Glu
Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Gln	Asp	Lys	Ser	Gly
Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly	His	Gln	Asp	Ile	Ala
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Pro 465	Thr	Pro	Thr	Pro	Thr	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Gly	Ser	Asp
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Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	Asp	
		530				535					540					
Ile	Glu	Gly	Arg	Thr	Pro	Leu	His	Leu	Ala	Ala	Arg	Val	Gly	His	Leu	
545					550				555						560	
Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	Lys	
			565					570					575			
Asp	Ala	Tyr	Gly	Phe	Thr	Pro	Leu	His	Leu	Ala	Ala	Glu	Ser	Gly	His	
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Leu	Glu	Ile	Val	Glu	Val	Leu	Leu	Lys	Ala	Gly	Ala	Asp	Val	Asn	Ala	
		595				600					605					
Gln	Asp	Lys	Ser	Gly	Lys	Thr	Pro	Ala	Asp	Leu	Ala	Ala	Arg	Ala	Gly	
	610				615					620						
His	Gln	Asp	Ile	Ala	Glu	Val	Leu	Gln	Lys	Ala	Ala					
625					630				635							