

PF60886.ST25.txt  
SEQUENCE LISTING

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<120> Yield enhancement in plants by modulation of a SEUSS-like co-regulator

<130> PF60886

<160> 16

<170> PatentIn version 3.3

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<212> DNA

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Ala Leu Ile Gln Gln Gln	Arg Leu Arg Gln Gln Gln	Gln Gln Gln Gln Gln	His	
	100	105	110	
Gln Gln Gln Gln Gln Gln	Leu Leu Gln Ser Met	Leu Pro Met Gln Arg		
	115	120	125	
Ala Gln Ser Leu Gln Leu	Gln Gln Gln Gln Gln	Gln Gln Gln Gln Gln		
	130	135	140	
Leu Arg Gln Gln Leu Leu	Gln Arg Gly Leu Gln	Pro Ser Ser Gly Ile		
145	150	155	160	
Lys Arg Pro Tyr Asp	Gly Gly Val Cys Ser	Arg Arg Leu Met Gln Tyr		
	165	170	175	
Leu Tyr His Gln Arg Gln	Arg Pro Ala Asp Asn	Thr Ile Ala Tyr Trp		
	180	185	190	
Arg Lys Phe Val Ala Glu	Tyr Tyr Ser Pro Arg	Ala Lys Lys Xaa Trp		
	195	200	205	
Cys Leu Ser Leu Tyr Asp	Asn Val Gly His Gln	Ser Leu Gly Val Phe		
	210	215	220	
Pro Gln Ala Ala Ile Asp	Ser Trp Gln Cys Asp	Ile Cys Gly Ser Lys		
225	230	235	240	
Ser Gly Lys Gly Phe Glu	Ala Thr Phe Glu Val	Leu Pro Arg Leu Asn		
	245	250	255	
Glu Phe Lys Tyr Gly Gly	Gly Ile Ile Asp Glu	Leu Leu Phe Leu Asp		
	260	265	270	
Leu Pro Arg Glu Cys Arg	Tyr Pro Ser Gly Met	Met Met Met Leu Glu Tyr		
	275	280	285	
Ala Lys Ala Val Gln Glu	Ser Val Tyr Glu His	Ile Arg Val Val His		
	290	295	300	
Glu Gly Gln Leu Arg Ile	Ile Phe Thr Pro Asp	Leu Lys Ile Leu His		
305	310	315	320	
Trp Glu Phe Cys Ala Arg	Arg His Glu Glu Leu	Leu Ser Arg Arg Leu		
	325	330	335	
Val Ala Pro Gln Val Asn	Gln Leu Leu Gln Val	Ala Leu Lys Cys Gln		
	340	345	350	
Ser Thr Ile Ser Glu Ser	Gly Pro Asp Gly Val	Ser Gln Pro Asp Val		
	355	360	365	
Gln Thr Asn Ser Ala Met	Val Val Thr Ala Gly	Arg Gln Leu Ala Arg		
	370	375	380	
Ser Leu Glu Leu Gln Ser	Leu Asn Asp Leu Gly	Phe Pro Lys Arg Tyr		
385	390	395	400	
Val Arg Cys Leu Gln Ile	Ala Glu Val Val Asn	Ser Met Lys Asp Leu		
	405	410	415	
Met Asp Phe Cys Lys Asp	Gln Lys Val Gly Ser	Ile Glu Gly Leu Lys		
	420	425	430	
Lys Phe Pro Gly Asn Ala	Thr Ala Pro Lys Val	Gln Thr Gln Met Gln		
	435	440	445	
Xaa Ile Glu Lys Gly Gly	Pro Gln Gly Leu Pro	Ala Asp Cys Asn Thr		
	450	455	460	
Pro Asn Gln Leu Thr Ser	Met His Pro Gly Ile	Thr Ser Pro Lys Asn		
465	470	475	480	
Asn Asn Gln His Thr Xaa	Asp Arg Thr Gly Ala	Phe Xaa Gly Leu Ala		
	485	490	495	
Gln Pro Ala Leu Val Ser	Ser Asn Tyr Gln Asn	Leu Pro Met Arg Gln		
	500	505	510	
Asn Ser Met Asn Ala Thr	His Asn Ser Val Lys	Gln Glu Pro Ser Ser		
	515	520	525	

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```

Pro Phe Gly Thr Pro Asn His Pro Pro Pro Thr Pro Glu Ser Ser Gly
  530          535          540
Ile Leu Pro Gly Ala Leu Lys Asn Ser Xaa Val Gly Ala Phe Ser Ser
545          550          555          560
Gly Gln Leu Gln Gln His Ala Pro Asn Gly Asn Gly Leu Leu Gln Gln
          565          570          575
Asn Gln Ser Leu Ser Ser Leu Gly Ser Gln Ala Leu Gln Gln Xaa Met
          580          585          590
Val Gln Gln Tyr Leu Gln Asp Ile Ser Asn Lys Asn Asn Gly Ala Ala
          595          600          605
Val Pro Pro Gln Ser Leu Ser Val Gln Asn Xaa Gly His Asp Leu Lys
          610          615          620
Ser Ser Ser Ala Thr Thr Ala Val Gly Asn Gly Pro Gly Asn Val Ala
625          630          635          640
Gly His Pro Thr Asn Gly Ser Asn Gly Phe Lys Ala Asp Ser Glu Ser
          645          650          655
Leu Ala Pro Val Gly Asn Ile Gly Phe Ser Gln Lys Thr Ser Asp Leu
          660          665          670
Ser Glu Asp Leu His Leu Ser Asp Asp Met Val Gln Asp Ile Val His
          675          680          685
Glu Phe Gln Lys Met Val Phe Phe Asp Asn Asp Leu Asp Asp Asp Met
          690          695          700
Asn Phe Ser Trp Glu Ala
705          710

```

```

<210> 5
<211> 901
<212> PRT
<213> Antirrhinum majus

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```

<220>
<221> UNSURE
<222> (82)..(82)
<223> Unknown amino acid

```

```

<220>
<221> UNSURE
<222> (235)..(235)
<223> Unknown amino acid

```

```

<220>
<221> UNSURE
<222> (240)..(240)
<223> Unknown amino acid

```

```

<220>
<221> UNSURE
<222> (390)..(390)
<223> Unknown amino acid

```

```

<220>
<221> UNSURE
<222> (496)..(496)
<223> Unknown amino acid

```

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<400> 5
Met Val Pro Gln Gly Pro Pro Thr Pro Leu Gly Gly Gly Gln Pro Val
1          5          10          15
Pro Ala Ser Met Leu Arg Ser Asn Ser Gly Ile Leu Gly Ser Gln Gly

