

1

SEQUENCE LISTING

<110> The Australian National University

<120> Method for Modulating Plant Growth

<130> P089505C

<140> New PCT Application

<141> 2014-10-15

<150> AU 2013903988

<151> 2013-10-16

<160> 504

<170> PatentIn version 3.5

<210> 1

<211> 619

<212> DNA

<213> Arabidopsis thaliana CEP1 cDNA

<400> 1

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gaatgtcgaa taggtcagtt tctacatcca tttttttcct tgcattggtg gttttgcatg      180
gaattcagga cacagaagag agacatttga aaactacttc gttagagatt gagggaattt      240
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ttcagaagga ggtcattgcc caccacacag acttttaggcc aacaaatccc ggaaacagcc      360
caggcgttgg acactctaac gggcgacatt gattcgatca tatcatatgt cataatctta      420
tatcatatag aaaattacat gtattttcat tcagacttgt cttctaattgc taaaggggtg      480
tttgacatc actttatcat ttcaatgttt tgacagtact atgatcatta tgtctttgtc      540
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attaatatat acattaatg                                     619

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<210> 2

<211> 91

<212> PRT

<213> Arabidopsis thaliana CEP1

<400> 2

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Met Gly Met Ser Asn Arg Ser Val Ser Thr Ser Ile Phe Phe Leu Ala
1           5           10           15

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Leu Val Val Leu His Gly Ile Gln Asp Thr Glu Glu Arg His Leu Lys
20           25           30

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Thr Thr Ser Leu Glu Ile Glu Gly Ile Tyr Lys Lys Thr Glu Ala Glu
 35 40 45

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

Glu Val Ile Ala His Pro Thr Asp Phe Arg Pro Thr Asn Pro Gly Asn
 65 70 75 80

Ser Pro Gly Val Gly His Ser Asn Gly Arg His
 85 90

<210> 3
 <211> 381
 <212> DNA
 <213> Arabidopsis thaliana CEP2 cDNA

<400> 3
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 gaatatttgg atcctacttt tgcagggcat acatttggag tagttaaaga agattttctc 180
 gaagtaaaaa agctaaagaa aattggtgat gaaaataatc taaaaaacag atttataaat 240
 gagtttgcgc ctactaatcc agaagatagt ctcggtattg ggcattccaag agttctaaac 300
 aacaaattta caaatgattt tgcgcctact aatccaggag atagtcccgg tatcaggcat 360
 ccaggagttg tgaatgttta a 381

<210> 4
 <211> 126
 <212> PRT
 <213> Arabidopsis thaliana CEP2

<400> 4

Met Lys Leu Phe Ile Ile Thr Val Val Thr Ile Leu Thr Ile Ser Arg
 1 5 10 15

Val Phe Asp Lys Thr Pro Ala Thr Thr Glu Ala Arg Lys Ser Lys Lys
 20 25 30

Met Val Gly His Glu His Phe Asn Glu Tyr Leu Asp Pro Thr Phe Ala
 35 40 45

Gly His Thr Phe Gly Val Val Lys Glu Asp Phe Leu Glu Val Lys Lys
 50 55 60

Leu Lys Lys Ile Gly Asp Glu Asn Asn Leu Lys Asn Arg Phe Ile Asn
 65 70 75 80

Glu Phe Ala Pro Thr Asn Pro Glu Asp Ser Leu Gly Ile Gly His Pro
 85 90 95

3

Arg Val Leu Asn Asn Lys Phe Thr Asn Asp Phe Ala Pro Thr Asn Pro
 100 105 110

Gly Asp Ser Pro Gly Ile Arg His Pro Gly Val Val Asn Val
 115 120 125

<210> 5
 <211> 415
 <212> DNA
 <213> Arabidopsis thaliana CEP3 cDNA

<400> 5
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 tgactatttag tgttggttca attgaaggcc gaaaactcac caaattcacc gtaacgacgt 180
 ctgaggaaat cagagctggg ggctctgtat tgctcgctgc acctccgact gagccacttg 240
 agtcgccgcc gagccacggg gttgatacct tcagacctac ggaacctggg catagccccg 300
 gtattggaca ttccgtacat aattaacgga gaggaacaat agcatcgtct atgtgattac 360
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<210> 6
 <211> 82
 <212> PRT
 <213> Arabidopsis thaliana CEP3

<400> 6

Met Ala Thr Ile Asn Val Tyr Val Phe Ala Phe Ile Phe Leu Leu Thr
 1 5 10 15

Ile Ser Val Gly Ser Ile Glu Gly Arg Lys Leu Thr Lys Phe Thr Val
 20 25 30

Thr Thr Ser Glu Glu Ile Arg Ala Gly Gly Ser Val Leu Ser Ser Ser
 35 40 45

Pro Pro Thr Glu Pro Leu Glu Ser Pro Pro Ser His Gly Val Asp Thr
 50 55 60

Phe Arg Pro Thr Glu Pro Gly His Ser Pro Gly Ile Gly His Ser Val
 65 70 75 80

His Asn

<210> 7
 <211> 261
 <212> DNA
 <213> Arabidopsis thaliana CEP4 cDNA

<400> 7

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atggtgtctc gcggttggtc aatcacagtt ttgtttcgct ttcttatagt tcttttgggtg      60
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ccacctgagc cgcctaagga tgattttgtg tggtagcaca agatcaaccg cttcaaaaac      180
atagaacaag atgcattccg accaaccac caaggtccta gtcaaggtat tggacacaaa      240
aaccctccag gtgctcctta a                                          261

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<210> 8
 <211> 86
 <212> PRT
 <213> Arabidopsis thaliana CEP4

<400> 8

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Met Val Ser Arg Gly Cys Ser Ile Thr Val Leu Phe Arg Phe Leu Ile
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Val Leu Leu Val Ile Gln Val His Phe Glu Asn Thr Lys Ala Ala Arg
          20              25              30

His Ala Pro Val Val Ser Trp Ser Pro Pro Glu Pro Pro Lys Asp Asp
          35              40              45

Phe Val Trp Tyr His Lys Ile Asn Arg Phe Lys Asn Ile Glu Gln Asp
          50              55              60

Ala Phe Arg Pro Thr His Gln Gly Pro Ser Gln Gly Ile Gly His Lys
65              70              75              80

Asn Pro Pro Gly Ala Pro
          85

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<210> 9
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 <212> DNA
 <213> Arabidopsis thaliana CEP9 cDNA

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<400> 9
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cctggtgtgg gacacaaaaa aggtaatgtg aatgttgaag ggtttcaaga tgacttcaag      180
cccacggaag gaagaaagtt gctgaaaact aacgttcaag atcatttcaa aaccggatct      240
acagatgatt ttgcacctac ttcccctgga cacagtcccg gggtagggaca caagaaagga      300
aatgtcaatg ttgaaagttc cgaagatgac ttcaaacaca aggaaggaag aaagcttcaa      360
caaacaaacg gtcaaaatca tttcaaaacc ggatctacgg acgattttgc acctacttct      420
ccgggaaaca gtcctgggat aggtcacaag aaagggcatg caaatgttaa agggtttaaa      480
gatgacttcg caccacgga agaaatacga ttgcagaaaa tgaacggtca agatcatttc      540

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aaaaccggat ctaccgatga tttcgcacct acaactccag gaaacagtcc cggtatgggc      600
cataagaaag gagatgactt caaacccacg acaccaggac atagccccgg ggttggtcat      660
gctgtcaaga acgatgaacc taaagcttaa                                         690

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<210> 10
<211> 243
<212> PRT
<213> Arabidopsis thaliana CEP9

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<400> 10

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Met Lys Leu Leu Ser Ile Thr Leu Thr Ser Ile Val Ile Ser Met Val
1                               5                               10                               15

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```

Phe Tyr Gln Thr Pro Ile Thr Thr Glu Ala Arg Ser Leu Arg Lys Thr
                20                               25                               30

```

```

Asn Asp Gln Asp His Phe Lys Ala Gly Phe Thr Asp Asp Phe Val Pro
        35                               40                               45

```

```

Thr Ser Pro Gly Asn Ser Pro Gly Val Gly His Lys Lys Gly Asn Val
    50                               55                               60

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```

Asn Val Glu Gly Phe Gln Asp Asp Phe Lys Pro Thr Glu Gly Arg Lys
65                               70                               75                               80

```

```

Leu Leu Lys Thr Asn Val Gln Asp His Phe Lys Thr Gly Ser Thr Asp
                85                               90                               95

```

```

Asp Phe Ala Pro Thr Ser Pro Gly His Ser Pro Gly Val Gly His Lys
        100                               105                               110

```

```

Lys Gly Asn Val Asn Val Glu Ser Ser Glu Asp Asp Phe Lys His Lys
        115                               120                               125

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```

Glu Gly Arg Lys Leu Gln Gln Thr Asn Gly Gln Asn His Phe Lys Thr
        130                               135                               140

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```

Gly Ser Thr Asp Asp Phe Ala Pro Thr Ser Pro Gly Asn Ser Pro Gly
145                               150                               155                               160

```

```

Ile Gly His Lys Lys Gly His Ala Asn Val Lys Gly Phe Lys Asp Asp
        165                               170                               175

```

```

Phe Ala Pro Thr Glu Glu Ile Arg Leu Gln Lys Met Asn Gly Gln Asp
        180                               185                               190

```

```

His Phe Lys Thr Gly Ser Thr Asp Asp Phe Ala Pro Thr Thr Pro Gly
        195                               200                               205

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```

Asn Ser Pro Gly Met Gly His Lys Lys Gly Asp Asp Phe Lys Pro Thr
        210                               215                               220

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Thr Pro Gly His Ser Pro Gly Val Gly His Ala Val Lys Asn Asp Glu
225                               230                               235                               240

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Pro Lys Ala

<210> 11
 <211> 501
 <212> DNA
 <213> Arabidopsis thaliana CEP5 cDNA

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 ggggtcaaaag aaaacattgt acgcgtgtta ttttttaatg ttgggtgttt ttttaggggt 180
 caattgtgtc catggacgaa ccctaaaagt tgatgataag attaatgggtg gtcattatga 240
 tagcaagacg atgatggcat tggcaaagca caatgatatg atggttgatg acaaggcaat 300
 gcagttctcg ccgccaccac caccaccacc gccgtcacia tcgggaggta aagatgctga 360
 agatttcagg cctacaacgc ctggccacag ccctggcatt ggccatagtt tatcccataa 420
 ttgatcattt tcatgcaatt tcacatatgt atatatgtgt tgtgaactta tgattaaata 480
 ttgttcgttt taatttttct t 501

<210> 12
 <211> 105
 <212> PRT
 <213> Arabidopsis thaliana CEP5

<400> 12

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

<210> 13
 <211> 306
 <212> DNA

7

<213> Arabidopsis thaliana CEP6 cDNA

<400> 13

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attcagttta cggaggcgag acagttgcga aaaaccgacg atcaagatca tgatgatcat      120
catttcacag tcgggtacac tgatgatttt gggcctactt ctcttggtaa cagccccgggc      180
attggtcata agatgaagga gaatgaagaa aatgctggag ggtataaaga tgacttcgaa      240
cctacgacgc caggacatag tcccggcggt ggacatgctg tcaagaacaa tgagcctaata      300
gcttaa                                          306

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<210> 14

<211> 101

<212> PRT

<213> Arabidopsis thaliana CEP6

<400> 14

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Met Lys Leu Ser Val Tyr Ile Ile Leu Ser Ile Leu Phe Ile Ser Thr
1              5              10              15

Val Phe Tyr Glu Ile Gln Phe Thr Glu Ala Arg Gln Leu Arg Lys Thr
                20              25              30

Asp Asp Gln Asp His Asp Asp His His Phe Thr Val Gly Tyr Thr Asp
                35              40              45

Asp Phe Gly Pro Thr Ser Pro Gly Asn Ser Pro Gly Ile Gly His Lys
                50              55              60

Met Lys Glu Asn Glu Glu Asn Ala Gly Gly Tyr Lys Asp Asp Phe Glu
65              70              75              80

Pro Thr Thr Pro Gly His Ser Pro Gly Val Gly His Ala Val Lys Asn
                85              90              95

Asn Glu Pro Asn Ala
                100

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<210> 15

<211> 589

<212> DNA

<213> Medicago truncatula CEP1 cDNA

<400> 15

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gttgagtcaa caataaaatc aaacaatgaa gtagctagtt attttgagaa ttcaagtgaa      180
gctcacacaa atgcattcca accaacaaca ccaggaaata gtcctgggtg ttggtcataga      240
tattttaccg atgaagatat cgacgtgaat tcgaaaaaga cggtagctca gagcaaagat      300

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gataataaat atgtgactga ggatactaca aatgagttcc aaaaaacaaa ccctgggtcac 360
 agtcctgggtg ttggtcattc ttaccaaaac aaaattggaa attgatgtaa atatgcaatt 420
 aataatttat tttattagtt aggtgtatgc tgtataatta atcaatcaat taattattaa 480
 gtgttctcca tagtttcatt ctgcattaca gattgtgaaa ttcttgcata tcccaaacca 540
 tgagcttggg ttttaattaat tattggctat tgattgtatc attcaattc 589

