

## SEQUENCE LISTING

<110> Macquarie University

<120> Luminescent biomolecular complex and use thereof

<130> 120619742

<160> 17

<170> PatentIn version 3.5

 $\langle 210 \rangle$  1

$\langle 211 \rangle$  21

&lt;212&gt; PRT

<213> Artificial Sequence

 $\langle 220 \rangle$ 

<223> polypeptide linker

<400> 1

Val Lys Thr Gln Ala Thr Ser Arg Glu Glu Pro Pro Arg Leu Pro Ser

1                      5                      10                      15

Lys His Arg Pro Gly

20

 $\langle 210 \rangle \quad 2$ 

<211> 91

&lt;212&gt; PRT

<213> Artificial Sequence

 $\langle 220 \rangle$ 

<223> polypeptide linker

<400> 2

Val Lys Thr Gln Ala Thr Ser Arg Glu Glu Pro Pro Arg Leu Pro Ser

1                      5                      10                      15

2/18

Lys His Arg Pro Gly Val Lys Thr Gln Ala Thr Ser Arg Glu Glu Pro  
                   20                                  25                                  30  
 Pro Arg Leu Pro Ser Lys His Arg Pro Gly Val Lys Thr Gln Ala Thr  
                   35                                  40                                  45  
 Ser Arg Glu Glu Pro Pro Arg Leu Pro Ser Lys His Arg Pro Gly Val  
                   50                                  55                                  60  
 Lys Thr Gln Ala Thr Ser Arg Glu Glu Pro Pro Arg Leu Pro Ser Lys  
 65                                  70                                  75                                  80  
 His Arg Pro Gly Val Lys Thr Gln Ala Thr Ser  
                                   85                                  90

<210> 3  
 <211> 84  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> polypeptide linker

<400> 3

Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser  
 1                                  5                                  10                                  15  
 Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro  
                   20                                  25                                  30  
 Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser  
                   35                                  40                                  45  
 Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly  
                   50                                  55                                  60  
 Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys  
 65                                  70                                  75                                  80  
 His Lys Gly Pro

<210> 4  
 <211> 84  
 <212> PRT  
 <213> Artificial Sequence

3/18

&lt;220&gt;

&lt;223&gt; polypeptide linker

&lt;400&gt; 4

```

Gly Lys Ser Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser
1           5           10           15
Lys His Lys Gly Pro Gly Lys Ser Gln Gly Gln Ser Lys Gly Gly Pro
           20           25           30
Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Gln Gly Gln
           35           40           45
Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly
           50           55           60
Lys Ser Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser Lys
65           70           75           80
His Lys Gly Pro

```

&lt;210&gt; 5

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; polypeptide linker

&lt;400&gt; 5

```

Gln Thr Val Thr His Arg Gly Arg His Glu Gly Lys Ala Pro Lys Gly
1           5           10           15
Pro Glu Leu His Arg Pro Gln Thr Val Thr His Arg Gly Arg His Glu
           20           25           30
Gly Lys Ala Pro Lys Gly Pro Glu Leu His Arg Pro Gln Thr Val Thr
           35           40           45
His Arg Gly Arg His Glu Gly Lys Ala Pro Lys Gly Pro Glu Leu His
           50           55           60
Arg Pro Gln Thr Val Thr His Arg Gly Arg His Glu Gly Lys Ala Pro
65           70           75           80

```

Lys Gly Pro Glu Leu His Arg Pro  
85

<210> 6

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide linker

<400> 6

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

5/18

Ser Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser  
 210 215 220  
 Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Ser Gly  
 225 230 235 240  
 Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro  
 245 250 255  
 Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser  
 260 265 270  
 Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro  
 275 280 285  
 Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser  
 290 295 300  
 Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly  
 305 310 315 320  
 Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys  
 325 330 335  
 His Lys Gly Pro  
 340

<210> 7  
 <211> 344  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> polypeptide linker