```



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			20					25				30					
Gly	Gly	Met	Ala	Ser	Gln	Asn	Gly	Phe	Pro	Ser	Leu	Val	Ser	Pro	Arg		
		35					40					45					
Asn	Gln	Phe	Asn	Ser	Met	Asn	Met	Leu	Gly	Asn	Val	Pro	Asn	Val	Ser		
	50					55					60						
Ser	Leu	Leu	His	Gln	Pro	Phe	Gly	Asn	Gly	Gly	Pro	Asn	Ser	Gly	Leu		
65				70					75						80		
Ser	Xaa	Pro	Gly	Ser	Ser	Gln	Arg	Gly	Leu	Ile	Asp	Gly	Gly	Ala	Glu		
			85					90						95			
Ser	Asp	Pro	Leu	Ser	Ser	Val	Gly	Asn	Gly	Met	Gly	Phe	Asn	Ala	Pro		
		100					105						110				
Ser	Ser	Ser	Tyr	Ile	Ser	Ser	Ser	Ile	Thr	Ala	Asn	Gln	Asn	Ser	Ser		
	115						120					125					
Gly	Gln	Val	Gln	Gly	Gln	Gln	Phe	Ser	Asn	His	Ser	Gly	Ser	Gln			
	130				135					140							
Met	Leu	Thr	Asp	Gln	Gln	His	Ala	Gln	Gln	Leu	Asp	Ser	Gln	Asn	Phe		
145				150						155					160		
His	His	Asn	Gln	Gln	Gln	Phe	Thr	Val	Ser	Ser	Asn	Ser	Gln	Gln	Gln		
			165						170					175			
Gln	Gln	Pro	Gln	Gln	Gln	Gln	Tyr	Gln	Ala	Met	Arg	Ala	Gly	Leu	Gly		
		180						185					190				
Gly	Val	Gly	Pro	Val	Lys	Leu	Glu	Gln	Gln	Val	Thr	Asn	Glu	Gln	Val		
	195						200					205					
Pro	Gln	Gln	Leu	Gln	Ala	Leu	Arg	Asn	Leu	Gly	Ser	Val	Lys	Leu	Glu		
	210					215					220						
Pro	Gln	Gln	Leu	Gln	Asn	Met	Arg	Ser	Leu	Xaa	Pro	Val	Lys	Met	Xaa		
225				230						235					240		
Pro	Gln	His	Ser	Asp	Pro	Ser	Leu	Phe	Leu	Gln	Gln	Gln	Gln	Gln	Gln		
			245						250					255			
Gln	Gln	Gln	Gln	Leu	Leu	Leu	Ser	Arg	Gln	Ser	Ser	Gln	Ala	Ala	Ala		
			260					265					270				
Ala	Ala	Gln	Ile	Leu	His	Gln	Gln	Arg	Leu	Met	Gln	Ile	Gln	His	Gln		
		275					280					285					
Gln	Gln	Gln	Gln	Leu	Met	Lys	Ser	Met	Pro	Gln	Gln	Arg	Ser	Pro	Leu		
	290					295					300						
Gln	Ser	Gln	Phe	Gln	Ser	Gln	Asn	Leu	Ser	Asn	Arg	Ala	Pro	Val	Lys		
305				310						315					320		
Pro	Val	Tyr	Glu	Pro	Gly	Met	Cys	Ala	Arg	Arg	Leu	Thr	His	Tyr	Met		
			325						330					335			
Tyr	Gln	Gln	Gln	Asn	Arg	Pro	Glu	Asp	Asn	Asn	Ile	Glu	Phe	Trp	Arg		
			340					345					350				
Lys	Phe	Val	Ala	Glu	Tyr	Phe	Ala	Pro	Asn	Ala	Lys	Lys	Lys	Trp	Cys		
	355					360						365					
Val	Ser	Leu	Tyr	Gly	Ser	Gly	Arg	Gln	Thr	Thr	Gly	Val	Phe	Pro	Gln		
	370					375					380						
Asp	Val	Trp	His	Cys	Xaa	Ile	Cys	Lys	Arg	Lys	Pro	Gly	Arg	Gly	Phe		
385				390						395					400		
Glu	Ala	Thr	Ala	Glu	Val	Leu	Pro	Arg	Leu	Phe	Lys	Ile	Lys	Tyr	Glu		
			405						410					415			
Ser	Gly	Thr	Leu	Glu	Glu	Leu	Leu	Tyr	Val	Asp	Met	Pro	Arg	Glu	Tyr		
			420					425					430				
Gln	Asn	Ser	Ser	Gly	Gln	Ile	Val	Leu	Asp	Tyr	Ala	Lys	Ala	Ile	Gln		
		435					440					445					
Glu	Ser	Val	Phe	Glu	Gln	Leu	Arg	Val	Val	Arg	Asp	Gly	Gln	Leu	Arg		
	450					455					460						
Ile	Val	Phe	Ser	Pro	Asp	Leu	Lys	Ile	Cys	Ser	Trp	Glu	Phe	Cys	Ala		
465				470						475					480		
Gln	Arg	His	Glu	Glu	Leu	Ile	Pro	Arg	Arg	Leu	Leu	Ile	Pro	Gln	Xaa		
			485						490					495			

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Gly	Gln	Leu	Gly	Ala	Ala	Ala	Gln	Lys	Tyr	Gln	Ala	Ala	Thr	Gln	Asn		
			500					505					510				
Ala	Gly	Ser	Thr	Ala	Ser	Val	Ser	Glu	Leu	Gln	Asn	Asn	Cys	Asn	Thr		
		515					520					525					
Phe	Val	Ala	Ser	Ala	Arg	Gln	Leu	Ala	Lys	Ala	Leu	Glu	Val	Pro	Leu		
		530				535						540					
Val	Asn	Asp	Leu	Gly	Tyr	Thr	Lys	Arg	Tyr	Val	Arg	Cys	Leu	Gln	Ile		
545					550					555					560		
Ser	Glu	Val	Val	Asn	Ser	Met	Lys	Asp	Leu	Ile	Asp	Tyr	Ser	Arg	His		
				565					570					575			
Thr	Ser	Thr	Gly	Pro	Met	Glu	Ser	Leu	Ala	Lys	Phe	Pro	Arg	Arg	Thr		
			580					585						590			
Asn	Pro	Ser	Pro	Gly	Phe	Gln	Ser	Gln	Pro	Gln	Gln	Pro	Glu	Gly	Gln		
		595				600						605					
Leu	Gln	Gln	Gln	Gln	Tyr	Gln	Thr	Pro	Gly	Gln	Asn	Pro	Asn	Asn	Asp		
	610					615					620						
Asn	Ser	Val	Gln	Ala	Ala	Ala	Met	Gln	Leu	Ala	Ser	Ser	Asn	Gly	Met		
625					630					635					640		
Pro	Ser	Val	Asn	Asn	Thr	Met	Asn	Ser	Leu	Pro	Thr	Thr	Ser	Ser	Ala		
				645					650					655			
Gly	Thr	Ile	Ala	Gly	Leu	Leu	His	Gln	Asn	Ser	Met	Asn	Ser	Arg	Gln		
			660					665						670			
Gln	Asn	Pro	Met	Ser	Asn	Ala	Asn	Ser	Pro	Tyr	Gly	Gly	Ser	Ser	Val		
		675					680					685					
Gln	Met	Pro	Ser	Pro	Gly	Pro	Ser	Ser	Ser	Met	Pro	Gln	Ala	Gln	Pro		
	690					695					700						
Ser	Pro	Ser	Pro	Phe	Gln	Ser	Pro	Thr	Pro	Ser	Ser	Ser	Asn	Asn	Asn		
705					710					715					720		
Pro	Gln	Pro	Thr	His	Asn	Ser	Leu	Ser	Gly	Ala	His	Phe	Asn	Ser	Val		
				725					730					735			
Thr	Ser	Pro	Asn	Val	Ser	Met	Gln	Gln	Pro	Ala	Leu	Ser	Gly	Asp	Ala		
			740					745						750			
Asp	Ala	Asn	Asp	Ser	Gln	Ser	Ser	Val	Gln	Lys	Ile	Ile	His	Asp	Met		
		755					760					765					
Met	Met	Ser	Ser	Gln	Leu	Ser	Gly	Gly	Gly	Met	Met	Gly	Met	Gly	Asn		
	770					775					780						
Met	Gly	Ser	Asp	Met	Lys	Asn	Val	Asn	Val	Met	Leu	Ser	Ser	Asn	Asn		
785					790					795					800		
Asn	Ala	Ser	Met	Asn	Gly	Ser	Asn	Ile	Leu	Val	Gly	Asn	Gly	Met	Ala		
				805					810					815			
Asn	Gly	Asn	Met	Ser	Gly	Pro	Gly	Phe	Gly	Gly	Ile	Gly	Gly	Gly	Arg		
			820					825						830			
Gly	Gln	Pro	Ala	Leu	Val	Asn	Gly	Ile	Pro	Ala	Ala	Leu	Gly	Asn	Asn		
		835					840					845					
Asn	Ser	Leu	Ser	Met	Asn	Gly	Arg	Val	Gly	Met	Ala	Met	Ala	Arg	Glu		
	850					855					860						
Gln	Thr	Met	Asn	His	Gln	Gln	Gln	Gln	Asp	Met	Gly	Asn	Gln	Leu	Leu		
865					870					875					880		
Ser	Gly	Leu	Gly	Ala	Val	Asn	Gly	Phe	Gln	Tyr	Pro	Ser	Asn	Leu	Asp		
				885					890					895			
Trp	Lys	Thr	Ser	Pro													
			900														