<210> 16
 <211> 142
 <212> PRT
 <213> Medicago truncatula CEP1

<400> 16

Met Ala Tyr Lys Phe Gln Tyr Thr Met Lys Tyr Phe Ala Leu Phe Leu
 1 5 10 15

Ala Leu Ile Ala Cys Asn Tyr Ser Leu Gln Ser His Ala Arg Leu Ile
 20 25 30

Lys Pro Ser Asn His His Asn Val Pro Ile Ser Thr Ser Glu Lys Lys
 35 40 45

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

Asp Ser Ser Glu Ala His Thr Asn Ala Phe Gln Pro Thr Thr Pro Gly
 65 70 75 80

Asn Ser Pro Gly Val Gly His Arg Tyr Phe Thr Asp Glu Asp Ile Asp
 85 90 95

Val Asn Ser Lys Lys Thr Val Ala Gln Ser Lys Asp Asp Asn Lys Tyr
 100 105 110

Val Thr Glu Asp Thr Thr Asn Glu Phe Gln Lys Thr Asn Pro Gly His
 115 120 125

Ser Pro Gly Val Gly His Ser Tyr Gln Asn Lys Ile Gly Asn
 130 135 140

<210> 17
 <211> 249
 <212> DNA
 <213> Medicago truncatula CEP2 cDNA

<400> 17

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 ctactcacta caactgaggg taggagtttg agacaaagca ttcagccacc aaacatagcc 120
 tctaccaaaa tgatgagcac aagccaattg taccaccgta gcaatagaag tttggaggga 180
 gatgttgaag cttttaggcc cacaactcct ggacacagtc ctggcattgg tcattccatt 240

aataattaa

249

<210> 18

<211> 82

<212> PRT

<213> Medicago truncatula CEP2

<400> 18

Met Ala His Leu Ala Arg Ile Cys Leu Phe Tyr Val Leu Leu Phe Leu
1 5 10 15

Ser His Glu Leu Leu Leu Thr Thr Thr Glu Gly Arg Ser Leu Arg Gln
20 25 30

Ser Ile Gln Pro Pro Asn Ile Ala Ser Thr Lys Met Met Ser Thr Ser
35 40 45

Gln Leu Tyr His Arg Ser Asn Arg Ser Leu Glu Gly Asp Val Glu Ala
50 55 60

Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Ile Gly His Ser Ile
65 70 75 80

Asn Asn

<210> 19

<211> 640

<212> DNA

<213> Medicago truncatula CEP3 cDNA

<400> 19

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gaaaaaaaga gaaaatgaac atccaaaaca atcaacgttg agtccacca ttttgcagca 120

gtttatttaa attagtaacc tggctcggca gatcaatcat taataggagg tggagcgctc 180

atgcgacatt ctacttcttg tgtccagcac ctggactatt tcttgggtgtt gtgggacgaa 240

aatcattcgt ctcaagattc ttgtaacggt tcaatttgtg agaatggata tcggattgat 300

cgggagcaaa agtgtgaata tctggaagat gactagcagc tttgtcttga ttaacactaa 360

cggataatgc aacatgcttg tgatactcac acaccgaaat tatgtctgtc ggggaaatct 420

tggctttaac taataacgcc ttagtgccgt gacatgacat cagatccctt agagctcgat 480

tatatgacat taatatagct ttttccgaga ctacagatgg actcaaggat atgaaagcca 540

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tgcttattaa gtgataatgc aagcactttt atattttttt 640

<210> 20

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<211> 131
 <212> PRT
 <213> *Medicago truncatula* CEP3

<400> 20

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

<210> 21
 <211> 243
 <212> DNA
 <213> *Medicago truncatula* CEP4 cDNA

<400> 21

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ggttcaattg aagcatcaag gttgctaaat attaatccac caccaactat tcctaaaagt	120
ccacaagctc cttcacatga ttattggtat tcgataaacg atgataaggg tgggtgacgat	180
gcttttcgcc ctacaagtcc aggacatagc cctggggtag gacatcaaac accacctcca	240
tga	243

<210> 22
 <211> 80
 <212> PRT
 <213> *Medicago truncatula* CEP4

<400> 22

Met	Gly	Glu	Lys	Thr	Met	Leu	Leu	Thr	Phe	Leu	Leu	Leu	Ile	Ile	Met
1				5					10					15	

11

Gln Gln Asn Ile Gly Ser Ile Glu Ala Ser Arg Leu Leu Asn Ile Asn
20 25 30

Pro Pro Pro Thr Ile Pro Lys Ser Pro Gln Ala Pro Ser His Asp Tyr
35 40 45

Trp Tyr Ser Ile Asn Asp Asp Lys Gly Gly Asp Asp Ala Phe Arg Pro
50 55 60

Thr Ser Pro Gly His Ser Pro Gly Val Gly His Gln Thr Pro Pro Pro
65 70 75 80

<210> 23

<211> 249

<212> DNA

<213> Medicago truncatula CEP5 cDNA

<400> 23

atggaaaata ctaaaaggct tcaaattatt tgtgttctta tttgtttttt ggttttgcaa 60

caagaagttg tgattgttca agggaggcat ttgaggtcta aattgtgtag agattgcaca 120

aagcctcata aaagatccat tgctcatcat ggagggaagt cttcaagacg tgtaggggat 180

gaagttgatg attttaggcc tacatctcca gggcatagtc caggtgttgg tcattccatc 240

cataattaa 249

<210> 24

<211> 85

<212> PRT

<213> Medicago truncatula CEP5

<400> 24

Met Ala His Phe Thr Arg Ser Cys Leu Ile Phe Val Leu Leu Leu Ile
1 5 10 15

Ser Cys Glu Leu Leu Ser Ile Glu Gly Arg Ser Leu Arg Lys Ser Ile
20 25 30

Gly Ser Pro Lys Ala Ala Ser Val Glu Thr Met Thr Arg Ser Val Val
35 40 45

Leu Ser Pro Arg Gln Leu Gln Asn Asn Gly Arg Asn Leu Glu Gly Ser
50 55 60

Val Glu Ala Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Val Gly
65 70 75 80

His Ser Leu Lys Asn
85

<210> 25

<211> 249

<212> DNA

12

<213> Medicago truncatula CEP6 cDNA

<400> 25

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atggaaaata ctaaaaggct tcaaattatt tgtgttctta tttgtttttt ggttttgcaa      60
caagaagttg tgattgttca agggaggcat ttgaggtcta aattgtgtag agattgcaca      120
aagcctcata aaagatccat tgctcatcat ggaggggaagt cttcaagacg tgtaggggat      180
gaagttgatg attttaggcc tacatctcca gggcatagtc caggtgttgg tcattccatc      240
cataattaa                                     249

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<210> 26

<211> 82

<212> PRT

<213> Medicago truncatula CEP6

<400> 26

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

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<210> 27

<211> 375

<212> DNA

<213> Medicago truncatula CEP7 cDNA

<400> 27

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tacaattcct ttcaaataac tcaagccagg ccaattaaac cattgaatca acaatcttca      120
ttaaacacac aagactcggg tgcaatccac actaactctt ttcggccgac aacaccagga      180
agtagtcctg gtgttgcca ccgaaatfff gttgtaggag ataagaacac gagaacaatg      240
gtggttgttc agagcccgga tgttgaggtt tttgtgacga ataagagatc cgatgatggt      300
ttcaaacctt caaatcctag tcatagtcct ggagttggcc atggttacca taccaaaatt      360
agacatttaa attag                                     375

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13

<210> 28
 <211> 124
 <212> PRT
 <213> Medicago truncatula CEP7

<400> 28

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

<210> 29
 <211> 309
 <212> DNA
 <213> Medicago truncatula CEP8 cDNA

<400> 29

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atgcagtcga	tcgagggggcg	ccttgtaaaa	tacatcgatg	aaagtaacct	cctgaagaat	120
gttaaacaatg	atggaatttc	agatgcaa	atgaagctactc	ttgttaacgt	gactccaaca	180
atattgccac	caagtgctgt	ggtaggttca	aatgggggttg	cagcacctcc	tccaagtc	240
gatgtgggtg	cttttagacc	cacaaccct	gggaacagtc	ctggtgtagg	tcactctatt	300
cactactag						309

<210> 30
 <211> 102
 <212> PRT
 <213> Medicago truncatula CEP8

<400> 30

Met	Ala	Gln	Asn	Lys	Thr	Ile	Val	Phe	Ser	Val	Ile	Ser	Leu	Ala	Leu
1				5					10					15	

14

Ile Ile Phe Cys Met Gln Ser Ile Glu Gly Arg Leu Val Lys Tyr Ile
 20 25 30

Asp Glu Ser Asn Leu Leu Lys Asn Val Lys His Asp Gly Ile Ser Asp
 35 40 45

Ala Asn Glu Ala Thr Leu Val Asn Val Thr Pro Thr Ile Leu Pro Pro
 50 55 60

Ser Ala Val Val Gly Ser Asn Gly Val Ala Ala Pro Pro Pro Ser His
 65 70 75 80

Asp Val Gly Ala Phe Arg Pro Thr Thr Pro Gly Asn Ser Pro Gly Val
 85 90 95

Gly His Ser Ile His Tyr
 100

<210> 31
 <211> 456
 <212> DNA
 <213> Medicago truncatula CEP9 cDNA

<400> 31
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 catatttttcc ttccaactca agctaggaag ataaaaccat tgattgaaga taatcccaaa 120
 cctaccttca catcccttaa aactgctgta aatattcctt ctccaacatt tgagaagaaa 180
 gttaaccttc ccatgatgcc aaatcatggt gtcgcaagta taggagattc aagcggagat 240
 acaaatgctt tccgaccac aacaccagga agcagtcctg gtgttggtca tcggaagttt 300
 gtaggagagg ttaaagatag tacagttggt cggagtcgga atgttaaagt ttttgtgact 360
 tctgagagat caaaagatgc ttttaaactt acttacccaa atcatagccc aggtgttgga 420
 catgttaacc aaagcacaaa aggacaacta aattag 456

<210> 32
 <211> 151
 <212> PRT
 <213> Medicago truncatula CEP9

<400> 32

Met Gly Glu Phe Gln Ala Met Gln Lys Tyr Phe Ala Ile Phe Leu Val
 1 5 10 15

Leu Val Ala Tyr His Ile Phe Leu Pro Thr Gln Ala Arg Lys Ile Lys
 20 25 30

Pro Leu Ile Glu Asp Asn Pro Lys Pro Thr Phe Thr Ser Leu Lys Thr
 35 40 45

Ala Val Asn Ile Pro Ser Pro Thr Phe Glu Lys Lys Val Asn Leu Pro
 50 55 60

15

Met Met Pro Asn His Gly Val Ala Ser Ile Gly Asp Ser Ser Gly Asp
65 70 75 80

Thr Asn Ala Phe Arg Pro Thr Thr Pro Gly Ser Ser Pro Gly Val Gly
85 90 95

His Arg Lys Phe Val Gly Glu Val Lys Asp Ser Thr Val Val Arg Ser
100 105 110

Pro Asn Val Lys Val Phe Val Thr Ser Glu Arg Ser Lys Asp Ala Phe
115 120 125

Lys Pro Thr Tyr Pro Asn His Ser Pro Gly Val Gly His Val Asn Gln
130 135 140

Ser Thr Lys Gly Gln Leu Asn
145 150

<210> 33
<211> 573
<212> DNA
<213> *Medicago truncatula* CEP10 cDNA

<400> 33
atggctgaga aaatcatggt tgtaacctat ttacttatcc ttattattat gcaacaatac 60
cttgatcaa tggaagcatc aagggttata aatgataata ataaggatgg tgatgatgct 120
ttcogtccaa ctcccttcagg tcatagtctt ggggtgggac atatattacc accaccatca 180
agtattatcc ctaaagtctt attgaaaagt caacaacctc cttcatctga ttatttgtat 240
accataaagg atgataataa ggacggtgat gatcctccat cacatgatta ttggtattcc 300
ataaatgatg ataataaaga tggatgatgat gctttccgtc caaatcctcc aggtcatagt 360
cctggagggg gacatacggt accaccatca ccaccaagtg ttatccctac agtcttattg 420
gaaaatccac aacctatttc atctgattat ttctataaca taaaggatga taataaggat 480
ggtgatgatg cttttcgccc aactcctcct ggtcatagcc ctggaggggg acatacatta 540
ccaccatcac caccaattgt ttttatgaac taa 573