<400> 7

Gln Thr Val Thr His Arg Gly Arg His Glu Gly Lys Ala Pro Lys Gly  
 1 5 10 15  
 Pro Glu Leu His Arg Pro Gln Thr Val Thr His Arg Gly Arg His Glu  
 20 25 30  
 Gly Lys Ala Pro Lys Gly Pro Glu Leu His Arg Pro Gln Thr Val Thr  
 35 40 45  
 His Arg Gly Arg His Glu Gly Lys Ala Pro Lys Gly Pro Glu Leu His  
 50 55 60  
 Arg Pro Gln Thr Val Thr His Arg Gly Arg His Glu Gly Lys Ala Pro  
 65 70 75 80

6/18

Lys Gly Pro Glu Leu His Arg Pro Gln Thr Val Thr His Arg Gly Arg  
                             85                            90                            95  
 His Glu Gly Lys Ala Pro Lys Gly Pro Glu Leu His Arg Pro Gln Thr  
                             100                            105                            110  
 Val Thr His Arg Gly Arg His Glu Gly Lys Ala Pro Lys Gly Pro Glu  
                             115                            120                            125  
 Leu His Arg Pro Gln Thr Val Thr His Arg Gly Arg His Glu Gly Lys  
                             130                            135                            140  
 Ala Pro Lys Gly Pro Glu Leu His Arg Pro Gln Thr Val Thr His Arg  
 145                            150                            155                            160  
 Gly Arg His Glu Gly Lys Ala Pro Lys Gly Pro Glu Leu His Arg Pro  
                             165                            170                            175  
 Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser  
                             180                            185                            190  
 Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro  
                             195                            200                            205  
 Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser  
                             210                            215                            220  
 Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly  
 225                            230                            235                            240  
 Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys  
                             245                            250                            255  
 His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro  
                             260                            265                            270  
 Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser  
                             275                            280                            285  
 Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys  
                             290                            295                            300  
 Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys His  
 305                            310                            315                            320  
 Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys  
                             325                            330                            335  
 Gly Pro Ser Lys His Lys Gly Pro  
                             340

&lt;210&gt; 8

&lt;211&gt; 348

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; polypeptide linker

&lt;400&gt; 8

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

8/18

Lys	Gly	Pro	Glu	Leu	His	Arg	Pro	Gly	Lys	Ser	Ser	Gly	Ser	Ser	Lys
			260					265					270		
Gly	Ser	Pro	Pro	Lys	Gly	Pro	Ser	Lys	His	Lys	Gly	Pro	Gly	Lys	Ser
		275					280					285			
Ser	Gly	Ser	Ser	Lys	Gly	Ser	Pro	Pro	Lys	Gly	Pro	Ser	Lys	His	Lys
	290					295					300				
Gly	Pro	Gly	Lys	Ser	Ser	Gly	Ser	Ser	Lys	Gly	Ser	Pro	Pro	Lys	Gly
305					310					315					320
Pro	Ser	Lys	His	Lys	Gly	Pro	Gly	Lys	Ser	Ser	Gly	Ser	Ser	Lys	Gly
			325					330						335	
Ser	Pro	Pro	Lys	Gly	Pro	Ser	Lys	His	Lys	Gly	Pro				
			340					345							

<210>	9
<211>	340
<212>	PRT
<213>	Artificial Sequence

<220>  
<223> polypeptide linker

<400> 9

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



9/18

Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser Lys His Lys  
 115 120 125  
 Gly Pro Gly Lys Ser Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly  
 130 135 140  
 Pro Ser Lys His Lys Gly Pro Gly Lys Ser Gln Gly Gln Ser Lys Gly  
 145 150 155 160  
 Gly Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Gln  
 165 170 175  
 Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser Lys His Lys Gly  
 180 185 190  
 Pro Gly Lys Ser Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly Pro  
 195 200 205  
 Ser Lys His Lys Gly Pro Gly Lys Ser Gln Gly Gln Ser Lys Gly Gly  
 210 215 220  
 Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Gln Gly  
 225 230 235 240  
 Gln Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro  
 245 250 255  
 Gly Lys Ser Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser  
 260 265 270  
 Lys His Lys Gly Pro Gly Lys Ser Gln Gly Gln Ser Lys Gly Gly Pro  
 275 280 285  
 Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Gln Gly Gln  
 290 295 300  
 Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly  
 305 310 315 320  
 Lys Ser Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser Lys  
 325 330 335  
 His Lys Gly Pro  
 340