<210> 6  
 <211> 933  
 <212> PRT  
 <213> Oryza sativa

<400> 6

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Met Val Pro Ser Gly Pro Pro Asn Pro Met Gly Pro Gly Gln Pro Val
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Gly Ala Ala Ser Leu Leu Arg Thr Ser Ser Ser Leu Leu Ser Gly Gly
20      25      30
Gln Gln Gly Met Gly Ser Gly Gly Gly Met Leu Pro Ser Gln Ser Pro
35      40      45
Phe Ser Ser Leu Val Ser Pro Arg Thr Gln Phe Gly Ala Asn Gly Leu
50      55      60
Leu Gly Gly Gly Ser Asn Val Ser Ser Leu Leu Asn Arg Pro Phe Gly
65      70      75      80
Asn Gly Gly His Met Leu Gly Pro Gly Ser Met Pro Gly Gly Gly Gly
85      90      95
Leu Pro Met Asn Thr Leu Gln Gln Gln Arg Gly Gly Leu Asp Gly Ala
100      105      110
Gly Asp Leu Val Gly Ala Gly Gly Ser Asp Ser Leu Ser Phe Pro Ser
115      120      125
Ser Ser Gln Val Ser Leu Gly Asn Gln Leu Gly Ser Asp Asn Leu His
130      135      140
Pro Pro Pro Gln His Gln Gln Gln Gln Gln His Leu Asp Ala Met Gln
145      150      155      160
Asp Leu Gln His Gln His Gln His Gln Gln Gln Leu Pro Met Ser Tyr
165      170      175
Asn Gln Gln Gln Leu Pro Pro Gln Pro Pro Gln Gln Pro Gln Ala Thr
180      185      190
Val Lys Leu Glu Asn Gly Gly Ser Thr Gly Gly Val Lys Leu Glu Pro
195      200      205
Gln Met Gly Gln Pro Asp Gln Asn Ser Thr Ala Gln Met Met Arg Asn
210      215      220
Ala Ser Asn Val Lys Ile Glu Pro Pro Gln Leu Gln Ala Leu Arg Ser
225      230      235      240
Leu Ser Ala Val Lys Met Glu Gln Gln Ser Ser Asp Pro Ser Ala Phe
245      250      255
Leu Gln Gln Gln Gln Gln Gln Gln His Leu Leu Gln Leu Thr Lys Gln
260      265      270
Asn Pro Gln Ala Ala Ala Ala Ala Gln Leu Asn Leu Leu Gln Gln Gln
275      280      285
Arg Ile Leu Gln Met Gln Gln Gln Gln Gln Gln Gln Gln Gln Ile Leu
290      295      300
Lys Asn Leu Pro Leu Gln Arg Asn Gln Leu Gln Gln Gln Gln Gln Gln
305      310      315      320
Gln Gln Gln Gln Gln Gln Leu Leu Arg Gln Gln Ser Leu Asn Met Arg
325      330      335
Thr Pro Gly Lys Ser Ala Pro Tyr Glu Pro Gly Thr Cys Ala Lys Arg
340      345      350
Leu Thr His Tyr Met Tyr His Gln Gln Asn Arg Pro Gln Asp Asn Asn
355      360      365
Ile Glu Tyr Trp Arg Asn Phe Val Asn Glu Tyr Phe Ser Pro Asn Ala
370      375      380
Lys Lys Arg Trp Cys Val Ser Leu Tyr Gly Ser Gly Arg Gln Thr Thr
385      390      395      400
Gly Val Phe Pro Gln Asp Val Trp His Cys Glu Ile Cys Asn Arg Lys
405      410      415
Pro Gly Arg Gly Phe Glu Thr Thr Val Glu Val Leu Pro Arg Leu Cys
420      425      430
Gln Ile Lys Tyr Ala Ser Gly Thr Leu Glu Glu Leu Leu Tyr Val Asp
435      440      445
Met Pro Arg Glu Ser Gln Asn Ala Ser Gly Gln Ile Val Leu Asp Tyr
450      455      460
Thr Lys Ala Ile Gln Glu Ser Val Phe Glu Gln Leu Arg Val Val Arg

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465                               470                               475                               480
Glu Gly His Leu Arg Ile Val Phe Asn Pro Asp Leu Lys Ile Ala Ser
                               485                               490                               495
Trp Glu Phe Cys Ala Arg Arg His Glu Glu Leu Ile Pro Arg Arg Ser
                               500                               505                               510
Ile Ile Pro Gln Val Ser Gln Leu Gly Ala Val Val Gln Lys Tyr Gln
                               515                               520                               525
Ser Ala Val Gln Asn Ser Thr Asn Leu Ser Thr Gln Asp Met Gln Asn
                               530                               535                               540
Asn Cys Asn Ser Phe Val Ala Cys Ala Arg Gln Leu Ala Lys Ala Leu
545                               550                               555                               560
Glu Val Pro Leu Val Asn Asp Leu Gly Tyr Thr Lys Arg Tyr Val Arg
                               565                               570                               575
Cys Leu Gln Ile Ala Glu Val Val Asn Cys Met Lys Asp Leu Ile Asp
                               580                               585                               590
Tyr Ser Arg Gln Asn Gly Ser Gly Pro Ile Ala Ser Leu His Ser Phe
                               595                               600                               605
Pro Arg Arg Thr Ser Ser Gly Gly Val Asn Pro Gln Gln Ser Gln Gln
                               610                               615                               620
Gln Gln Pro Glu Glu Gln Gln Ser Ile Pro Gln Ser Ser Asn Gln Ser
625                               630                               635                               640
Gly Gln Asn Ala Ala Pro Met Thr Gly Val Gln Ala Ser Ala Ser Ala
                               645                               650                               655
Asn Ala Asp Val Thr Ser Asn Asn Ser Leu Ser Cys Ala Pro Ser Thr
                               660                               665                               670
Ser Ala Pro Ser Pro Ser Val Val Gly Leu Leu Gln Gly Ser Met Asn
                               675                               680                               685
Ser Arg Gln Asp His Pro Met Ser Ser Ala Asn Gly Pro Tyr Thr Ser
690                               695                               700
Gly Asn Ser Ala Ala Ile Pro Lys Val Asn Ser Thr Thr Ser Leu Gln
705                               710                               715                               720
Ser Thr Pro Ser Thr Ser Phe Pro Ser Pro Val Pro Thr Thr Ser Asn
                               725                               730                               735
Asn Asn Met Met Pro Ala Pro Gln Asn Thr Asn Gln Leu Ser Ser Pro
                               740                               745                               750
Thr Ala Ser Ser Asn Leu Pro Pro Met Gln Pro Pro Ala Thr Arg Pro
                               755                               760                               765
Gln Glu Pro Asp Pro Asn Glu Ser Gln Ser Ser Val Gln Arg Ile Leu
770                               775                               780
Gln Asp Leu Met Met Ser Pro Gln Met Asn Gly Val Gly Gln Leu Gly
785                               790                               795                               800
Asn Asp Met Lys Arg Pro Asn Gly Leu Thr Ser Ser Val Asn Gly Val
                               805                               810                               815
Asn Cys Leu Val Gly Asn Ala Val Thr Asn Asn Ser Gly Met Gly Gly
                               820                               825                               830
Met Gly Phe Gly Ala Met Gly Gly Leu Gly Pro Asn His Ala Ala Ser
835                               840                               845
Gly Leu Arg Thr Ala Ile Ala Asn Asn Ala Met Ala Ile Ser Gly Arg
850                               855                               860
Met Gly Met Asn His Ser Ala His Asp Leu Ser Gln Leu Gly Gln Leu
865                               870                               875                               880
Gln Gln Gln Gln Gln His Gln His Gln His Gln His Gln His Gln Gln
                               885                               890                               895
Gln Gln Gln Gln Gln Gln Gln Gln Gln His Asp Leu Gly Asn Gln Leu
900                               905                               910
Leu Ser Gly Leu Arg Ala Ala Asn Ser Phe Asn Asn Leu Gln Tyr Asp
915                               920                               925
Trp Lys Pro Ser Gln
930

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<210> 7  
 <211> 877  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 7  
 Met Val Pro Ser Glu Pro Pro Asn Pro Val Gly Gly Gly Glu Asn Val  
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 Pro Pro Ser Ile Leu Gly Gly Gln Gly Gly Ala Pro Leu Pro Ser Gln  
 20 25 30  
 Pro Ala Phe Pro Ser Leu Val Ser Pro Arg Thr Gln Phe Gly Asn Asn  
 35 40 45  
 Met Ser Met Ser Met Leu Gly Asn Ala Pro Asn Ile Ser Ser Leu Leu  
 50 55 60  
 Asn Asn Gln Ser Phe Val Asn Gly Ile Pro Gly Ser Met Ile Ser Met  
 65 70 75 80  
 Asp Thr Ser Gly Ala Glu Ser Asp Pro Met Ser Asn Val Gly Phe Ser  
 85 90 95  
 Gly Leu Ser Ser Phe Asn Ala Ser Ser Met Val Ser Pro Arg Ser Ser  
 100 105 110  
 Gly Gln Val Gln Gly Gln Gln Phe Ser Asn Val Ser Ala Asn Gln Leu  
 115 120 125  
 Leu Ala Glu Gln Gln Arg Asn Lys Lys Met Glu Thr Gln Ser Phe Gln  
 130 135 140  
 His Gly Gln Gln Gln Ser Met Gln Gln Gln Phe Ser Thr Val Arg Gly  
 145 150 155 160  
 Gly Gly Leu Ala Gly Val Gly Pro Val Lys Met Glu Pro Gly Gln Val  
 165 170 175  
 Ser Asn Asp Gln Gln His Gly Gln Val Gln Gln Gln Gln Lys Met  
 180 185 190  
 Leu Arg Asn Leu Gly Ser Val Lys Leu Glu Pro Gln Gln Ile Gln Ala  
 195 200 205  
 Met Arg Asn Leu Ala Gln Val Lys Met Glu Pro Gln His Ser Glu Gln  
 210 215 220  
 Ser Leu Phe Leu Gln Gln Gln Gln Arg Gln Gln Gln Gln Gln Gln Gln  
 225 230 235 240  
 Gln Gln Phe Leu Gln Met Pro Gly Gln Ser Pro Gln Ala Gln Met Asn  
 245 250 255  
 Ile Phe Gln Gln Gln Arg Leu Met Gln Leu Gln Gln Gln Gln Leu Leu  
 260 265 270  
 Lys Ser Met Pro Gln Gln Arg Pro Gln Leu Pro Gln Gln Phe Gln Gln  
 275 280 285  
 Gln Asn Leu Pro Leu Arg Pro Pro Leu Lys Pro Val Tyr Glu Pro Gly  
 290 295 300  
 Met Gly Ala Gln Arg Leu Thr Gln Tyr Met Tyr Arg Gln Gln His Arg  
 305 310 315 320  
 Pro Glu Asp Asn Asn Ile Glu Phe Trp Arg Lys Phe Val Ala Glu Tyr  
 325 330 335  
 Phe Ala Pro Asn Ala Lys Lys Arg Trp Cys Val Ser Met Tyr Gly Ser  
 340 345 350  
 Gly Arg Gln Thr Thr Gly Val Phe Pro Gln Asp Val Trp His Cys Glu  
 355 360 365  
 Ile Cys Asn Arg Lys Pro Gly Arg Gly Phe Glu Ala Thr Ala Glu Val  
 370 375 380  
 Leu Pro Arg Leu Phe Lys Ile Lys Tyr Glu Ser Gly Thr Leu Glu Glu  
 385 390 395 400  
 Leu Leu Tyr Val Asp Met Pro Arg Glu Ser Gln Asn Ser Ser Gly Gln  
 405 410 415