<210> 34
<211> 223
<212> PRT
<213> *Medicago truncatula* CEP10

<400> 34

Met Ala Glu Lys Ile Met Phe Val Thr Tyr Leu Leu Ile Leu Ile Ile
1 5 10 15

Met Gln Gln Tyr Leu Gly Ser Met Glu Ala Ser Arg Phe Ile Asn Asp
20 25 30

16

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

<210> 35

<211> 258

<212> DNA

<213> Medicago truncatula CEP11 cDNA

<400> 35

atggcaaaga aaaccattat gttaagcttt ctgtgttttc tcattcttgt gcaaaatttt 60

ggtttgatgg aagtgctagg gaagaatgtt gaagcaccac caacaattcc aagagttttg 120

ttgaggagtc cacaagctcc ttccattggc ttttatacca aaaatgatga caaggatagt 180

caaggtgatg cttttcgtcc aactagtcct ggatcatagtc ctgggtgtggg ccatgattcg 240

ccaccaaatt ttccttaa 258

<210> 36

<211> 85

<212> PRT

<213> Medicago truncatula CEP11

<400> 36

17

Met Ala Lys Lys Thr Ile Met Leu Ser Phe Leu Val Phe Leu Ile Leu
 1 5 10 15

Val Gln Asn Phe Gly Leu Met Glu Val Leu Gly Lys Asn Val Glu Ala
 20 25 30

Pro Pro Thr Ile Pro Arg Val Leu Leu Arg Ser Pro Gln Ala Pro Ser
 35 40 45

Ile Gly Phe Tyr Thr Lys Asn Asp Asp Lys Asp Ser Gln Gly Asp Ala
 50 55 60

Phe Arg Pro Thr Ser Pro Gly His Ser Pro Gly Val Gly His Asp Ser
 65 70 75 80

Pro Pro Asn Phe Pro
 85

<210> 37
 <211> 105
 <212> PRT
 <213> Arabidopsis lyrata CEP1

<400> 37

Met Glu Ser Ser Met Gly Gln Lys Lys Thr Leu Tyr Ala Cys Ile Phe
 1 5 10 15

Leu Met Met Val Phe Phe Leu Gly Phe Asn Cys Gly His Gly Arg Thr
 20 25 30

Leu Lys Val Asp Asp Lys Ile Asp Gly Gly His Asp Asp Ser Lys Thr
 35 40 45

Met Met Ala Leu Ala Lys His Asn Val Met Met Val Asp Asp Lys Thr
 50 55 60

Val Gln Phe Ser Pro Pro Pro Pro Pro Pro Ser Pro Ser Gln Ser Gly
 65 70 75 80

Gly Lys Glu Ala Glu Asp Phe Arg Pro Thr Thr Pro Gly His Ser Pro
 85 90 95

Gly Ile Gly His Ser Leu Ser His Asn
 100 105

<210> 38
 <211> 231
 <212> PRT
 <213> Arabidopsis lyrata CEP2

<400> 38

Met Lys Leu Leu Ser Ile Thr Val Met Thr Ile Val Ile Ser Met Val
 1 5 10 15

Phe Asp Gln Thr Pro Ile Thr Thr Glu Ala Arg Arg Leu Arg Asn Thr
 20 25 30

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

<210> 39
 <211> 90
 <212> PRT
 <213> Arabidopsis lyrata CEP3

<400> 39

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

19

Ala Val Ile Ala His Pro Thr Asp Phe Arg Pro Thr Asn Pro Gly Asn
65 70 75 80

Ser Pro Gly Val Gly His Ser His Gly Arg
85 90

<210> 40
<211> 92
<212> PRT
<213> Solanum lycopersicum CEP1

<400> 40

Met Ala Gln Pro Lys Ile Met Tyr Thr Cys Ala Phe Phe Leu Ala Leu
1 5 10 15

Ile Phe Phe Ser Tyr Gly Ile Leu Leu Ser Glu Gly Arg Val Leu Phe
20 25 30

Lys Lys Glu Lys Asn Asn Asn Thr Ile Phe Ser His His Glu Glu Asn
35 40 45

Ser His Thr Lys Val Val Lys Asn Asn Tyr Phe Asn Asn Ile Asp His
50 55 60

Asn Asn Met His Asp Asn Ile Asn Ile Ser Glu Glu Gly Gly Pro Gly
65 70 75 80

His Ser Pro Gly Val Gly His Gly Gly Gly Pro Pro
85 90

<210> 41
<211> 81
<212> PRT
<213> Solanum lycopersicum CEP2

<400> 41

Met Ala Ser Ser Tyr Gln Lys Ser Ile Tyr Met Val Ile Phe Tyr Val
1 5 10 15

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

Val Val Val Met Lys Phe His Gln Pro Met Met Pro Pro Ser Thr Asn
35 40 45

Ile Leu Ser Phe Asn Arg Tyr Lys Lys Ser Glu Ile Val Lys Asp Tyr
50 55 60

Ser Gly Pro Gly His Ser Pro Gly Met Gly His Asn Asp Pro Pro Gly
65 70 75 80

Ala

<210> 42

20

<211> 74
 <212> PRT
 <213> Solanum lycopersicum CEP3

<400> 42

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Met Ala Ser Ser Tyr Lys Lys Ser Ile Tyr Met Val Leu Phe Tyr Val
1              5              10              15

Phe Val Phe Leu Leu Leu Gln Gln Cys Glu Leu Ile Val Ala Ser Arg
                20                25                30

Val Val Val Met Lys Phe His Gln Pro Lys Pro Pro Ser Thr Asn Ile
          35                  40                  45

Phe Ser Phe Asn Arg Tyr Lys Lys Ser Glu Val Val Lys Asp Tyr Ser
          50                  55                  60

Gly Pro Gly His Ser Pro Gly Met Gly His
65              70
```

<210> 43
 <211> 82
 <212> PRT
 <213> Lycopersicum esculentum CEP1

<400> 43

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Met Ala Ser Ser Tyr Gln Lys Ser Ile Tyr Met Val Ile Phe Tyr Val
1              5              10              15

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

Val Val Val Met Lys Phe His Gln Pro Met Met Pro Pro Ser Thr Asn
          35                  40                  45

Ile Leu Ser Phe Asn Arg Tyr Lys Lys Ser Glu Ile Val Lys Asp Tyr
          50                  55                  60

Ser Gly Pro Gly His Ser Pro Gly Met Gly His Asn Asp Pro Pro Gly
65              70              75              80

Ala Pro
```

<210> 44
 <211> 120
 <212> PRT
 <213> Lycopersicum esculentum CEP2

<400> 44

```
Met Val Ile Val Thr Asn Thr Lys Ile Ile Gln Phe Phe Ala Phe Ile
1              5              10              15

Leu Val Leu Ile Leu Phe Ser His Glu Ile Leu Cys Val Glu Ala Ile
          20                25                30
```

21

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

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<210> 45
<211> 93
<212> PRT
<213> Gossypium hirsutum CEP1
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<400> 45

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

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<210> 46
<211> 103
<212> PRT
<213> Lactuca sativa CEP1
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<400> 46

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Met Val His Phe Gln Ile Tyr Pro Cys Val Phe Phe Leu Leu Ile Ile
1          5          10          15

Ser Phe His Gly Leu Ile Pro Leu Phe Glu Gly Arg Lys Leu Lys Asp
          20          25          30