&lt;210&gt; 10

&lt;211&gt; 344

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; polypeptide linker

10/18

&lt;400&gt; 10

```

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

```

11/18

Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Gln Gly Gln Ser  
 275 280 285  
 Lys Gly Gly Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys  
 290 295 300  
 Ser Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser Lys His  
 305 310 315 320  
 Lys Gly Pro Gly Lys Ser Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys  
 325 330 335  
 Gly Pro Ser Lys His Lys Gly Pro  
 340

<210> 11  
 <211> 348  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> polypeptide linker

<400> 11

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

12/18

Ala Pro Lys Gly Pro Glu Leu His Arg Pro Gln Thr Val Thr His Arg  
 145 150 155 160  
 Gly Arg His Glu Gly Lys Ala Pro Lys Gly Pro Glu Leu His Arg Pro  
 165 170 175  
 Gln Thr Val Thr His Arg Gly Arg His Glu Gly Lys Ala Pro Lys Gly  
 180 185 190  
 Pro Glu Leu His Arg Pro Gln Thr Val Thr His Arg Gly Arg His Glu  
 195 200 205  
 Gly Lys Ala Pro Lys Gly Pro Glu Leu His Arg Pro Gln Thr Val Thr  
 210 215 220  
 His Arg Gly Arg His Glu Gly Lys Ala Pro Lys Gly Pro Glu Leu His  
 225 230 235 240  
 Arg Pro Gln Thr Val Thr His Arg Gly Arg His Glu Gly Lys Ala Pro  
 245 250 255  
 Lys Gly Pro Glu Leu His Arg Pro Gly Lys Ser Gln Gly Gln Ser Lys  
 260 265 270  
 Gly Gly Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser  
 275 280 285  
 Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly Pro Ser Lys His Lys  
 290 295 300  
 Gly Pro Gly Lys Ser Gln Gly Gln Ser Lys Gly Gly Pro Pro Lys Gly  
 305 310 315 320  
 Pro Ser Lys His Lys Gly Pro Gly Lys Ser Gln Gly Gln Ser Lys Gly  
 325 330 335  
 Gly Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro  
 340 345

&lt;210&gt; 12

&lt;211&gt; 252

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; polypeptide linker

&lt;400&gt; 12

Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser  
 1 5 10 15

13/18

```

Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro
      20                      25                      30
Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser
      35                      40                      45
Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly
      50                      55                      60
Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys
65                      70                      75                      80
His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro
      85                      90                      95
Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser
      100                     105                     110
Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys
      115                     120                     125
Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys His
      130                     135                     140
Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys
145                     150                     155                     160
Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys
      165                     170                     175
Gly Ser Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro Gly Lys Ser
      180                     185                     190
Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly Pro Ser Lys His Lys
      195                     200                     205
Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly Ser Pro Pro Lys Gly
      210                     215                     220
Pro Ser Lys His Lys Gly Pro Gly Lys Ser Ser Gly Ser Ser Lys Gly
225                     230                     235                     240
Ser Pro Pro Lys Gly Pro Ser Lys His Lys Gly Pro
      245                     250

```

&lt;210&gt; 13

&lt;211&gt; 210

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; polypeptide linker

14/18

&lt;400&gt; 13

```

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

Gly Pro
      210

```

&lt;210&gt; 14

&lt;211&gt; 147

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

15/18

&lt;223&gt; polypeptide linker

&lt;400&gt; 14

```

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

```

&lt;210&gt; 15

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; polypeptide linker

&lt;400&gt; 15

```

Val Lys Thr Gln Ala Thr Ser Arg Glu Glu Pro Pro Arg Leu Pro Ser
1           5           10           15

```

16/18

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

&lt;210&gt; 16

&lt;211&gt; 210

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence



17/18

&lt;220&gt;

&lt;223&gt; polypeptide linker

&lt;400&gt; 16

```

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

```

&lt;210&gt; 17

&lt;211&gt; 147

&lt;212&gt; PRT

<213> Artificial Sequence

<220>

<223> polypeptide linker

<400> 17

```

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

```