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```

Ile Val Leu Glu Tyr Ala Lys Ala Thr Gln Glu Ser Val Phe Glu His
      420      425      430
Leu Arg Val Val Arg Asp Gly Gln Leu Arg Ile Val Phe Ser Pro Asp
      435      440      445
Leu Lys Ile Phe Ser Trp Glu Phe Cys Ala Arg Arg His Glu Glu Leu
      450      455      460
Ile Pro Arg Arg Leu Leu Ile Pro Gln Val Ser Gln Leu Gly Ser Ala
465      470      475      480
Ala Gln Lys Tyr Gln Gln Ala Ala Gln Asn Ala Thr Thr Asp Ser Ala
      485      490      495
Leu Pro Glu Leu Gln Asn Asn Cys Asn Met Phe Val Ala Ser Ala Arg
      500      505      510
Gln Leu Ala Lys Ala Leu Glu Val Pro Leu Val Asn Asp Leu Gly Tyr
      515      520      525
Thr Lys Arg Tyr Val Arg Cys Leu Gln Ile Ser Glu Val Val Asn Ser
530      535      540
Met Lys Asp Leu Ile Asp Tyr Ser Arg Glu Thr Arg Thr Gly Pro Ile
545      550      555      560
Glu Ser Leu Ala Lys Phe Pro Arg Arg Thr Gly Pro Ser Ser Ala Leu
      565      570      575
Pro Gly Pro Ser Pro Gln Gln Ala Ser Asp Gln Leu Arg Gln Gln Gln
      580      585      590
Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln
      595      600      605
Gln Gln Gln Gln Gln Thr Val Ser Gln Asn Thr Asn Ser Asp Gln Ser
610      615      620
Ser Arg Gln Val Ala Leu Met Gln Gly Asn Pro Ser Asn Gly Val Asn
625      630      635      640
Tyr Ala Phe Asn Ala Ala Ser Ala Ser Thr Ser Thr Ser Ile Ala
      645      650      655
Gly Leu Ile His Gln Asn Ser Met Lys Gly Arg His Gln Asn Ala Ala
      660      665      670
Tyr Asn Pro Pro Asn Ser Pro Tyr Gly Gly Asn Ser Val Gln Met Gln
      675      680      685
Ser Pro Ser Ser Ser Gly Thr Met Val Pro Ser Ser Ser Gln Gln Gln
690      695      700
His Asn Leu Pro Thr Phe Gln Ser Pro Thr Ser Ser Ser Asn Asn Asn
705      710      715      720
Asn Pro Ser Gln Asn Gly Ile Pro Ser Val Asn His Met Gly Ser Thr
      725      730      735
Asn Ser Pro Ala Met Gln Gln Ala Gly Glu Val Asp Gly Asn Glu Ser
740      745      750
Ser Ser Val Gln Lys Ile Leu Asn Glu Ile Leu Met Asn Asn Gln Ala
755      760      765
His Asn Asn Ser Ser Gly Gly Ser Met Val Gly His Gly Ser Phe Gly
770      775      780
Asn Asp Gly Lys Gly Gln Ala Asn Val Asn Ser Ser Gly Val Leu Leu
785      790      795      800
Met Asn Gly Gln Val Asn Asn Asn Asn Thr Asn Ile Gly Gly Ala
      805      810      815
Gly Gly Phe Gly Gly Gly Ile Gly Gln Ser Met Ala Ala Asn Gly Ile
820      825      830
Asn Asn Ile Asn Gly Asn Asn Ser Leu Met Asn Gly Arg Val Gly Met
835      840      845
Met Val Arg Asp Pro Asn Gly Gln Gln Asp Leu Gly Asn Gln Leu Leu
850      855      860
Gly Ala Val Asn Gly Phe Asn Asn Phe Asp Trp Asn Ala
865      870      875

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<210> 8  
 <211> 981  
 <212> PRT  
 <213> Oryza sativa

<400> 8  
 Met Val Pro Ser Gly Pro Pro Asn Pro Met Gly Pro Gly Gln Pro Val  
 1 5 10 15  
 Gly Ala Ala Ser Leu Leu Arg Thr Ser Ser Ser Leu Leu Ser Gly Gly  
 20 25 30  
 Gln Gln Gly Met Gly Ser Gly Gly Gly Met Leu Pro Ser Gln Ser Pro  
 35 40 45  
 Phe Ser Ser Leu Val Ser Pro Arg Thr Gln Phe Gly Ala Asn Gly Leu  
 50 55 60  
 Leu Gly Gly Gly Ser Asn Val Ser Ser Leu Leu Asn Arg Pro Phe Gly  
 65 70 75 80  
 Asn Gly Gly His Met Leu Gly Pro Gly Ser Met Pro Gly Gly Gly Gly  
 85 90 95  
 Leu Pro Met Asn Thr Leu Gln Gln Gln Arg Gly Gly Leu Asp Gly Ala  
 100 105 110  
 Gly Asp Leu Val Gly Ala Gly Gly Ser Asp Ser Leu Ser Phe Pro Ser  
 115 120 125  
 Ser Ser Gln Val Ser Leu Gly Asn Gln Leu Gly Ser Asp Asn Leu His  
 130 135 140  
 Pro Pro Pro Gln His Gln Gln Gln Gln Gln His Leu Asp Ala Met Gln  
 145 150 155 160  
 Asp Leu Gln His Gln His Gln His Gln Gln Gln Leu Pro Met Ser Tyr  
 165 170 175  
 Asn Gln Gln Gln Leu Pro Pro Gln Pro Pro Gln Gln Pro Gln Ala Thr  
 180 185 190  
 Val Lys Leu Glu Asn Gly Gly Ser Thr Gly Gly Val Lys Leu Glu Pro  
 195 200 205  
 Gln Met Gly Gln Pro Asp Gln Asn Ser Thr Ala Gln Met Met Arg Asn  
 210 215 220  
 Ala Ser Asn Val Lys Ile Glu Pro Pro Gln Leu Gln Ala Leu Arg Ser  
 225 230 235 240  
 Leu Ser Ala Val Lys Met Glu Gln Gln Ser Ser Asp Pro Ser Ala Phe  
 245 250 255  
 Leu Gln Gln Gln Gln Gln Gln Gln His Leu Leu Gln Leu Thr Lys Gln  
 260 265 270  
 Asn Pro Gln Ala Ala Ala Ala Ala Gln Leu Asn Leu Leu Gln Gln Gln  
 275 280 285  
 Arg Ile Leu Gln Met Gln Gln Gln Gln Gln Gln Gln Gln Gln Ile Leu  
 290 295 300  
 Lys Asn Leu Pro Leu Gln Arg Asn Gln Leu Gln Gln Gln Gln Gln  
 305 310 315 320  
 Gln Gln Gln Gln Gln Leu Leu Arg Gln Gln Ser Leu Asn Met Arg  
 325 330 335  
 Thr Pro Gly Lys Ser Ala Pro Tyr Glu Pro Gly Thr Cys Ala Lys Arg  
 340 345 350  
 Leu Thr His Tyr Met Tyr His Gln Gln Asn Arg Pro Gln Asp Asn Asn  
 355 360 365  
 Ile Glu Tyr Trp Arg Asn Phe Val Asn Glu Tyr Phe Ser Pro Asn Ala  
 370 375 380  
 Lys Lys Arg Trp Cys Val Ser Leu Tyr Gly Ser Gly Arg Gln Thr Thr  
 385 390 395 400  
 Gly Val Phe Pro Gln Asp Val Trp His Cys Glu Ile Cys Asn Arg Lys  
 405 410 415  
 Pro Gly Arg Gly Phe Glu Thr Thr Val Glu Val Leu Pro Arg Leu Cys