Val Thr Ala Phe Arg Pro Thr Thr Pro Gly Asn Ser Pro Gly Ala Gly
          35          40          45

```

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

Ser Lys Asp Ser Gly Ile His His Pro Asn Ser Glu Ser Ala Thr Gly
 65 70 75 80

Phe Arg Pro Thr Lys Pro Gly Asn Ser Pro Gly Ala Gly His Ser Ile
 85 90 95

His Asn Gln Thr Ala Met Pro
 100

<210> 47
 <211> 210
 <212> PRT
 <213> Euphorbia esula CEP1

<400> 47

Met Ala Glu Ile Gln Lys Phe Val Ile Phe Leu Leu Ala Ile Val Phe
 1 5 10 15

Tyr Leu Gln Ser Gln Ser Thr Ser Ala Arg Pro Val Lys Phe Val Asn
 20 25 30

Lys Lys Gly Leu Ala Leu Lys Lys Asn Ser Asp Ser Phe Lys Leu His
 35 40 45

Gln Thr Met Lys Lys Glu Gln Met Pro Pro Pro Val Asp Lys Thr Gly
 50 55 60

Phe Phe Gly Asp Phe Ser Asp Lys Ser Thr Asp Asp Phe Arg Pro Thr
 65 70 75 80

Ser Pro Gly Tyr Ser Pro Gly Val Gly His Pro Lys Ala Val Phe Ala
 85 90 95

Asn Ser Gln Ser Asp Arg Ile Asp His Ser Thr Ala Arg Lys Glu Glu
 100 105 110

Glu Ser Thr Thr Asp Asp Phe Arg Pro Thr Glu Pro Gly Tyr Ser Pro
 115 120 125

Gly Val Gly His Pro Met Glu Ala Ser Thr Ser Ser Asp Lys Asp Asp
 130 135 140

Tyr Arg Pro Thr Glu Pro Gly His Ser Pro Gly Ala Gly His Pro Lys
 145 150 155 160

Glu Glu Ser Thr Asp Asp Phe Arg Pro Thr Ala Pro Gly Phe Ser Pro
 165 170 175

Gly Val Gly His Arg Lys Glu Val Val Thr Val Pro Glu Ala Glu Asn
 180 185 190

Asp Phe Ser Gly Thr Lys Asp Asp Tyr Arg Pro Thr Gln Pro Gly His
 195 200 205

Ser Pro
210

<210> 48
<211> 232
<212> PRT
<213> Euphorbia esula CEP2

<220>
<221> misc_feature
<222> (212)..(215)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (218)..(219)
<223> Xaa can be any naturally occurring amino acid

<400> 48

Ile Ser Lys Ser Pro Asn Ala Ile Tyr Pro Pro Ala Thr Ser Ile Ser
1 5 10 15

Phe Asp Asp Glu Glu Glu Glu Pro Gln Glu Ala His Val Tyr Ala Phe
20 25 30

Arg Pro Thr Ala Pro Gly His Ser Pro Gly Val Gly His Lys Glu Glu
35 40 45

Leu Glu Asp Ala His Leu Tyr Ala Phe Arg Pro Thr Ala Pro Gly His
50 55 60

Ser Pro Gly Val Gly His Lys Glu Glu Pro Glu Asp Ser Met Asn Ser
65 70 75 80

His Val Ile Ile Ser Lys Ser Pro Asn Ala Ile Tyr Pro Pro Thr Thr
85 90 95

Ser Ile Ser Phe Asp Glu Glu Glu Glu Pro Gln Glu Ala His Leu Tyr
100 105 110

Ala Phe Arg Pro Thr Ala Pro Gly His Ser Pro Gly Val Gly His Lys
115 120 125

Glu Glu Leu Glu Asp Ala His Leu Tyr Ala Phe Arg Pro Thr Ala Pro
130 135 140

Gly His Ser Pro Gly Val Gly Tyr Lys Glu Glu Pro Glu Asp Ser Met
145 150 155 160

Asn Ser His Val Arg Ile Ser Lys Tyr Pro Asn Ala Ile Tyr Pro Pro
165 170 175

Thr Thr Ser Ile Ser Phe Asp Glu Glu Glu Glu Glu Pro Gln Glu Ala
180 185 190

His Leu Tyr Ala Phe Arg Pro Thr Ala Pro Gly His Ser Pro Gly Val
195 200 205

24

Gly His Lys Xaa Xaa Xaa Xaa Asp Ala Xaa Xaa Tyr Ala Ala Ile Ala
 210 215 220

Lys Gly Leu Ala Thr Pro Ser Ser
 225 230

<210> 49
 <211> 158
 <212> PRT
 <213> Glycine max CEP1

<400> 49

Met Ala Lys Phe Gln Val Leu His Glu Tyr Phe Phe Ile Phe Leu Ala
 1 5 10 15

Leu Val Val Cys Asp Gly Ser Leu Leu Thr His Gly Arg Lys Ile Asn
 20 25 30

Ile Lys Pro Leu Asn Gln Leu His Ser Ser Leu Asn Thr Lys Thr Val
 35 40 45

Ala Asn His Pro Asn Pro Thr Ser Leu Pro Ser Leu Lys Thr Lys Val
 50 55 60

Glu Ser Pro Gln His His Glu Glu Ser Ser Lys Leu Glu Asp Ser Gly
 65 70 75 80

Ala Asp Asn Thr Asn Ala Phe Arg Pro Thr Thr Pro Gly Gly Ser Pro
 85 90 95

Gly Val Gly His Lys Met Ile Thr Ser Ser Ser Glu Asp Asn Lys Val
 100 105 110

Lys Thr Met Val Val Val His Ser Pro Asp Val Glu Val Phe Lys Thr
 115 120 125

Glu Gly Ser Lys Asp Asp Phe Lys Pro Thr Asp Pro Gly His Ser Pro
 130 135 140

Gly Val Gly His Ala Tyr Lys Asn Lys Ile Gly Asp Glu Asn
 145 150 155

<210> 50
 <211> 87
 <212> PRT
 <213> Glycine max CEP2

<400> 50

Met Ala His Phe Thr Arg Thr Cys Leu Leu Leu Val Leu Leu Phe Leu
 1 5 10 15

Ser Cys Glu Leu Leu Cys Ile Glu Gly Arg Gly Leu Lys Ala Thr Thr
 20 25 30

Lys Ser Pro Lys Ser Val Ser Val Arg Ala Met Ser Thr Thr Lys Gly
 35 40 45

25

Ala Val Ala Lys Pro Ser Gln Leu Glu Thr Ile Ala Lys Ser Leu Asn
 50 55 60

Gly Phe Val Glu Ala Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly
 65 70 75 80

Val Gly His Ser Val Asn Asn
 85

<210> 51
 <211> 144
 <212> PRT
 <213> Glycine max CEP3

<400> 51

Met His Lys Tyr Phe Thr Ile Phe Val Ala Leu Phe Ala Cys His Gly
 1 5 10 15

Ser Leu Phe Ala His Gly Arg Gln Ile Lys Pro Leu Asn Gln His Ser
 20 25 30

Ser Leu Asn Thr Asn Pro Ile Leu Ala Pro Leu Ser Arg Thr Ser Ile
 35 40 45

Lys Val Ile Glu Ala Pro Ile Val Pro Lys Phe Lys Phe Ser Asp Val
 50 55 60

Asp Ser Gly Asp Ser Gly Ala Asp His Ala Asn Ala Phe Arg Pro Thr
 65 70 75 80

Thr Pro Gly Asn Ser Pro Gly Val Gly His Lys Lys Phe Glu Glu Asp
 85 90 95

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

Thr Ser Val Ala Glu Gly Ser Phe Glu Asn Asp Phe Lys Pro Thr Asp
 115 120 125

Pro Gly His Ser Pro Gly Val Gly His Pro Arg Gln Asn Lys Arg Asn
 130 135 140

<210> 52
 <211> 94
 <212> PRT
 <213> Glycine max CEP4

<400> 52

Met Ala Gln His Lys Phe Leu Leu Cys Leu Ile Leu Leu Ala Leu Ile
 1 5 10 15

Ile Phe Cys Gln Gly Leu His Ser Ile Glu Gly Arg Tyr Leu Lys Ser
 20 25 30

Asp His Glu Ile Ile Lys His Gln Tyr Gln Met His Ser Gly Ile Ser
 35 40 45

26

Thr Thr Asn Val Ala Ala Leu Val Ala Asp Val Ser Pro Pro Thr Pro
 50 55 60

Pro Ser Ala Ala Val Pro Gly Arg Asp Asn Asp Asn Phe Arg Pro Thr
 65 70 75 80

Ala Pro Gly His Ser Pro Gly Val Gly His Ala Ala His Asn
 85 90

<210> 53
 <211> 141
 <212> PRT
 <213> Glycine max CEP5

<400> 53

Met Ala Ala Gln Val Leu His Lys Tyr Phe Phe Ile Phe Leu Ala Leu
 1 5 10 15

Val Val Cys His Gly Ser Leu Val Ala His Gly Arg Lys Ile Asn Val
 20 25 30

Lys Pro Leu Asn Gln Gln His Tyr Ser Leu Asn Thr Lys Thr Val Ala
 35 40 45

Asn Asn Asn Pro Tyr Pro Ser Leu Pro Ser Leu Lys Thr Lys Val Glu
 50 55 60

Ser Pro Gln Tyr Glu Glu Ala Asn Lys Leu Gly Asp Ser Gly Ser Thr
 65 70 75 80

Gly Val Gly His Lys Ile Ile Thr Ser Ser Glu Asp Asn Lys Met Lys
 85 90 95

Thr Met Val Val Val Gln Ser Pro Asp Val Glu Val Phe Val Thr Lys
 100 105 110

Gly Ser Lys Asp Asp Phe Lys Pro Thr Asp Pro Gly His Ser Pro Gly
 115 120 125

Val Gly His Val Tyr Gln Asn Lys Ile Gly Gln Ala Asn
 130 135 140

<210> 54
 <211> 86
 <212> PRT
 <213> Glycine max CEP6

<400> 54

Met Glu Asn Ser Ser Leu Arg Asn Ile Ala Phe Val Leu Phe Leu Phe
 1 5 10 15

Leu Ile Leu His His Gln Val Leu Phe Val Gln Gly Arg Asn Leu Lys
 20 25 30

Cys Pro Leu Cys Lys Glu Cys Ser Lys Ser Gln Lys Asn Thr Met Ser
 35 40 45

27

Val Ala Ser Tyr Glu Val His Gln Glu Gly Leu Arg Arg Val Glu Tyr
50 55 60

Glu Val Asp Asp Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Val
65 70 75 80

Gly His Ser Ile Asn Asn
85

<210> 55
<211> 109
<212> PRT
<213> Glycine max CEP7

<400> 55

Met Ala Asn Ser Lys Leu Gly Phe Asn Phe Met Val Ser Ala Ile Phe
1 5 10 15

Leu Ser Leu Met Thr Phe His Gly Thr Phe Ser Val Gln Gly Arg Pro
20 25 30

Leu Lys Met Glu Ile Lys Glu Gln Val Thr Thr His Glu Asn Ile Ile
35 40 45

Asp Glu Ile Ala Lys Ala Ala Glu Tyr Thr Ala Thr Trp His Arg His
50 55 60

Thr Leu Glu Phe Glu Asp Thr Lys Asn Pro Gln Tyr Asp Gly Val Thr
65 70 75 80

Asn Asp Phe Gln Pro Thr Asp Pro Gly His Ser Pro Gly Ala Gly His
85 90 95

Ser Ser Pro His Ala Asn Ile Val Ser Ile Ser Lys Pro
100 105

<210> 56
<211> 75
<212> PRT
<213> Glycine max CEP8

<220>
<221> misc_feature
<222> (75)..(75)
<223> Xaa can be any naturally occurring amino acid

<400> 56

Ile Lys Leu Ile Asp Ala Pro Ile Val Pro Lys Phe Lys Phe Ala Asp
1 5 10 15

Val Asp Ser Gly Asp Ser Gly Ala Asp His Ala Asn Ala Phe Arg Pro
20 25 30

Thr Thr Pro Gly Asn Ser Pro Gly Val Gly His Lys Lys Phe Glu Gly
35 40 45

28

Glu Asp Lys Asp Ala Gly Ser Phe Glu Asn Asp Phe Arg Pro Thr Asp
 50 55 60

Pro Gly His Ser Pro Gly Val Gly His Pro Xaa
 65 70 75

<210> 57
 <211> 87
 <212> PRT
 <213> Glycine max CEP9

<400> 57

Met Ala Gln Asn Lys Phe Leu Leu Ser Leu Val Leu Leu Ala Leu Ile
 1 5 10 15

Ile Phe Cys Gln Gly Phe His Ser Ile Glu Gly Arg Tyr Leu Lys Ser
 20 25 30

Gly Glu Thr Ile Lys His Gln Met His Ser Gly Ile Ser Thr Thr Asn
 35 40 45

Val Ala Asp Val Ser Pro Pro Thr Pro Pro Ser Ala Ala Val Pro Gly
 50 55 60

Arg Asp Val Asp Asn Phe Arg Pro Thr Ala Pro Gly His Ser Pro Gly
 65 70 75 80

Val Gly His Thr Val His Asn
 85

<210> 58
 <211> 108
 <212> PRT
 <213> Glycine max CEP10

<400> 58

Met Ala Asn Leu Lys Leu Val Phe Thr Met Ser Ser Ile Leu Leu Val
 1 5 10 15

Leu Val Phe Phe Asn Gly Ile Leu Pro Ala Met Gly Arg Pro Leu Lys
 20 25 30

Lys Glu His Ile Thr Thr Thr Tyr Glu Asn Ser Val Lys Glu Met Gly
 35 40 45

Thr Val Glu Asp Asn Asn Ile Leu Leu Trp Arg Arg Ser Ile Ile Glu
 50 55 60

Asn Asn Ala Ala Asn Asp Gly Gly Val Asp Lys Trp Ile Asp Asp Phe
 65 70 75 80

Arg Pro Met Asp Pro Gly His Ser Pro Gly Ala Gly His Ser Ser Pro
 85 90 95

Thr Pro Lys Asp Ala Thr Asn Gly Ala Pro Arg Pro
 100 105

<210> 59
 <211> 81
 <212> PRT
 <213> Glycine max CEP11

<400> 59

Met Ala Gln Lys Ile Ile Trp Leu Thr Phe Leu Val Phe Leu Ile Leu
 1 5 10 15

Gln His Asn Phe Gly Thr Met Glu Ala Ser Arg Lys Leu Ile His Thr
 20 25 30

His Pro Pro Pro Ala Ile Pro Arg Ser Pro Gln Ala Pro Ala Leu Trp
 35 40 45

Tyr Thr Pro Asn Asp Glu Asp Gly Gly His Asp Ala Phe Arg Pro Thr
 50 55 60

Cys Arg Gly His Ser Pro Gly Ala Gly His Asp Asn Pro Pro Thr Lys
 65 70 75 80

Pro

<210> 60
 <211> 81
 <212> PRT
 <213> Glycine max CEP12

<400> 60

Met Ala Arg Leu Thr His Phe Val Leu Leu Phe Val Leu Leu Phe Leu
 1 5 10 15

Ser His Glu Leu Leu Gly Ser Glu Gly Arg Asn Leu Arg Gln Ile Thr
 20 25 30

Ile Gln Ser Pro Asp Ala Thr Lys Ala Met Ser Ile Ala Thr Lys Ser
 35 40 45

Ala Asn Ala Ile Pro Ser Tyr Arg Ser Ile Arg Ser Leu Ser Gly Asp
 50 55 60

Val Glu Ala Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Val Gly
 65 70 75 80

His

<210> 61
 <211> 87
 <212> PRT
 <213> Glycine max CEP13

<400> 61

30

Met Ala His Phe Thr Arg Thr Cys Leu Leu Leu Val Leu Leu Phe Leu
 1 5 10 15

Ser Cys Glu Leu Leu Cys Ile Glu Gly Arg Gly Leu Lys Ala Thr Thr
 20 25 30

Lys Ser Pro Lys Ser Val Ser Val Arg Ala Met Ser Thr Thr Lys Gly
 35 40 45

Ala Val Ala Lys Pro Ser Gln Leu Glu Thr Ile Ala Lys Ser Leu Asn