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			420					425				430							
Gln	Ile	Lys	Tyr	Ala	Ser	Gly	Thr	Leu	Glu	Glu	Leu	Leu	Tyr	Val	Asp				
		435						440				445							
Met	Pro	Arg	Glu	Ser	Gln	Asn	Ala	Ser	Gly	Gln	Ile	Val	Leu	Asp	Tyr				
		450				455						460							
Thr	Lys	Ala	Ile	Gln	Glu	Ser	Val	Phe	Glu	Gln	Leu	Arg	Val	Val	Arg				
465					470					475					480				
Glu	Gly	His	Leu	Arg	Ile	Val	Phe	Asn	Pro	Asp	Leu	Lys	Ile	Ala	Ser				
			485						490					495					
Trp	Glu	Phe	Cys	Ala	Arg	Arg	His	Glu	Glu	Leu	Ile	Pro	Arg	Arg	Ser				
			500					505					510						
Ile	Ile	Pro	Gln	Val	Ser	Gln	Leu	Gly	Ala	Val	Val	Gln	Lys	Tyr	Gln				
		515					520					525							
Ser	Ala	Val	Gln	Asn	Ser	Thr	Asn	Leu	Ser	Thr	Gln	Asp	Met	Gln	Asn				
		530				535					540								
Asn	Cys	Asn	Ser	His	Leu	Pro	Ser	Val	Gln	Val	Pro	Pro	Lys	Cys	Gln				
545					550					555					560				
Lys	Thr	Gln	Cys	Cys	Ala	Asn	Gly	Met	Ser	Leu	Lys	Tyr	Val	Lys	Asn				
			565					570					575						
Tyr	Lys	Arg	Lys	Ala	Phe	Trp	Ile	Tyr	Gly	Cys	Met	Val	Ile	Leu	Thr				
			580					585					590						
Val	Leu	Ala	Pro	Phe	Val	Ala	Cys	Ala	Arg	Gln	Leu	Ala	Lys	Ala	Leu				
		595				600						605							
Glu	Val	Pro	Leu	Val	Asn	Asp	Leu	Gly	Tyr	Thr	Lys	Arg	Tyr	Val	Arg				
		610				615					620								
Cys	Leu	Gln	Ile	Ala	Glu	Val	Val	Asn	Cys	Met	Lys	Asp	Leu	Ile	Asp				
625					630					635					640				
Tyr	Ser	Arg	Gln	Asn	Gly	Ser	Gly	Pro	Ile	Ala	Ser	Leu	His	Ser	Phe				
			645					650					655						
Pro	Arg	Arg	Thr	Ser	Ser	Gly	Gly	Val	Asn	Pro	Gln	Gln	Ser	Gln	Gln				
			660					665					670						
Gln	Gln	Pro	Glu	Glu	Gln	Gln	Ser	Ile	Pro	Gln	Ser	Ser	Asn	Gln	Ser				
		675					680						685						
Gly	Gln	Asn	Ala	Ala	Pro	Met	Thr	Gly	Val	Gln	Ala	Ser	Ala	Ser	Ala				
		690				695					700								
Asn	Ala	Asp	Val	Thr	Ser	Asn	Asn	Ser	Leu	Ser	Cys	Ala	Pro	Ser	Thr				
705					710					715					720				
Ser	Ala	Pro	Ser	Pro	Ser	Val	Val	Gly	Leu	Leu	Gln	Gly	Ser	Met	Asn				
			725					730					735						
Ser	Arg	Gln	Asp	His	Pro	Met	Ser	Ser	Ala	Asn	Gly	Pro	Tyr	Thr	Ser				
			740					745					750						
Gly	Asn	Ser	Ala	Ala	Ile	Pro	Lys	Val	Asn	Ser	Thr	Thr	Ser	Leu	Gln				
		755					760						765						
Ser	Thr	Pro	Ser	Thr	Ser	Phe	Pro	Ser	Pro	Val	Pro	Thr	Thr	Ser	Asn				
		770				775					780								
Asn	Asn	Met	Met	Pro	Ala	Pro	Gln	Asn	Thr	Asn	Gln	Leu	Ser	Ser	Pro				
785					790					795					800				
Thr	Ala	Ser	Ser	Asn	Leu	Pro	Pro	Met	Gln	Pro	Pro	Ala	Thr	Arg	Pro				
			805					810						815					
Gln	Glu	Pro	Asp	Pro	Asn	Glu	Ser	Gln	Ser	Ser	Val	Gln	Arg	Ile	Leu				
			820					825					830						
Gln	Asp	Leu	Met	Met	Ser	Pro	Gln	Met	Asn	Gly	Val	Gly	Gln	Leu	Gly				
		835					840					845							
Asn	Asp	Met	Lys	Arg	Pro	Asn	Gly	Leu	Thr	Ser	Ser	Val	Asn	Gly	Val				
		850				855					860								
Asn	Cys	Leu	Val	Gly	Asn	Ala	Val	Thr	Asn	Asn	Ser	Gly	Met	Gly	Gly				
865					870					875					880				
Met	Gly	Phe	Gly	Ala	Met	Gly	Gly	Leu	Gly	Pro	Asn	His	Ala	Ala	Ser				
			885					890					895						



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Gly	Leu	Arg	Thr	Ala	Ile	Ala	Asn	Asn	Ala	Met	Ala	Ile	Ser	Gly	Arg
			900					905					910		
Met	Gly	Met	Asn	His	Ser	Ala	His	Asp	Leu	Ser	Gln	Leu	Gly	Gln	Leu
		915					920					925			
Gln	Gln	Gln	Gln	Gln	His	Gln	His	Gln	His	Gln	His	Gln	His	Gln	Gln
	930					935					940				
Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	His	Asp	Leu	Gly	Asn	Gln	Leu
945					950					955					960
Leu	Ser	Gly	Leu	Arg	Ala	Ala	Asn	Ser	Phe	Asn	Asn	Leu	Gln	Tyr	Asp
			965						970					975	
Trp	Lys	Pro	Ser	Gln											
			980												

<210> 9  
 <211> 797  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Contig sequence derived from Zea mays

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

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290		295		300
Arg Cys Asp Ile Cys Lys Thr His Gly Ala Lys Gly Tyr Glu Ser Thr				
305		310		315
Tyr Glu Val Leu Pro Arg Leu Cys Gln Ile Arg Phe Asp His Gly Val				
		325		330
				335
Ile Asp Glu Tyr Leu Phe Leu Asp Met Thr Lys Pro Asn Glu Phe Gln				
		340		345
				350
Leu Pro Asn Gly Leu Met Val Leu Glu His Thr Lys Val Val Gln Lys				
		355		360
				365
Ser Val Tyr Glu His Leu His Val Ile His Glu Gly His Leu Arg Ile				
		370		375
				380
Ile Phe Thr Pro Glu Leu Lys Ile Met Ser Trp Glu Phe Cys Ser Arg				
385		390		395
				400
Arg His Glu Glu Tyr Ile Thr Arg Arg Val Leu Ala Pro Lys Val Asn				
		405		410
				415
Asn Leu Leu Gln Val Ala Gln Lys Phe Gln Thr Ala Ala Thr Glu Asn				
		420		425
				430
Gly Pro Ala Gly Val Ser Asn Asn Asp Ala Gln Thr Ile Cys Asn Met				
		435		440
				445
Phe Val Ala Ala Ser Arg Gln Leu Ala Lys Asn Leu Glu His His Thr				
		450		455
				460
Leu Asn Glu His Gly Leu Ser Lys Arg Tyr Val Arg Cys Leu Gln Ile				
465		470		475
				480
Ser Glu Val Val Asn Asn Met Lys Asp Leu Ile Glu Phe Thr Asn Arg				
		485		490
				495
Asn Asn Phe Gly Pro Ile Glu Gly Leu Lys Asn Tyr Pro Lys Pro Asn				
		500		505
				510
Val Ser Glu Leu Pro Gly Gln Asn Pro Arg Glu Thr Lys Gln Thr Thr				
		515		520
				525
Ala Ala Gly Gly Leu Pro Asn Asp Gln Asn Asn Thr Glu Ala Met Gly				
		530		535
				540
Thr Lys Gln Glu Thr Ser Ala Arg Val Asp Asn Gly Ala Ser Val Ala				
545		550		555
				560
Gly Ala Val Gly Asn Ser Ala Pro Gln Asn Ala Ala Ala Leu Asn Gly				
		565		570
				575
Tyr Gln Asn Leu Pro Arg Ser Ser Ser Ala Asn Gln Ser Gln Leu Gln				
		580		585
				590
Gln Gly Ala Ser Gly Ala Phe Lys Gly Pro Ala Ala Thr Arg Asn Gly				
		595		600
				605
Met Gln Met Glu Ala Ser Arg Ser Phe Cys Gly Pro Asn Gln Val Gln				
		610		615
				620
Leu Ala Arg Phe Gln His Pro Gly Ser Phe Gln His Pro Met Pro Gln				
625		630		635
				640
His Asn Asn Leu Gln Gly Leu Gly Leu Gln Asn Asn His Arg Gly Leu				
		645		650
				655
Gly Val Ser Pro Gln Tyr Gln Gln His Ala Leu Asn Gln Leu Ile Gln				
		660		665
				670
Glu Val Lys Asn Ala Lys Arg His Thr Leu Pro Gln Gln Pro Pro Leu				
		675		680
				685
Asp Ile Pro Asn Ile Ser Ser Gly Ile Thr Ser Gly Gly Ala Asn Thr				
		690		695
				700
Asn Ser Ala Gly Thr Gly Asp Gln Gly Gln Arg Met Ala Val Asn Gly				
705		710		715
				720
Ala Ala Thr Ile Tyr Thr Gly Pro Thr Ser Val Ile Asn Asn Ser Thr				
		725		730
				735
Ala Arg Ser Asn Asn Phe Lys Ser Val Ser Ser Asn Leu Ala Val Ala				
		740		745
				750
Ala Ala Pro Ala Gly Gly Asn Ala Ala Thr Leu Lys Ala Lys Pro Phe				
		755		760
				765