 50 55 60

Gly Phe Val Glu Ala Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly
 65 70 75 80

Val Gly His Ser Val Asn Asn
 85

<210> 62
 <211> 163
 <212> PRT
 <213> Glycine max CEP14

<400> 62

Met Ala Ile Phe Gln Tyr Ala Thr Arg Lys Cys Leu Val Ile Phe Leu
 1 5 10 15

Leu Leu Val Ala Phe Asn Gly Ser Leu Leu Thr His Gly Arg Gln Ile
 20 25 30

Lys Pro Leu Asn Gln Gln His Ser Ser Leu Asn Asn Asp Thr Val Val
 35 40 45

Lys His Ser Val Asn Asn Val Pro Thr His Pro Ser Ser Gly Lys Lys
 50 55 60

Lys Val Val Asp Ser Ser Ser Val Val Pro Lys Tyr Gly Val Glu Ser
 65 70 75 80

Phe Gly Asp Ser Met Ser Ser Asp Thr Asn Ala Phe Arg Pro Thr Thr
 85 90 95

Pro Gly Asn Ser Pro Gly Val Gly His Arg Lys Phe Ala Pro Glu Asp
 100 105 110

Lys Asp Val Glu Ala Met Val Ala Ser Val Gln Ser Pro Asp His Val
 115 120 125

Lys Val Tyr Val Thr Glu Gly Thr Gln Asn Gln Asp Gly Phe Lys Pro
 130 135 140

Thr Asn Pro Gly His Ser Pro Gly Val Gly His Ala Gln Gln Asn Lys
 145 150 155 160

Ile Gly Gln

31

<210> 63
 <211> 76
 <212> PRT
 <213> Glycine max CEP15

<400> 63

Glu	Ser	Pro	Gln	His	His	Glu	Glu	Ser	Ser	Lys	Leu	Glu	Asp	Ser	Gly
1				5					10					15	
Ala	Asp	Asn	Thr	Asn	Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Gly	Ser	Pro
			20					25					30		
Gly	Val	Gly	His	Lys	Met	Ile	Thr	Ser	Ser	Ser	Glu	Asp	Asn	Lys	Gly
		35					40					45			
Ser	Lys	Asp	Asp	Phe	Lys	Pro	Thr	Asp	Pro	Gly	His	Ser	Pro	Gly	Val
	50					55					60				
Gly	His	Ala	Tyr	Lys	Asn	Lys	Ile	Gly	Asp	Gly	Asn				
65					70					75					

<210> 64
 <211> 108
 <212> PRT
 <213> Glycine max CEP16

<400> 64

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

<210> 65
 <211> 95
 <212> PRT
 <213> Lotus japonicus CEP1

<400> 65

32

Met Thr Asn Ser Lys Lys Leu Val Phe Thr Ile Ser Ser Ile Leu Leu
 1 5 10 15

Leu Thr Leu Met Phe Ser Asn Phe Ile Phe Ser Ala His Gly Arg Pro
 20 25 30

Leu Lys Thr Glu Asn Lys Glu His Val Thr Thr Tyr Glu Asn Asn Ser
 35 40 45

Val Lys Glu Met Ala Thr Gly Glu Asn Asp His Lys Val Gly Lys Leu
 50 55 60

Ile Asn Asp Phe Lys Pro Thr Asp Pro Gly His Ser Pro Gly Val Gly
 65 70 75 80

His Ser Ser Pro Ile Pro Met Asp Ala Asn Glu Pro Pro Arg Ser
 85 90 95

<210> 66
 <211> 89
 <212> PRT
 <213> Lotus japonicus CEP2

<400> 66

Met Ala Gln Asn Lys Pro Ile Phe Ser Leu Ile Leu Leu Ala Leu Ile
 1 5 10 15

Ile Phe Cys His Gly Phe Gln Ser Ile Glu Gly Arg Tyr Phe Lys Ile
 20 25 30

Gly Glu Gly Thr Gln His Leu Met Lys His Gly Asp Phe Ser Thr Thr
 35 40 45

Asn Gly Val Val Ser Gly Ala Ser Glu Ala Pro Ser Leu Thr Pro Ser
 50 55 60

Arg Asp Val Ser Gly Phe Lys Gln Pro Thr Thr Gly Pro Gly His Ser
 65 70 75 80

Pro Gly Val Gly His Ser Ile His Asn
 85

<210> 67
 <211> 99
 <212> PRT
 <213> Lotus japonicus CEP3

<400> 67

Met Ala Lys Thr Asn Leu Lys Phe Val Cys Val Val Phe Leu Leu Leu
 1 5 10 15

Ile Leu His His Gln His Val Cys Val Gln Gly Arg His Leu Arg Ser
 20 25 30

Cys Leu Cys Arg Gly Cys Pro Lys Thr Cys Val Lys Ile Lys Ser Gly
 35 40 45

33

Val Ala His Gly Val Gly Asp Arg Gly Asn Arg Ala Thr Thr His Asp
50 55 60

Tyr Asp Thr His Gln Gly Arg Lys Arg Leu Val Glu Tyr Glu Val Glu
65 70 75 80

Ala Phe Arg Pro Thr Ser Pro Gly His Ser Pro Gly Val Gly His Ser
85 90 95

Ile Asn Asn

<210> 68

<211> 86

<212> PRT

<213> Lotus japonicus CEP4

<400> 68

Met Glu Glu Lys Thr Val Met Leu Thr Leu Leu Val Ile Leu Ile Leu
1 5 10 15

Gln His Asn Tyr Gly Ser Met Ala Leu Ser Gly Asn Asn Ile His Pro
20 25 30

Pro Pro Ala Ile Pro Arg Ala Leu Leu Arg Ser Pro Gln Pro Pro Ser
35 40 45

Pro Gly Trp Tyr Thr Ile Asn Asp Asp Lys Val Gly Glu Gly Asp Ala
50 55 60

Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Val Gly His Asp Ser
65 70 75 80

Pro Pro Asn Phe His Ala
85

<210> 69

<211> 91

<212> PRT

<213> Lotus japonicus CEP5

<400> 69

Met Ala His Phe Ala Arg Thr Cys Leu Leu Phe Val Leu Leu Phe Val
1 5 10 15

Ser Cys Glu Leu Leu Cys Ile Glu Gly Arg Thr Leu Ser Lys Asn Val
20 25 30

Leu Asp His Ser Leu Lys Ser Ser Ser Val Lys Ala Met Ser Ile Ala
35 40 45

Thr Val Lys Thr Glu Asn Gly Val Val Ala Ser Pro Ser Gln Leu Arg
50 55 60

Arg Ser Met Glu Gly Tyr Val Glu Ala Phe Arg Pro Thr Thr Pro Gly
65 70 75 80

34

His Ser Pro Gly Val Gly His Ser Val His Asn
85 90

<210> 70
<211> 125
<212> PRT
<213> Lotus japonicus CEP6

<400> 70

Met Gly Glu Phe Gln Ala Arg Thr Ile Tyr Phe Leu Val Phe Leu Ala
1 5 10 15

Leu Phe Ala Cys Asn Cys Ser Leu Leu Cys His Gly Arg Pro Leu Lys
20 25 30

Pro Val Asn Ser Pro Ile Met Pro Asn Gln Asp Val Ala Thr Ser Gly
35 40 45

Asp Ala Ala Gly Ala Ser Tyr Thr Asn Ala Phe Glu Pro Thr Thr Pro
50 55 60

Gly Asn Ser Pro Gly Val Gly His Arg Ser Phe Ala Gly Glu Asp Asn
65 70 75 80

Lys Met Val Ala Ala Gln Ser Pro Asp Val Gly Val Ser Val Thr Gln
85 90 95

Gly Ser Glu Ser Asp Phe Lys Pro Thr Asp Pro Gly His Ser Pro Gly
100 105 110

Val Gly His Ala Tyr Gln Glu Lys Ile Gly His Leu Asn
115 120 125

<210> 71
<211> 210
<212> PRT
<213> Populus trichocarpa CEP1

<400> 71

Met Pro His Pro Ala Val Pro Ser Phe Gly Asn Ser Ala Ala Val Tyr
1 5 10 15

Lys Asp Asp Phe Arg Pro Thr Thr Pro Gly Val Ser Pro Gly Val Gly
20 25 30

His Pro Lys Thr Ile Gly Thr Asn Ser Asn Asn Glu His Ser Leu Thr
35 40 45

Asp Phe Lys Asp Asp Phe Gln Pro Thr Thr Pro Gly His Ser Pro Gly
50 55 60

Ala Gly His Ala Leu Ala Asn Asp Asp Asp Asn Glu Glu Val Ser Pro
65 70 75 80

Lys Ala Pro Gly Pro Ser Ile Glu Arg Ser Gly Thr Ala Phe Lys Pro
85 90 95

35

Thr Thr Pro Gly His Ser Pro Gly Ala Gly His Ala Leu Ala Asn Asp
 100 105 110
 Asp Asp Asn Glu Glu Val Ser Pro Lys Ala Pro Gly Ser Ser Ile Glu
 115 120 125
 Arg Ser Gly Thr Ala Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly
 130 135 140
 Ile Gly His Leu Phe Ser Glu Asn Asp Thr Asp Lys Asn Glu Ile Thr
 145 150 155 160
 Ala Ser Lys Ala Ser Ser Ile Glu His Ser Val Thr Gly Val Thr Asp
 165 170 175
 Asp Phe Arg Pro Thr Val Pro Gly His Ser Pro Gly Ile Gly His Ala
 180 185 190
 Phe Arg Pro Pro Thr Pro Gly His Ser Pro Gly Val Gly His Ser Ile
 195 200 205
 His Asn
 210

<210> 72
 <211> 370
 <212> PRT
 <213> Populus trichocarpa CEP2
 <400> 72

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

36

Asp Phe Gln Pro Thr Thr Pro Gly Asn Ser Pro Gly Val Gly His Ile
 145 150 155 160
 Leu Val Asp Glu Asp Asp Ser Glu Asp Asp Asp Pro Lys Ala Pro Gly
 165 170 175
 Thr Ser Ser Ser Asn Glu Arg Ser Gly Ala Ala Phe Lys Pro Thr Thr
 180 185 190
 Pro Gly His Ser Pro Gly Val Gly His Met Ser Ser Val Asp Gln Ser
 195 200 205
 Asp Lys Thr Asp Leu Lys Ala Ser Lys Thr Glu Leu Ser Val Thr Thr
 210 215 220
 Pro Ala Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Val Gly His
 225 230 235 240
 Met Ser Ser Val Asp Gln Ser Asp Lys Ile Asp Ser Lys Ala Ser Glu
 245 250 255
 Ile Glu His Phe Asn Thr Glu His Ser Val Thr Thr Pro Gly His Ser
 260 265 270
 Pro Ala Val Gly His Ile Leu Ser Asp Glu Asp Glu Asp Asp Asn Glu
 275 280 285
 Asp Val Asp Pro Lys Ala Pro Gly Thr Gly Ser Ser Ile Lys Arg Ser
 290 295 300
 Gly Ala Ala Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Ile Gly
 305 310 315 320
 His Met Ser Ser Val Asp Gln Ser Asp Lys Thr Asp Arg Lys Ala Thr
 325 330 335
 Asn Ile Glu His Ser Val Ala Arg Val Pro Asp Gly Phe Arg Pro Ala
 340 345 350
 Val Pro Ile Gln Gly Pro Gly Val Gly His Val Phe Gln Ala Gln Thr
 355 360 365
 Lys Asn
 370

<210> 73
 <211> 158
 <212> PRT
 <213> Populus trichocarpa CEP3

<400> 73

Met Ile Gln Arg His Pro Val Leu Ala Pro Val Met Lys Arg Ser Gly
 1 5 10 15
 Ala Ala Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Ile Gly His
 20 25 30

37

Met Ser Ser Val Asp Gln Thr Phe Lys Pro Thr Thr Pro Gly His Ser
 35 40 45

Pro Gly Ile Gly His Met Ser Ser Val Asp Gln Ser Asp Lys Thr Asp
 50 55 60

Ser Lys Ala Ser Glu Ile Lys His Ser Val Thr Thr Pro Gly His Ser
 65 70 75 80

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

Lys Pro Thr Thr Pro Gly His Ser Pro Gly Ile Gly His Met Ser Ser
 100 105 110

Val Asp Gln Ser Asp Lys Thr Asp Arg Lys Ala Thr Asn Ile Glu His
 115 120 125

Ser Val Ala Arg Val Pro Asp Gly Phe Arg Pro Ala Val Pro Ile Gln
 130 135 140

Gly Pro Gly Val Gly His Val Phe Gln Ala Gln Thr Lys Asn
 145 150 155

<210> 74
 <211> 90
 <212> PRT
 <213> Populus trichocarpa CEP4

<400> 74

Met Ala Asp Lys Thr Arg Ser Phe Met Leu Thr Phe Phe Thr Val Val
 1 5 10 15

Leu Leu Leu Leu His Gln His Phe Asp Leu Thr Ala Ala Ser Arg Pro
 20 25 30

Leu Asp Ile His Ser Pro Ala Ile Pro Arg Ser Gly Ser Glu Pro Pro
 35 40 45

Pro Thr Asp Val His Asp Arg Trp Tyr Arg Ile Asn Arg Tyr Lys Asn
 50 55 60

Leu Glu Ser Asp Ala Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly
 65 70 75 80

Val Gly His Glu Asn Pro Pro Ala Ala Pro
 85 90

<210> 75
 <211> 88
 <212> PRT
 <213> Populus trichocarpa CEP5

<400> 75

Met Ala Lys Gly Lys Leu Ile Phe Thr Ser Thr Leu Ile Ile Val Leu
 1 5 10 15

38

Val Leu Cys Tyr Gly Ile Thr Ser Ser Val Gly Arg Leu Leu Lys Thr
 20 25 30

Gly Glu Asn Thr Ser Ser Phe Ser Leu His Arg Asp Leu Leu Val Ser
 35 40 45

Glu Ala Arg Ser Glu Pro Val Thr Pro Gly Pro Asp His Ala Asp Ala
 50 55 60

Asp Ser Asp Asp Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Ala
 65 70 75 80

Gly His Ser Thr Pro Gly His Asn
 85

<210> 76
 <211> 70
 <212> PRT
 <213> Populus trichocarpa CEP6

<400> 76

Met Ala Gln Ser Asn Leu Leu Ser Ala Phe Val Phe Leu Val Leu Ile
 1 5 10 15

Phe Ser His Glu Leu Gln Phe Ile Glu Gly Arg Tyr Leu Asn Leu Lys
 20 25 30

Thr Pro Asn Lys Phe Leu Gln Lys Glu Ile Arg Arg Leu Val Glu Ser
 35 40 45

Asn Ser Lys Leu His Val Asn Asp Asn Leu Asp Lys Pro Val Asn Ala
 50 55 60

Thr Lys Val Ala Pro Pro
 65 70

<210> 77
 <211> 244
 <212> PRT
 <213> Vitis vinifera CEP1

<400> 77

Met Ala Ile Ile Gln Val Ile His Ala Cys Ser Leu Leu Leu Ala Val
 1 5 10 15

Ile Thr Tyr His Asp Ile Leu Tyr Thr Glu Gly Arg Pro Ile Asn Ser
 20 25 30

Val Thr Lys Gln Glu Phe Ser Ser Thr Asp Phe Glu Pro Gly Asn Glu
 35 40 45

Thr Gly Ser Gln Gly Thr Glu His Lys Glu Asp His Trp Tyr Thr Pro
 50 55 60

Pro Pro Pro Glu Pro Asn Pro Ser Val Lys Asn Ser Val Val Gly Lys
 65 70 75 80

[illegible]

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<210> 78
<211> 140
<212> PRT
<213> Vitis vinifera CEP2
```