PF60886.ST25.txt

His	Glu	Phe	Asp	Asp	Leu	Glu	His	Leu	Ile	Ala	Asn	Glu	Leu	Val	Gly
770						775					780				
Ser	Gly	Leu	Leu	Asn	Gly	Asn	Glu	Leu	Ala	Trp	Asn	Ser			
785					790					795					

<210> 10  
 <211> 861  
 <212> PRT  
 <213> Oryza sativa

<400> 10

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

## PF60886.ST25.txt

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Asn Glu Phe Arg Leu Pro Asn Gly Leu Met Leu Leu Glu His Thr Lys
385          390          395          400
Val Val Gln Lys Ser Ile Tyr Glu His Met His Val Ile His Glu Gly
          405          410          415
Gln Leu Arg Ile Ile Phe Thr Pro Glu Leu Lys Ile Met Ser Trp Glu
          420          425          430
Phe Cys Ser Arg Arg His Asp Glu Tyr Ile Thr Arg Arg Phe Leu Ser
          435          440          445
Pro Gln Val Ala His Leu Leu Gln Val Ala Gln Lys Tyr Gln Thr Val
          450          455          460
Ala Thr Glu Ser Gly Pro Ala Gly Val Ser Asn Ser Asp Ala Gln Asn
465          470          475          480
Ile Cys Asn Met Phe Val Thr Ala Ser Arg Gln Leu Ala Lys Asn Ile
          485          490          495
Asp His His Thr Leu Asn Glu His Gly Leu Ser Lys Arg Tyr Val Arg
          500          505          510
Cys Leu Gln Ile Ser Glu Val Val Asn His Met Lys Asp Leu Ile Glu
          515          520          525
Phe Ser His Lys Asn Lys Leu Gly Pro Ile Glu Gly Leu Lys Ser Tyr
          530          535          540
Pro Lys Gln Thr Ala Ala Lys Leu Pro Val Gln Asn Met His Glu Pro
545          550          555          560
Lys Gln Leu Met Ala Ala Ala Gly Leu Pro Asn Asp Gln Thr Asn Leu
          565          570          575
Lys Ala Met Gly Val Lys Thr Glu Met Asn Thr His Ala Asn Glu Thr
          580          585          590
His Gly Ile Gly Pro Ile Gly Asn Gly Pro Gln Asn Ala Ala Ala Leu
          595          600          605
Asn Asn Tyr Gln Asn Pro Ile Gly Asn Gly Leu Gln Asn Ala Ala Ala
610          615          620
Leu Asn Asn Tyr Gln Asn Ile Leu Arg Ser Ser Val Ala Asn Gln Ser
625          630          635          640
Leu Leu Gln Gln Glu Ala Ser Ser Met Phe Lys Gly Pro Thr Ala Met
          645          650          655
His Asn Gly Ile Gln Leu Glu Ala Ser Arg Ser Phe Arg Gly Pro Asn
          660          665          670
Gln Val His Leu Ala Gln Phe Gln His Pro Ala Ser Phe Gln Gln Pro
          675          680          685
Met Pro Gln Gln Ser Ser Leu Gln Gly Leu Gly Val Ser Pro Gln Tyr
690          695          700
Gln Gln His Val Leu His Gln Leu Leu Gln Glu Ala Lys Asn Thr Asn
705          710          715          720
Asn Arg Val Leu Ala Gln Gln Gln Gln Gln Gln Gln Leu Gln His Ala
          725          730          735
Pro Ala Asn Ser Gly Leu Ala Ser Gly Gly Thr Ala Ile Thr Gly Ser
          740          745          750
Ala Ala Ser Gly Asp His Met Asn Asn Asn Gly Ala Val Lys Gly Gly
          755          760          765
Thr Pro Met Val Thr Thr Gly Pro Ser Ser Val Ile Asn Asn Thr Ala
770          775          780
Ser Ile Leu Pro Ser Arg Ser Asn Ser Phe Lys Ser Val Ser Ser Asn
785          790          795          800
Pro Gln Val Ala Ala Ala Ala Gly Gly Gly Ile Gly Ser Gly Gly His
          805          810          815
Ala Ala Thr Pro Lys Ala Asp Ala Leu His Glu Leu Asp Asp Leu Asp
          820          825          830
Asn Leu Gly Asn Leu Ile Ser Thr Glu Leu Glu Glu Ser Gly Leu Phe
          835          840          845
Leu Gly Asp Gln Ala Gly Gly Gly Tyr Ser Trp Asn Met

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850

855

860

&lt;210&gt; 11

&lt;211&gt; 784

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Contig sequence derived from Zea mays

&lt;400&gt; 11

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

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Trp	Glu	Phe	Cys	Ser	Arg	Arg	His	Glu	Glu	Tyr	Thr	Thr	Arg	Lys	Thr
385					390					395					400
Ile	Ala	Pro	Gln	Val	Asn	Asn	Leu	Leu	Gln	Val	Val	Gln	Lys	Tyr	Gln
				405					410					415	
Ala	Val	Val	Thr	Glu	Ser	Gly	Ser	Ala	Gly	Ile	Ser	Asn	Asn	Asp	Ala
			420					425					430		
Gln	Thr	Ile	Cys	Asn	Met	Phe	Val	Thr	Ala	Ser	Gln	Gln	Leu	Ala	Lys
	435					440						445			
Asn	Leu	Glu	His	His	Thr	Leu	Asn	Glu	His	Gly	Leu	Ser	Lys	Arg	Tyr
	450					455					460				
Val	Arg	Ser	Leu	Gln	Ile	Ser	Glu	Val	Val	Asn	His	Met	Lys	Asp	Leu
465					470					475					480
Ile	Glu	Phe	Ser	His	Lys	Asn	Gly	Leu	Gly	Pro	Lys	Glu	Ser	Leu	Asn
				485					490					495	
Ser	Tyr	Ser	Lys	Thr	Met	Ala	Lys	Phe	Gln	Asn	Met	His	Asp	Ser	Arg
			500					505					510		
Gln	Leu	Met	Ala	Ala	Ala	Asn	Leu	Ala	Asn	Asn	Gln	Ser	Asn	Thr	Lys
	515						520					525			
Leu	Met	Gly	Thr	Lys	Gln	Glu	Ala	Ser	Ala	Ser	Ala	Thr	Asn	Gln	Thr
	530					535					540				
Pro	Gly	Val	Gly	Ala	Ile	Gly	Asn	Asn	Ala	Leu	Gln	His	Ala	Thr	Pro
545					550					555					560
Leu	Asn	Ser	Tyr	Gln	Asn	Met	Leu	Arg	Ser	Ser	Ser	Ala	Asn	Pro	Val
				565					570					575	
Leu	Leu	Gln	Gln	Glu	Ala	Ser	Ser	Val	Phe	Lys	Gly	Pro	Thr	Ala	Met
			580					585					590		
His	Asn	Gly	Ile	Gln	Leu	Glu	Ala	Ala	Arg	Ser	Phe	Arg	Gly	Pro	Asn
	595						600					605			
Gln	Val	Gln	Phe	Gln	His	Pro	Ala	Ala	Ile	Gln	Gln	Gln	Gln	Pro	Met
	610					615					620				
Pro	Gln	Gln	Ser	Asn	Phe	Gln	Gly	Phe	Gly	Gly	Val	Asn	Pro	Gln	Tyr
625					630					635					640
Gln	His	His	Val	Leu	Asn	Gln	Leu	Leu	Gln	Glu	Val	Lys	Asn	Asn	Asn
				645					650					655	
His	Val	Lys	Ala	Gln	Gln	Leu	Pro	Pro	Asp	Ala	Pro	Lys	Ala	Ser	Gly
			660					665					670		
Gly	Leu	Ala	Pro	Gly	Val	Ala	Ile	Pro	Asn	Val	Ala	Ala	Ala	Gly	Glu
	675						680					685			
Gln	Gly	Gln	His	Ile	Asn	Ser	Asn	Thr	Arg	Asp	His	Asn	Gly	Ala	Val
	690					695					700				
Lys	Gly	Ala	Ala	Pro	Ala	Gly	Thr	Gly	Pro	Ser	Asn	Val	Ile	Asn	Asn
705					710					715					720
Thr	Ala	Ser	Met	Pro	Pro	Gly	Arg	Asn	Asn	Ser	Phe	Lys	Ser	Val	Ser
				725					730					735	
Ser	Ser	Pro	Ala	Ala	Ala	Thr	Gly	Gly	Ile	Ala	Val	Asn	Ser	Lys	Val
			740					745					750		
Asp	Asp	Ser	Phe	His	Gln	Leu	Glu	Asp	Leu	Asp	Leu	Asp	Gly	Leu	Ile
		755					760					765			
Thr	Asn	Glu	Leu	Met	Glu	Ser	Gly	Leu	Phe	Gly	Ala	Gly	Gln	Gly	Trp
	770					775					780				

<210> 12  
 <211> 748  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 12  
 Met Asn Arg Thr Val Val Ser Gly Ala Val Glu Ser Ser Phe Ser Leu  
 1 5 10 15

PF60886.ST25.txt

Thr	Asp	Ala	Val	Gly	Thr	Glu	Ala	Leu	Asn	Met	Gln	Arg	Ser	Ser	Gly
			20					25					30		
Ile	Asn	Asn	Asn	Met	Arg	Ile	Pro	Thr	Ser	Pro	Met	Ser	Phe	Ser	Ser
		35					40					45			
Asn	Ser	Val	Asn	Ile	Pro	Gly	Ser	Leu	Val	Leu	Asp	Gly	Ser	Ala	Ala
		50				55					60				
Ser	Met	Gln	His	Leu	Pro	Gln	Gln	Gln	Gln	Gln	Gln	Leu	Leu	Gln	Gln
65					70					75					80
Gln	Thr	Gly	Gln	Gly	Ser	Val	Pro	Met	Arg	Glu	Asn	Ser	Tyr	Ser	His
			85						90					95	
Val	Asp	Lys	Lys	Pro	Arg	Leu	Glu	Val	Lys	Gln	Glu	Asp	Met	Leu	Gln
			100					105					110		
Gln	Gln	Ile	Leu	Gln	Gln	Leu	Ile	Gln	Arg	Gln	Asp	Pro	Thr	Gly	Arg
		115					120					125			
Asn	Pro	Gln	Met	Gln	Ala	Leu	Leu	Gln	Gln	Gln	Arg	Leu	Arg	Gln	His
		130				135					140				
Gln	Gln	Met	Leu	Gln	Ser	Met	Ser	Pro	Ser	Gln	Arg	Leu	Gln	Leu	Gln
145					150					155					160
Gln	Gln	Gln	Gln	Leu	Arg	Gln	Gln	Leu	Gln	Gln	Gln	Gly	Thr	Gln	Gln
			165						170					175	
Ile	Pro	Pro	Asn	Val	Arg	Pro	Tyr	Glu	Val	Gly	Val	Cys	Ala	Arg	Lys
			180					185					190		
Leu	Met	Met	Tyr	Leu	Tyr	His	Leu	Gln	Gln	Arg	Pro	Ala	Glu	Asn	Cys
		195					200					205			
Ile	Thr	Tyr	Trp	Arg	Lys	Phe	Val	Ala	Glu	Tyr	Phe	Ser	Pro	Arg	Ala
	210					215					220				
Lys	Gln	Arg	Leu	Cys	Leu	Ser	Gln	Tyr	Glu	Ser	Ala	Gly	His	His	Ala
225					230					235					240
Leu	Gly	Met	Phe	Pro	Gln	Ala	Ala	Pro	Asp	Met	Trp	Gln	Cys	Asp	Leu
			245						250					255	
Cys	Gly	Thr	Lys	Ser	Gly	Lys	Gly	Phe	Glu	Ala	Thr	Phe	Asp	Val	Leu
			260					265					270		
Ala	Arg	Leu	Ile	Glu	Ile	Lys	Phe	Ala	Ser	Gly	Ile	Ile	Asp	Glu	Leu
		275					280					285			
Leu	Tyr	Leu	Asp	His	Pro	Arg	Glu	Asn	Arg	Phe	Pro	Asn	Gly	Leu	Met
	290					295					300				
Met	Leu	Glu	Tyr	Arg	Lys	Ala	Val	Gln	Glu	Thr	Val	His	Glu	Gln	Phe
305					310					315					320
Arg	Val	Val	Arg	Glu	Gly	His	Leu	Arg	Ile	Ile	Phe	Ser	Gln	Asp	Leu
			325						330					335	
Lys	Ile	Leu	Ser	Trp	Glu	Phe	Cys	Ala	Arg	Arg	His	Glu	Glu	Leu	Leu
		340						345					350		
Leu	Arg	Arg	Leu	Ile	Ala	Pro	Gln	Val	Asn	Gln	Leu	Leu	Gln	Val	Ala
		355					360					365			
Gln	Lys	Cys	Gln	Ser	Thr	Ile	Ser	Glu	Ser	Gly	Ser	Glu	Gly	Val	Ser
	370					375					380				
Gln	Gln	Asp	Leu	Gln	Ser	Asn	Ser	Asn	Met	Val	Leu	Gly	Ala	Gly	Arg
385					390					395					400
Gln	Leu	Ala	Lys	Phe	Met	Glu	Leu	Gln	Ser	Leu	Asn	Asp	Leu	Gly	Tyr
			405						410					415	
Pro	Lys	Arg	Tyr	Ile	Arg	Thr	Leu	Gln	Ile	Ser	Glu	Val	Val	Lys	Ser
			420					425					430		
Met	Lys	Asp	Leu	Met	Asn	Phe	Thr	Gly	Glu	Gln	Lys	Ile	Gly	Pro	Ile
		435					440					445			
Glu	Gly	Leu	Lys	Arg	Leu	Leu	Glu	Gln	Thr	Val	Thr	Val	Lys	Leu	Gln
	450					455					460				
Lys	Gln	Lys	Met	Gln	Glu	Met	Glu	Gln	Phe	Gly	Asn	Asn	Gly	Ala	Ile
465					470					475					480
Asn	Gly	Pro	Val	Gln	Ala	Gln	Met	Val	Leu	Thr	Ser	Gly	Thr	Met	Asn

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				485					490				495				
Gly	Ser	Thr	Gly	Asn	Asn	Thr	Asn	Asn	His	His	Gln	Ile	Val	Gly	Arg		
			500					505					510				
Gly	Ala	Met	Ser	Gly	Pro	Ala	Glu	Gly	Gln	Met	Val	Ile	Ser	Ser	Gly		
		515					520				525						
Thr	Val	Ser	Gly	Ala	Thr	Ala	Asn	Asn	Asn	Ser	Asn	Asn	His	Asn	Gln		
		530				535					540						
Ile	Val	Gly	Arg	Gly	Ala	Met	Asn	Gly	Ser	Ala	Gln	Ala	Ala	Ala	Ala		
545					550					555					560		
Leu	Thr	Asn	Tyr	Gln	Ser	Met	Leu	Met	Arg	Gln	Asn	Ala	Met	Asn	Asn		
			565						570					575			
Pro	Asn	Ser	Asn	Thr	Gly	Lys	Gln	Glu	Gly	Phe	Ser	Ser	Gln	Asn	Pro		
			580					585					590				
Thr	Pro	Asn	Ser	Asn	Gln	Ser	Pro	Ser	Ser	Ser	Ser	Gln	Gln	Arg	His		
		595					600					605					
Asn	Leu	Val	Thr	Gly	Gly	Phe	Pro	Asn	Ser	Pro	Gln	Met	Gln	Gln	Gln		
	610					615					620						
Gln	Arg	Thr	Met	Asn	Gly	Pro	Thr	Asn	Ile	Leu	Pro	Gln	Asn	His	Pro		
625					630					635					640		
His	Gln	Leu	Gln	Ser	Pro	His	Ser	His	Gly	Asn	Thr	Pro	Glu	Gln	Gln		
			645						650				655				
Met	Leu	His	Gln	Leu	Leu	Gln	Glu	Met	Ser	Glu	Asn	Gly	Gly	Ser	Val		
			660					665					670				
Gln	Gln	Gln	Gln	Ala	Phe	Ser	Gly	Gln	Ser	Gly	Ser	Asn	Ser	Asn	Ala		
		675					680					685					
Glu	Arg	Asn	Thr	Thr	Ala	Ser	Thr	Ser	Asn	Ile	Ser	Gly	Gly	Gly	Arg		
	690					695					700						
Ala	Pro	Ser	Arg	Asn	Asn	Ser	Phe	Lys	Ala	Ala	Ser	Asn	Asn	Asn	Leu		
705					710					715					720		
His	Phe	Ser	Glu	Asp	Ile	Ser	Ile	Thr	Asp	His	Asp	Phe	Ser	Glu	Asp		
			725						730					735			
Gly	Phe	Phe	Asn	Asn	Asn	Asp	Ile	Tyr	Gly	Gly	Leu						
			740					745									