<400> 78

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

40

Thr Asp Gly Phe Arg Pro Thr Thr Pro Gly Ser Ser Pro Gly Ile Gly
 100 105 110

His Ser Ser Ala Pro Thr Lys Glu Asp Ile Glu Pro Lys Ala Pro Gly
 115 120 125

Asn Ser Pro Lys Thr Phe Arg Gln Gly Lys Gln Gly
 130 135 140

<210> 79
 <211> 140
 <212> PRT
 <213> Vitis vinifera CEP3

<400> 79

Met Ala Lys Val His Ile Ile His Ala Cys Ser Leu Leu Leu Ala Val
 1 5 10 15

Ile Thr Asn His Asp Ile Leu Tyr Thr Glu Gly Arg Pro Met Lys Ser
 20 25 30

Leu Ser Lys His Glu Phe Ser Ser Ile Asp Ser Gly Pro Gly Thr Glu
 35 40 45

Thr Gly Ser Glu Gly Ile Glu His Lys Asp Asp His Arg Ser Ala Pro
 50 55 60

Pro Pro Pro Glu Pro Asn Pro Gly Val Lys Asn Ser Val Ala Gly Lys
 65 70 75 80

Lys Glu Leu Pro Pro Pro Met Met Pro Asn Tyr Thr Thr Gly Leu Ala
 85 90 95

Asp Ser Thr Ala Val Tyr Glu Asp Asp Phe Arg Pro Thr Pro Pro Gly
 100 105 110

Ser Ser Pro Gly Ile Gly His His Phe Asp Phe Arg Pro Thr Thr Pro
 115 120 125

Gly His Ser Pro Gly Val Gly His Ser Leu Gln Asn
 130 135 140

<210> 80
 <211> 110
 <212> PRT
 <213> Vitis vinifera CEP4

<400> 80

Met Ala Lys Val Lys Leu Ile Met Ser Ile Tyr Val Phe Ile Leu Ala
 1 5 10 15

Leu Val Leu Ile Tyr Gly Gly Leu Met Ser Glu Gly Arg Lys Leu Asp
 20 25 30

Ile Glu Lys Asn Ser Lys Cys Glu Met Cys Val Ser Ile Asp Glu Lys
 35 40 45

41

Ile Ser Val Leu Gly Asn Leu His Arg Ser Ser Lys Ala Asn Ala Arg
50 55 60

Pro His Ala Pro Ala Arg Gln Ser Pro Gly Ala Asp Arg Leu Phe Thr
65 70 75 80

Asp Asp Gly Val Asp Val Gln Ser Thr Thr Pro Gly His Ser Pro Gly
85 90 95

Val Gly His Ser Val Gly Pro Ala Ser Asn Asp Pro Asn Pro
100 105 110

<210> 81

<211> 166

<212> PRT

<213> Vitis vinifera CEP5

<400> 81

Met Asp Arg Gln Asp Ala Ile Leu Asp Ile Gln Trp Leu Lys Lys Ile
1 5 10 15

Leu Val Arg His Arg Val Ile Thr Asn His Asp Ile Leu Tyr Thr Glu
20 25 30

Gly Arg Pro Met Lys Ser Leu Ser Lys His Glu Phe Ser Ser Ile Asp
35 40 45

Ser Gly Pro Gly Thr Glu Thr Gly Ser Glu Gly Ile Glu His Lys Asp
50 55 60

Asp His Arg Ser Ala Pro Pro Pro Pro Glu Pro Asn Pro Gly Val Lys
65 70 75 80

Asn Ser Val Ala Gly Lys Lys Glu Leu Pro Pro Pro Met Met Pro Asn
85 90 95

Tyr Thr Thr Gly Leu Ala Asp Ser Thr Ala Val Tyr Glu Asp Asp Phe
100 105 110

Arg Pro Thr Pro Pro Gly Ser Ser Pro Gly Ile Gly His His Phe Val
115 120 125

Pro Thr Lys Gly Asp Ile Gln Pro Lys Ala Gln Gly Asn Ser Pro Gly
130 135 140

Val Gly Gln Ser Val Thr Ala Tyr Lys Asp Asp Tyr Pro Pro Thr Lys
145 150 155 160

Pro Ala Arg Ser Gln Pro
165

<210> 82

<211> 173

<212> PRT

<213> Vitis vinifera CEP6

42

<400> 82

```

Met Ala Lys Ile Gln Val Ile His Ala Cys Ser Leu Val Leu Ala Val
1           5           10           15

Ile Thr Tyr His Asp Ile Leu Tyr Thr Glu Gly Arg Pro Ile Lys Ser
          20           25           30

Leu Asp Lys His Glu Phe Ser Ser Ile Asp Ser Glu Pro Gly Thr Glu
          35           40           45

Thr Gly Ser Gln Gly Ile Glu His Lys Asp Asp His Trp Ala Ala Pro
          50           55           60

Pro Gln Glu Pro Asn Pro Gly Val Lys Asn Ser Val Ala Gly Lys Lys
65           70           75           80

Glu Leu Pro Pro Pro Met Leu Pro Asn Tyr Ser Val Gly Phe Gly Asp
          85           90           95

Ser Thr Ala Val Ser Lys Asp Asp Phe Arg Pro Thr Thr Pro Gly Ser
          100          105          110

Ser Pro Gly Val Gly His His Ser Val Pro Thr Lys Asp Asp Thr Gln
          115          120          125

Pro Lys Ala Leu Arg Asn Ser Pro Ser Val Arg Gln Ser Val Thr Ala
          130          135          140

Tyr Lys Asp Asp Tyr Arg Pro Thr Lys Pro Gly His Ser Pro Gly Val
145          150          155          160

Gly His Ser Leu Gln Lys Thr Asn Ala Glu Pro Asn Ala
          165          170

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<210> 83

<211> 89

<212> PRT

<213> Vitis vinifera CEP7

<400> 83

```

Met Ala Asn Thr Arg Phe Leu Gly Ala Cys Ala Val Leu Leu Val Leu
1           5           10           15

Leu Leu Cys His Glu Phe Ser Cys Val Lys Gly Arg His Leu Arg Ser
          20           25           30

Ala Met Cys Lys Lys Cys Ser Arg His Arg Gln Thr Ser Leu Arg Ala
          35           40           45

Thr Glu Ala Gly Glu Ala Pro Ser Gly Leu Pro Gln Met Ser Thr Ser
          50           55           60

Lys Met Glu His Ile Glu Asp Phe Arg Pro Thr Ser Pro Gly His Ser
65           70           75           80

Pro Gly Val Gly His Ser Ile His Asn
          85

```

43

<210> 84
 <211> 267
 <212> PRT
 <213> Ricinus communis CEPl

<400> 84

Met Arg Lys Gln Leu Glu Ala Phe Gln Lys Glu Leu Ala Lys Arg Gly
 1 5 10 15

Val Ser Asn Thr Ile Asn Leu His Gln Ser Lys Leu Ala Gly Gln Asp
 20 25 30

His Gln Glu Gln Thr His Thr Gly Phe Ser Asp Phe Ala Ala Ala Ser
 35 40 45

Val Asp Ala Phe Arg Pro Thr Pro Pro Gly Asn Ser Pro Gly Val Gly
 50 55 60

His Pro Lys Ala Val Val Thr Ser Ser Ser Thr Thr Asp Gln His Ser
 65 70 75 80

Leu Thr Gly Leu Arg His Asp Tyr Ser Asn Leu His Lys Ser Ser His
 85 90 95

Asn Ile Pro Gly Asn Val Gln Gln Ser Met Ser Gly Lys Glu Glu Thr
 100 105 110

Ser Pro Thr Ser Leu Asp Val Phe Ala Ala Ala Ser Thr Asp Asp Phe
 115 120 125

Arg Pro Thr Ser Pro Gly Tyr Ser Pro Gly Val Gly His Pro Lys Ala
 130 135 140

Val Val Thr Ser Ser Ser Thr Ala Asp Gln His Ser Phe Thr Gly Val
 145 150 155 160

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

Asp Asn Val Lys Lys Pro Val Ser Gly Lys Gly Glu Met Leu Pro Thr
 180 185 190

Val Thr Thr Thr Ser Phe Asp Ala Ser Ala Ala Ser Thr Lys Asp Asp
 195 200 205

Phe Arg Pro Thr Ala Pro Gly Phe Ser Pro Gly Val Gly His Pro Lys
 210 215 220

Lys Val Val Thr Ser Ser Ser Thr Lys His Ser Ile Thr Gly Phe Lys
 225 230 235 240

Asp Asp Tyr Arg Pro Thr Gln Pro Gly His Ser Pro Gly Val Gly His
 245 250 255

Ser Tyr Gln Lys Asn Asn Ala Gly Gln Asp Pro
 260 265

44

<210> 85
 <211> 101
 <212> PRT
 <213> Ricinus communis CEP2

<400> 85

```

Met Ala Ile Ala Ala Ser Ala Ala Ala Thr Asn Leu Met Gly Thr Cys
1              5              10              15

Thr Cys Leu Leu Val Leu Ile Leu Cys His Glu Ala Ile Tyr Val Val
              20              25              30

Glu Gly Arg His Leu Lys Pro Lys Leu Cys Lys Lys Cys Ser Arg Arg
              35              40              45

Ser Glu Ser Ser Leu Asp Val Ser Lys Asp Gly His His Asn Thr Thr
              50              55              60

Thr His Leu Leu Asn Gly Asp Gln Glu Lys Ile Ser Lys Met Asp Phe
65              70              75              80

Val Asp Asp Phe Arg Pro Thr Ala Pro Gly His Ser Pro Gly Val Gly
              85              90              95

His Ser Ile Gln Asn
              100

```

<210> 86
 <211> 95
 <212> PRT
 <213> Ricinus communis CEP3

<400> 86

```

Met Ala Asn Val Cys Tyr Thr Cys Leu Phe Phe Leu Val Met Leu Leu
1              5              10              15

Ser Tyr Asp Leu Val Cys Ile Glu Ala Arg Gln Leu Lys Leu Arg Glu
              20              25              30

Asn Met Lys Cys Val Lys Cys Leu Ser Ala Pro Asp Ser Lys Glu Ser
              35              40              45

Ile Thr Arg Asn Pro Arg Gly Asp Asn Ala Met Ser Ser Ser Gln Asp
              50              55              60

Gly Ile Glu Pro Lys Asp Gly Ser Asn Asn Phe Asp Ala Phe Arg Pro
65              70              75              80

Thr Asn Pro Gly His Ser Pro Gly Val Gly His Ser Ile Gln His
              85              90              95

```

<210> 87
 <211> 86
 <212> PRT
 <213> Ricinus communis CEP4

45

<400> 87

```

Met Ala Arg Val Lys Leu Asn Phe Ser Ile Val Leu Val Ile Ala Leu
1           5           10           15

Val Val Ser Tyr Gly Ile Thr Ser Thr Glu Glu Arg Gln Leu Arg Met
          20           25           30

Gln Val Arg Ala Ala Gly Met Glu Lys Gly Thr Gly Asn Leu Tyr Phe
          35           40           45

Gly Arg Ser Leu Leu Val Asp Asn Asp Gly Asp Ser Asp Asp Phe Arg
          50           55           60

Pro Thr Asn Pro Gly His Ser Pro Gly Ala Gly His Ser Thr Gly Pro
65           70           75           80

Ser Ser Lys Asn Ala His
          85

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<210> 88

<211> 123

<212> PRT

<213> Ricinus communis CEP5

<400> 88

```

Met Ala Gln Thr Asn Leu Leu Phe Gly Cys Ile Phe Ile Met Leu Ile
1           5           10           15

Phe Phe Gln Glu Leu Gln Ser Ile Ser Gly Arg His Leu Asn Leu Glu
          20           25           30

Thr Asn His Lys Phe Ser Lys Ile Gln Val Ser Tyr Ile Asn Phe Glu
          35           40           45

Arg Gln His Arg Gln Phe Ile Gly His Asn Val Asp Ile Glu His Asn
          50           55           60

Asp Leu Asn Lys Asp Val Phe Ala Ala Asn Lys Met Ser Pro Ala Ala
65           70           75           80

Pro Val Ala Ala Ala Gly Gly Ile Gly Glu Ala Glu Ser Pro Pro Pro
          85           90           95

Pro Pro Ala Ser Gly His Val Asp Asp Phe Arg Pro Thr Ala Pro Gly
          100          105          110

His Ser Pro Gly Val Gly His Ser Ile Gln Asn
          115          120