<210> 13  
 <211> 816  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 13

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



## PF60886.ST25.txt

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145          150          155          160
Arg Arg Ala Ser Glu Ser Phe Phe Gln Asp Pro Asn Asn Leu Thr Gln
          165          170          175
Ala Arg Lys Lys Pro Arg Leu Asp Ser Lys Gln Asp Asp Ala Leu Gln
          180          185          190
Gln Gln Ile Leu Arg Gln Trp Leu Gln Arg Gln Asp Ile Leu Gln Gln
          195          200          205
Gln Gln Gln Gln Gln Gln Gln Gly Gln Asn Pro Gln Phe Gln Ile Leu
          210          215          220
Leu Gln Gln Gln Lys Leu Arg Gln Gln Gln Gln Tyr Leu Gln Ser Leu
225          230          235          240
Pro Pro Leu Gln Arg Val Gln Leu Gln Gln Gln Gln Val Gln Gln
          245          250          255
Gln Gln Gln Leu Gln Gln Gln His Gln Gln Gln Gln Gln Leu Gln
          260          265          270
Gln Gln Gly Met Gln Met Gln Leu Thr Gly Gly Pro Arg Pro Tyr Glu
          275          280          285
Asn Ser Val Cys Ala Arg Arg Leu Met Gln Tyr Leu Tyr His Gln Arg
          290          295          300
Gln Arg Pro Ser Glu Ser Ser Ile Val Tyr Trp Arg Lys Phe Val Thr
305          310          315          320
Glu Tyr Phe Ser Pro Arg Ala Lys Lys Arg Trp Cys Leu Ser His Tyr
          325          330          335
Asp Asn Val Gly His Ser Ala Leu Gly Val Ser Pro Gln Ala Ala Thr
          340          345          350
Asp Glu Trp Gln Cys Asp Leu Cys Gly Ser Lys Ser Gly Arg Gly Phe
          355          360          365
Glu Ala Thr Phe Asp Val Leu Pro Arg Leu Asn Glu Ile Lys Phe Ala
          370          375          380
Ser Gly Val Leu Asp Glu Leu Leu Tyr Leu Gly Val Pro Ser Glu Arg
385          390          395          400
Arg Tyr Gly Ser Gly Ile Met Val Leu Glu Tyr Gly Lys Ala Val Gln
          405          410          415
Glu Ser Val Tyr Glu His Ile Arg Val Val Arg Glu Gly His Leu Arg
          420          425          430
Ile Ile Phe Ser Gln Glu Leu Lys Ile Leu Ser Trp Glu Phe Cys Thr
          435          440          445
Arg Arg His Glu Glu Leu Leu Pro Arg Arg Leu Val Ala Pro Gln Val
          450          455          460
Asn Gln Leu Leu Gln Val Ala Glu Lys Cys Gln Ser Thr Ile Asp Gln
465          470          475          480
Ser Gly Ser Asp Gly Ile His Gln Gln Asp Leu Gln Ala Asn Ser Asn
          485          490          495
Met Val Met Ala Ala Gly Arg Gln Leu Ala Lys Ser Leu Glu Ser His
          500          505          510
Ser Leu Asn Asp Leu Gly Phe Ser Lys Arg Tyr Val Arg Cys Leu Gln
          515          520          525
Ile Ser Glu Val Val Ser Ser Met Lys Asp Met Ile Asp Phe Cys Arg
          530          535          540
Asp Gln Lys Val Gly Pro Ile Glu Ala Leu Lys Ser Tyr Pro Tyr Arg
545          550          555          560
Met Lys Ala Gly Lys Pro Gln Met Gln Glu Met Glu Gln Leu Ala Ala
          565          570          575
Ala Arg Gly Leu Pro Pro Asp Arg Asn Ser Leu Asn Lys Leu Met Ala
          580          585          590
Leu Arg Asn Ser Gly Ile Asn Ile Pro Met Asn Asn Met Ser Gly Gln
          595          600          605
Gly Ser Leu Pro Gly Ser Ala Gln Ala Ala Ala Phe Ala Leu Thr Asn
          610          615          620

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Tyr	Gln	Ser	Met	Leu	Met	Lys	Gln	Asn	His	Leu	Asn	Ser	Asp	Leu	Asn
625					630					635					640
Asn	Thr	Thr	Ile	Gln	Gln	Glu	Pro	Ser	Arg	Asn	Arg	Ser	Ala	Ser	Pro
				645						650					655
Ser	Tyr	Gln	Gly	Thr	Ser	Pro	Leu	Leu	Pro	Gly	Phe	Val	His	Ser	Pro
			660							665					670
Ser	Ile	Ser	Gly	Val	Ser	Ser	His	Leu	Ser	Pro	Gln	Arg	Gln	Met	Pro
		675								680					685
Ser	Ser	Ser	Tyr	Asn	Gly	Ser	Thr	Gln	Gln	Tyr	His	Gln	Gln	Pro	Pro
	690									695					700
Ser	Cys	Ser	Ser	Gly	Asn	Gln	Thr	Leu	Glu	Gln	Gln	Met	Ile	His	Gln
705					710					715					720
Ile	Trp	Gln	Gln	Met	Ala	Asn	Ser	Asn	Gly	Gly	Ser	Gly	Gln	Gln	Gln
				725						730					735
Gln	Ser	Leu	Ser	Gly	Gln	Asn	Met	Met	Asn	Cys	Asn	Thr	Asn	Met	Gly
			740							745					750
Arg	Asn	Arg	Thr	Asp	Tyr	Val	Pro	Ala	Ala	Ala	Glu	Thr	Pro	Ser	Thr
			755							760					765
Ser	Asn	Arg	Phe	Arg	Gly	Ile	Lys	Gly	Leu	Asp	Gln	Ser	Gln	Asn	Leu
	770									775					780
Glu	Gly	Ile	Ile	Ser	Asn	Thr	Ser	Leu	Asn	Phe	Gly	Asn	Asn	Gly	Val
785					790					795					800
Phe	Ser	Asn	Glu	Val	Asp	Glu	Ser	Met	Gly	Gly	Tyr	Ser	Trp	Lys	Ser
				805						810					815

<210> 14  
 <211> 468  
 <212> PRT  
 <213> Sorghum bicolor

<400> 14

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

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Met Tyr His Gln Gln Asn Arg Pro Gln Asp Asn Asn Ile Glu Tyr Trp
225          230          235          240
Arg Asn Phe Val Asn Glu Tyr Phe Ala Pro Asn Ala Lys Lys Arg Trp
          245          250          255
Cys Val Ser Leu Tyr Gly Ser Gly Arg Gln Thr Thr Gly Val Phe Pro
          260          265          270
Gln Glu Ala Thr Tyr Glu Val Leu Pro Arg Leu Cys Gln Ile Arg Phe
          275          280          285
Asp His Gly Val Ile Asp Glu Tyr Leu Phe Leu Asp Met Pro Asn Glu
290          295          300
Phe Arg Leu Pro Asn Gly Leu Met Leu Leu Glu His Thr Lys Val Val
305          310          315          320
Gln Lys Cys Val Tyr Glu His Gln His Val Thr His Glu Gly His Leu
          325          330          335
Arg Ile Ile Phe Thr Pro Glu Leu Lys Val Ser Cys Phe Arg Phe Val
          340          345          350
Ala Cys Ala Arg Gln Leu Ala Lys Ala Leu Glu Val Pro Leu Leu Asn
          355          360          365
Asp Leu Gly Tyr Thr Lys Arg Tyr Val Arg Cys Leu Gln Val Gln Ile
370          375          380
Ala Glu Val Val Asn Cys Met Lys Asp Leu Ile Asp His Ser Arg Gln
385          390          395          400
Thr Gly Ser Gly Pro Ile Gly Ala Val Asn Pro Met Ala Met Gly Ala
          405          410          415
Arg Met Gly Met Asn His Gly Ala His Asp Leu Ser Gln Leu Gly Gln
          420          425          430
Leu His Gln Gln Gln Gln Gln Gln His Asp Ile Gly Asn Gln Leu Leu
          435          440          445
Gly Gly Phe Arg Ser Ala Asn Gly Phe Asn Asn Ile Gln Tyr Asp Trp
450          455          460
Lys Pro Ser Gln
465

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<210> 15  
 <211> 176  
 <212> PRT  
 <213> Artificial sequence

<220>  
 <223> SEUSS domain

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

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130		135		140
His	Leu	Arg	Ile	Val
145		150		155
Phe	Cys	Ala	Arg	Arg
		165		170
				175

<210> 16  
 <211> 64  
 <212> PRT  
 <213> Artificial sequence

<220>  
 <223> LIM domain

<400>	16														
Phe	Val	Ala	Cys	Ala	Arg	Gln	Leu	Ala	Lys	Ala	Leu	Glu	Val	Pro	Leu
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Val	Asn	Asp	Leu	Gly	Tyr	Thr	Lys	Arg	Tyr	Val	Arg	Cys	Leu	Gln	Ile
	20	25	30												
Ala	Glu	Val	Val	Asn	Cys	Met	Lys	Asp	Leu	Ile	Asp	His	Ser	Arg	Gln
	35	40	45												
Thr	Gly	Ser	Gly	Pro	Ile	Asp	Ser	Leu	His	Asn	Phe	Pro	Arg	Arg	Thr
50		55									60				