```

<210> 89

<211> 89

<212> PRT

<213> Ricinus communis CEP6

<400> 89

46

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

<210> 90
 <211> 267
 <212> PRT
 <213> Ricinus communis CEP7

<400> 90

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

47

Asp Asn Val Lys Lys Pro Val Ser Gly Lys Gly Glu Met Leu Pro Thr
 180 185 190

Val Thr Thr Thr Ser Phe Asp Ala Ser Ala Ala Ser Thr Lys Asp Asp
 195 200 205

Phe Arg Pro Thr Ala Pro Gly Phe Ser Pro Gly Val Gly His Pro Lys
 210 215 220

Lys Val Val Thr Ser Ser Ser Thr Lys His Ser Ile Thr Gly Phe Lys
 225 230 235 240

Asp Asp Tyr Arg Pro Thr Gln Pro Gly His Ser Pro Gly Val Gly His
 245 250 255

Ser Tyr Gln Lys Asn Asn Ala Gly Gln Asp Pro
 260 265

<210> 91
 <211> 61
 <212> PRT
 <213> Ricinus communis CEP8

<400> 91

Met Lys Cys Val Lys Cys Leu Ser Ala Pro Asp Ser Lys Glu Ser Ile
 1 5 10 15

Thr Arg Asn Pro Arg Gly Asp Asn Ala Met Ser Ser Ser Gln Asp Gly
 20 25 30

Ile Glu Pro Lys Asp Gly Ser Asn Asn Phe Asp Ala Phe Arg Pro Thr
 35 40 45

Asn Pro Gly His Ser Pro Gly Gly His Ser Ile Gln His
 50 55 60

<210> 92
 <211> 70
 <212> PRT
 <213> Ricinus communis CEP9

<400> 92

Met Ala Gln Ser Asn Leu Leu Ser Ala Phe Val Phe Leu Val Leu Ile
 1 5 10 15

Phe Ser His Glu Leu Gln Phe Ile Glu Gly Arg Tyr Leu Asn Leu Lys
 20 25 30

Thr Pro Asn Lys Phe Leu Gln Lys Glu Ile Arg Arg Leu Val Glu Ser
 35 40 45

Asn Ser Lys Leu His Val Asn Asp Asn Leu Asp Lys Pro Val Asn Ala
 50 55 60

Thr Lys Val Ala Pro Pro
 65 70

<210> 93
 <211> 84
 <212> PRT
 <213> Casuarina glauca CEP1

<400> 93

```

Met Ala His Arg Thr Leu Met Leu Thr Leu Ser Leu Val Ile Leu Leu
1              5              10              15

Leu Gln Gln Thr Ile Val Ser Val Thr Ala Ser Arg Pro Val Ser Ile
              20              25              30

His Pro Pro Asp Val Leu Arg Gly Ser Leu Ser Ile Pro Lys Pro Pro
              35              40              45

Ser Thr Glu Trp Phe Thr Val Asn Arg Tyr Lys Lys Leu Glu Asp Ala
              50              55              60

Phe Arg Pro Thr Ser Pro Gly His Ser Pro Gly Val Gly His Gly Thr
65              70              75              80

Pro Pro Ala Ala
  
```

<210> 94
 <211> 124
 <212> PRT
 <213> Cotton CEP

<400> 94

```

Met Glu Phe Arg Arg Met His Thr Phe Ala Val Phe Leu Leu Ile Ala
1              5              10              15

Cys Tyr Leu Val Leu Ser Val Glu Gly Arg Phe Leu Lys Ser Leu Ser
              20              25              30

Lys Asn Asn Ser Lys Gln Val Leu Pro Pro Pro Thr Pro Thr Lys Ala
              35              40              45

Ser Asp Phe Gly Asp Ser Ile Glu Gly Tyr Lys Glu Asp Phe Arg Pro
50              55              60

Thr Thr Pro Gly Asn Ser Pro Gly Val Gly His Ser Phe Ala Asp Val
65              70              75              80

Val Glu Asp Ile Val Glu Gln Asn Pro Ala Ser Ile Ser Val Gln Gly
              85              90              95

Asn Gly Lys Arg Ser Ile Ala Val His Ser Pro Gly Val Gly His Ser
              100              105              110

Phe Ala Asp Val Val Glu Asp Ile Val Glu Gln Asn
              115              120
  
```

<210> 95
 <211> 360
 <212> PRT
 <213> *Jatropha curcas* CEP2

<400> 95

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

50

Gln Asn Lys Leu Thr Gly Thr Ala Thr Ala Ser Thr Thr Asn Asp Phe
 290 295 300

Arg Pro Thr Ala Pro Gly Tyr Ser Pro Gly Val Gly His Pro Lys Ala
 305 310 315 320

Val Leu Val Pro Ser Ser Thr Asn Ser Asn Val Asp Asp Tyr Arg Pro
 325 330 335

Thr Gln Pro Gly His Ser Pro Gly Val Gly His Lys Lys Ser Ser Asp
 340 345 350

Leu Val Pro Asn Pro Glu Thr Gly
 355 360

<210> 96
 <211> 107
 <212> PRT
 <213> Theobroma cacao CEP1

<400> 96

Met Ala Lys Thr Asn Leu Ile Val Leu Ala Gly Ala Leu Leu Leu Val
 1 5 10 15

Leu Leu Phe Ser Tyr Gly Ile Thr Phe Thr Glu Glu Arg Val Leu Lys
 20 25 30

Thr Asp Lys Asp Val Lys Pro Ala Gly Asn Tyr Val Thr Asn Val Met
 35 40 45

Thr Ser Ser His Lys Thr Asn Leu Asn Arg Asp Ile Leu Glu Asp Gly
 50 55 60

Thr Val Asp Val Pro Thr Ser Ser Ser Gly Asn Gly Thr Ala Phe Asp
 65 70 75 80

Ala Asp Asp Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Ala Gly
 85 90 95

His Ser Thr Gly Pro Ala Ser Asn Asp Lys Asn
 100 105

<210> 97
 <211> 107
 <212> PRT
 <213> Theobroma cacao CEP2

<400> 97

Met Ala Lys Thr Asn Leu Val Val Leu Ala Gly Ala Leu Leu Leu Val
 1 5 10 15

Leu Leu Phe Ser Tyr Gly Ile Thr Phe Thr Glu Glu Arg Val Leu Lys
 20 25 30

Thr Asp Lys Asp Val Lys Pro Ala Gly Asn Ser Val Thr Asn Val Met
 35 40 45

51

Thr Ser Ser Arg Lys Thr Asn Leu Asn Arg Asp Asn Leu Glu Asp Gly
50 55 60

Thr Asp Asp Val Pro Thr Ala Ser Ser Gly Asn Asp Thr Ala Phe Asp
65 70 75 80

Ala Asp Asp Phe Arg Pro Thr Pro Pro Gly His Ser Pro Gly Ala Gly
85 90 95

His Ser Thr Gly Pro Ala Ser Ser Asp Lys Asn
100 105

<210> 98

<211> 107

<212> PRT

<213> Theobroma cacao CEP3

<400> 98

Met Ala Lys Thr Asn Leu Ile Val Leu Ala Gly Ala Leu Leu Leu Val
1 5 10 15

Leu Leu Phe Ser Tyr Gly Ile Thr Phe Thr Glu Glu Arg Val Leu Lys
20 25 30

Thr Asp Lys Asp Val Lys Pro Ala Gly Asn Tyr Val Thr Asn Val Met
35 40 45

Thr Ser Ser His Lys Thr Asn Leu Asn Arg Asp Ile Leu Glu Asp Gly
50 55 60

Thr Val Asp Val Pro Thr Ser Ser Ser Gly Asn Gly Thr Ala Phe Asp
65 70 75 80

Ala Asn Asp Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Ala Gly
85 90 95

His Ser Thr Gly Pro Ala Ser Asn Asp Lys Asn
100 105

<210> 99

<211> 121

<212> PRT

<213> Theobroma cacao CEP4

<400> 99

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

Phe Val Thr Asn Val Ala Ala Gly Arg His Lys Thr Asn Leu Ile Arg
20 25 30

Ala Phe Leu Glu Asp Gly Thr Val Asp Val Pro Thr Ser Ser Ser Gly
35 40 45

Asn Gly Thr Ala Phe Gly Ala Asn Asp Phe Arg Pro Pro Thr Pro Gly
50 55 60

52

His Gly Pro Gly Ala Gly His Ser Thr Gly Pro Ala Ser Asn Asp Lys
65 70 75 80

Asn Trp Ile Pro Leu Pro Ala Arg Thr Ile Ile Phe Pro Leu Pro Trp
85 90 95

Val Ala Thr Phe Thr Gln Ser Leu Val Gly Tyr Ile Ser Tyr Asp Phe
100 105 110

Val Leu Ala Leu Pro Lys Ala Leu Lys
115 120

<210> 100

<211> 96

<212> PRT

<213> Malus domestica CEP

<400> 100

Met Ala Asn Gly Lys Leu Ser Phe Leu Leu Leu Val Leu Ile Ser Ser
1 5 10 15

Tyr Gly Ile Ile Ser Thr Glu Glu Arg Phe Leu Lys Thr Asp His Thr
20 25 30

Asn Gly Gly Ser Thr Ser Met Ile Ser His Asp Asn Tyr Leu Asn Ser
35 40 45

Arg Arg Asn Val Phe Glu Asn Glu Leu Ser Asp Ser Val Pro Pro Val
50 55 60

Pro Gly Tyr His Ser Ala Ser Asp Tyr Arg Pro Thr Thr Pro Gly His
65 70 75 80

Ser Pro Gly Ala Gly His Ser Val Gly Pro Gln Val Glu Pro Asn Gln
85 90 95

<210> 101

<211> 153

<212> PRT

<213> Carica Papaya CEP1

<400> 101

Met Glu Tyr Gln Thr Ile Val Arg Cys Gly Ile Leu Leu Ala Leu Leu
1 5 10 15

Phe Ala Ser Leu Met Ile Thr Glu Ala Arg Lys Ile Arg Glu Leu Ile
20 25 30

Thr Gly Asn Asn Gly Asp Phe Asp Asp Ser Phe Ala Ala His Asp Thr
35 40 45

Ala Gly Phe Arg Pro Thr Thr Pro Gly Ile Ser Pro Gly Val Gly His
50 55 60

Ser Phe Gln Asn Gly Asn Lys Asp Met Ser Gly Ser Lys Ala Ala His
65 70 75 80

53

Phe Lys Pro Pro Ser Ser Asp Tyr Gln Lys Glu Thr Ser Pro Pro Arg
85 90 95

Ala Pro Lys Ala Pro Gly Asn Ser Pro Gly Gly Ile Gly Asp Ser Phe
100 105 110

Ala Asp Val Asn Ser Gln Gly Trp Ser Asn Lys Asp Asp Phe Gln Val
115 120 125

Thr Val Gln Ala Thr Ser Pro Gly His Ser Gly Gly Val Gly His Gly
130 135 140

Asp Asn Asp Asp Glu Pro Asn Ala Arg
145 150

<210> 102

$\langle 211 \rangle$	70
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<212> PRT

<213> Carica papaya CEP2

<400> 102

Met Ala Asn Val Ala Cys Ser Cys Leu Phe Leu Val Val Met Ile Leu
1 5 10 15

Cys Ser His Cys Leu His Gly Thr Gln Gly Arg Asn Leu Lys Asn Thr
20 25 30

Pro Ser Ser Ser Lys Asn Met Asn Phe Pro Lys Pro Ser Ser Val Lys
35 40 45

Ser Thr Glu Ala Ile Val Glu Ala Phe Arg Pro Thr Thr Pro Gly His
50 55 60

Ser Pro Gly Val Gly His
65 70

<210> 103

<211> 114

<212> PRT

<213> Carica papaya CEP3

<400> 103

Met Ala Arg Thr Gly Leu Met Gly Val Cys Val Leu Phe Leu Val Leu
1 5 10 15

Leu Val Cys Gln Glu Ile Val Phe Val Asn Ala Arg His Leu Arg Asp
20 25 30

Arg Ile Leu Cys Glu Lys Cys Ser Thr Thr His His His Arg His His
35 40 45

His His His His His His His His His Leu Asp Lys Ile Arg Leu Ser
50 55 60

Val Ala Pro Ala Asn Gly Ala Gly Pro Val His Val Asn Asp Gly Ala
65 70 75 80

54

Gly Ser Glu Gln Gln Arg Trp Ser Thr Lys Asp Glu Tyr Val Asp Asp
85 90 95

Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Val Gly His Ser Ile
100 105 110

Gly Asn

<210> 104

<211> 151

<212> PRT

<213> Fragaria vesca CEP1

<400> 104

Met Glu Ala Lys Cys Ala Val Val Phe Ala Leu Ile Ala Cys Leu Asp
1 5 10 15

Ile Ala Ser Val Glu Gly Ile Arg Pro Phe Trp Ser Glu Thr Lys Ser
20 25 30

Thr Glu Thr Ile Leu Ile Asp Ser Ile Glu Ala Asn Tyr Lys Arg Glu
35 40 45

Leu Gly Glu Gln Ser Gly Gln His Asn Asn Leu Lys Gly Glu Phe Lys
50 55 60

Ser Ala Val Val Lys Asn Gln Gly His Phe Ala Lys Leu Gly Ala Pro
65 70 75 80

Ala Tyr Asn Asp Glu Glu Asp Phe Arg Pro Thr Thr Pro Gly Asn Ser
85 90 95

Pro Gly Ala Gly His Lys Ser Leu Gln Val Ser Glu Pro Lys Thr Val
100 105 110

Val Val Ala Gly Arg Asn Tyr Phe Thr Ala Gly Thr Lys Glu Asp Tyr
115 120 125

Arg Pro Thr Gln Pro Gly His Ser Pro Gly Val Gly His Ala Leu Gln
130 135 140

Glu Asn Val Lys Pro Met Pro
145 150

<210> 105

<211> 101

<212> PRT

<213> Fragaria vesca CEP2

<400> 105

Met Ala Asn Ala Thr Tyr Thr Cys Leu Phe Phe Leu Leu Val Ile Phe
1 5 10 15

Ser His Glu Leu Ile Ser Cys Thr Glu Gly Arg Asn Leu Lys Val Thr
20 25 30

55

Ser Lys Lys Leu Lys Cys Gly Lys Cys Leu Ser Pro Asp Ile Asp Ala
 35 40 45

Lys Ser Ile Ala Gly Asp Gln Gly Ser Gly Gly Ser Ser Ser Asn
 50 55 60

Gln Ile Gln Ser Pro Pro Val Val Pro Leu Pro Ala Ser Pro Gly Arg
65 70 75 80

Val Glu Ala Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Val Gly
 85 90 95

His Ser Val His Asn
 100

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<210> 106
<211> 103
<212> PRT
<213> Fragaria vesca CEP3
```

<400> 106

[illegible]

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<210> 107
<211> 87
<212> PRT
<213> Prunus persica CEP1
```

<400> 107

```
Met Val Ser Phe Phe Met Val Ala Leu Leu Leu Gly Gln Asn Ser Asp
1          5          10          15

Leu Val Ala Ala Ser Arg Pro Leu His Leu His Thr His Pro Pro Ala
20          25          30

Ile His Ile Gly Ser Leu Asn Lys Pro Ile Pro Pro Ser Ile Gly Arg
35          40          45
```

56

Phe Thr Ile Asn Arg Tyr Lys Met Thr Glu Ser Ser Ser Gly Ala Asp
 50 55 60

Ala Phe Arg Pro Thr Ser Pro Gly His Ser Pro Gly Val Gly His Gln
 65 70 75 80

Asp Pro Pro Gly Ala Leu Leu
 85

<210> 108

<211> 91

<212> PRT

<213> Cucumis sativus CEP1

<400> 108

Met Ala His Arg Ser Leu His Leu Asn Ser Phe Phe Pro Leu Val Ala
 1 5 10 15

Leu Leu Leu Leu Leu Leu Leu Leu His Ser Leu Phe Val Thr Ser Ser
 20 25 30

Arg Pro Leu His Gly Ile His Pro His Asn Pro His Ala Ile Thr Pro
 35 40 45

Pro Ala Pro Val Ser Leu Glu Thr Ser Phe Ser Ile Asn Arg Tyr Lys
 50 55 60

Tyr Val Glu Thr Asp Ala Phe Arg Pro Thr Ser Pro Gly His Ser Pro
 65 70 75 80

Gly Val Gly His Asn Glu Pro Pro Gly Lys Pro
 85 90

<210> 109

<211> 155

<212> PRT

<213> Manihot esculenta CEP1

<400> 109

Leu His Cys Phe Cys Cys Arg Cys Phe Arg Pro Thr Asp Pro Gly Asn
 1 5 10 15

Ser Pro Gly Val Gly His His Leu Ser Gln Glu Glu Ser Asp Glu Glu
 20 25 30

Thr Asp Pro Lys Pro Pro Arg Lys Asp Tyr Gly Pro Lys Pro Gly His
 35 40 45

Ser Gln Pro Val Gly Arg Asp Ile Ile Phe Ser Asn Pro Ser Asn Thr
 50 55 60

Lys Gly Ser Gln Pro Ala Ser Ser Ser His Asn Pro Val Asn Ala Val
 65 70 75 80

Pro Leu Thr Pro Thr Ala Phe Asp Ala Ser Ala Ala Ser Ser Met Glu
 85 90 95

57

Gly Phe Arg Pro Thr Thr Pro Gly Tyr Ser Pro Gly Val Gly His Pro
 100 105 110

Asn Ala Glu Ile Ser Ser Ser Asn Val Glu Thr Ser Val Thr Arg Phe
 115 120 125

Glu Asp Asp His Arg Pro Thr Gln Pro Gly His Ser Pro Gly Val Gly
 130 135 140

His Ala Tyr Leu Glu Asn Asn Ala Glu Pro Asn
 145 150 155

<210> 110
 <211> 80
 <212> PRT
 <213> Citrus sinensis CEP1

<400> 110

Met Leu Thr Leu Leu Val Val Leu Leu Leu Ser Lys Ser Phe Asp Leu
 1 5 10 15

Ile Ser Ala Ser Arg Pro Pro His Ile His Pro Pro Thr Ile Pro Arg
 20 25 30

Gly Ser Leu Leu Asn Lys Val Lys Pro Pro Ser Phe His Ala Tyr Thr
 35 40 45

Ala Asn Arg Tyr Lys Leu Thr Glu Ser Glu Ala Phe Arg Pro Thr Ser
 50 55 60

Pro Gly His Ser Pro Gly Val Gly His Lys Gly Pro Pro Gly Ser Asp
 65 70 75 80

<210> 111
 <211> 80
 <212> PRT
 <213> Citrus clementina CEP1

<400> 111

Met Leu Thr Leu Leu Val Val Leu Leu Leu Ser Lys Ser Phe Asp Leu
 1 5 10 15

Ile Ser Ala Ser Arg Pro Pro His Ile His Pro Pro Thr Ile Pro Arg
 20 25 30

Gly Ser Leu Leu Asn Lys Val Lys Pro Pro Ser Phe His Ala Tyr Thr
 35 40 45

Ala Asn Arg Tyr Lys Leu Thr Glu Ser Glu Ala Phe Arg Pro Thr Ser
 50 55 60

Pro Gly His Ser Pro Gly Val Gly His Lys Gly Pro Pro Gly Ser Asp
 65 70 75 80

58

<210> 112
 <211> 81
 <212> PRT
 <213> Catharanthus roseus CEP1

<400> 112

```
Met Ala Asn Ile Ser Cys Lys Cys Leu Phe Met Ile Phe Leu Leu Ile
1           5           10           15

Leu Val Ser Ile Glu Gln Val Pro Ile Ser Val Glu Gly Arg Asn Leu
          20           25           30

Arg Gly Glu Lys Val Lys Val Arg Ile Leu Gly Gln Glu Thr Arg Asn
          35           40           45

Arg Ala Glu Lys Ser Arg Arg Val Leu Gln Gly Glu Val Asp Ser Phe
          50           55           60

Arg Pro Thr Asn Pro Gly Arg Ser Pro Gly Ile Gly His Ser Thr His
65           70           75           80
```

Asp

<210> 113
 <211> 81
 <212> PRT
 <213> Solanum tuberosum CEP1

<400> 113

```
Met Ala Ser Ser Tyr Lys Lys Ser Ile Tyr Met Val Leu Phe Tyr Val
1           5           10           15

Phe Val Phe Leu Leu Leu Gln Gln Cys Glu Leu Ile Val Ala Ser Arg
          20           25           30

Val Val Val Met Lys Phe His Gln Pro Lys Pro Pro Ser Thr Asn Ile
          35           40           45

Phe Ser Phe Asn Arg Tyr Lys Lys Ser Glu Val Val Lys Asp Tyr Ser
          50           55           60

Gly Pro Gly His Ser Pro Gly Met Gly His Asp Asn Pro Pro Gly Ala
65           70           75           80
```

Ser

<210> 114
 <211> 94
 <212> PRT
 <213> Solanum tuberosum CEP2

<400> 114

```
Met Ala Ile Leu Ser Tyr His Lys Val Ile Cys Met Phe Ile Leu Tyr
1           5           10           15
```

59

Ile Phe Ile Ile Ser Ile Ala Leu Gln Gln Phe Val Leu Val Asp Ala
 20 25 30

Ser Arg Ser Phe Ser Arg Tyr Pro Pro Pro Pro Pro Pro Val Glu Ile
 35 40 45

Thr His Gly Glu Val Lys Ser Leu Ser Ser Asp Asn Phe Ser Phe Asn
 50 55 60

Gly Ser Lys Ser Lys Tyr Glu Lys Lys Asp Ile Pro Tyr Val Thr Pro
 65 70 75 80

Gly His Ser Pro Gly Met Gly His Asp Thr Pro Pro Ser Ser
 85 90

<210> 115
 <211> 99
 <212> PRT
 <213> Brassica napus CEP1

<400> 115

Met Gly Gln Lys Lys Thr Leu Phe Val Cys Val Phe Phe Val Met Val
 1 5 10 15

Leu Phe Asn Gly Phe Asn Cys Val His Gly Arg Thr Leu Arg Asn Met
 20 25 30

Lys Val Asp Asp Lys Met Asn Val Gly His Asp Asp Ser Lys Thr Met
 35 40 45

Lys Ala Met Asn Asn Asp Leu Ile Val Asp Glu Lys Ala Val Gln Leu
 50 55 60

Ser Gln Pro Pro Pro Ser Pro Pro Pro Glu Ser Lys Asp Ala Glu Asp
 65 70 75 80

Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Ile Gly His Ser Leu
 85 90 95

Ser His Asn

<210> 116
 <211> 56
 <212> PRT
 <213> Brassica napus CEP2

<400> 116

Asn Val Asp Gly His Lys Glu Gly Ile Glu Val Phe Gln Ala Lys Ile
 1 5 10 15

Leu Lys Asn Ile Tyr Ala Tyr Ala Pro Thr Asp Pro Gly Asn Ser Pro
 20 25 30

Gly Ile Gly His His Lys Met Asp Val His Val Ser Asn Asp Phe Lys
 35 40 45

60

Val Val Arg Lys Leu Lys Lys Asn
50 55

<210> 117
<211> 188
<212> PRT
<213> Brassica napus CEP3

<400> 117

Met Met Thr Ile Met Ala Ile Ser Ile Val Phe Val Gln Val Pro Ser
1 5 10 15

Thr Thr Glu Ala Arg Pro Leu Glu Ile Thr Glu Asn Lys Asn His Phe
20 25 30

Lys Val Thr Ser Leu Asn Asn Phe Val Ser Thr Ile Pro Val Gly His
35 40 45

Asn Val Asp Gly His Lys Glu Gly Ile Glu Leu Phe Gln Glu Lys Ile
50 55 60

Leu Lys Asn Ile Tyr Ala Tyr Ala Pro Thr Asp Pro Gly Asn Ser Pro
65 70 75 80

Gly Ile Gly His His Lys Met Asp Val His Ala Pro Glu Leu Ser Asn
85 90 95

Asp Phe Lys Val Val Arg Pro Leu Glu Ile Thr Glu Asn Lys Asn His
100 105 110

Phe Lys Val Met Ser Leu Asn Asn Phe Val Ser Thr Val Pro Glu Gly
115 120 125

His Asn Val Asp Gly His Lys Glu Gly Ile Glu Val Phe Gln Ala Lys
130 135 140

Ile Leu Lys Asn Ile Tyr Ala Tyr Ala Pro Thr Asp Pro Gly Asn Ser
145 150 155 160

Pro Gly Ile Gly His His Lys Met Asp Val His Ala Pro Ala Arg Ser
165 170 175

Asn Asp Phe Lys Val Val Arg Lys Leu Lys Lys Asn
180 185

<210> 118
<211> 154
<212> PRT
<213> Eucalyptus grandis CEP1

<400> 118

Met Leu Ser Arg His Leu Leu Ser Arg Val Leu Ser Leu Ser Leu Ser
1 5 10 15

Leu Ser Leu Ser Pro Pro Pro Leu Pro Pro Thr Val Pro Ala Met Ala
20 25 30

61

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

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<210> 119
<211> 83
<212> PRT
<213> Mimulus guttatus CEP1
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<400> 119

[illegible]

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<210> 120
<211> 92
<212> PRT
<213> Aquilegia coerulea CEP1
```

$\langle 400 \rangle$ 120

Met Ala Lys Asn Lys Leu Ile Cys Thr Cys Thr Leu Leu Leu Val Leu
1 5 10 15

62

Val Leu Ser His Glu Met Ile His Thr Glu Gly Arg His Leu Lys Ile
 20 25 30

Lys Lys Arg Thr Ala Cys Val Lys Cys Ser Ser Ser Asn Thr Val Arg
 35 40 45

Gly Lys Lys Glu Ser Asp Gly Gln Lys Thr Ser Asp Val His His Lys
 50 55 60

Ile Thr Pro Met Ala Gly Phe Val Glu Ala Phe Arg Pro Thr Thr Pro
 65 70 75 80

Gly His Ser Pro Gly Ile Gly His Ser Ile Gln His
 85 90

<210> 121
 <211> 190
 <212> PRT
 <213> Oryza sativa CEP1#

<400> 121

Met Lys Gly Lys Arg Thr Phe Leu Ser Ser Leu Asn Lys Glu His Ile
 1 5 10 15

Lys Lys Phe Tyr Val Leu Glu Arg Val Val Ala Gln Phe Tyr Leu Phe
 20 25 30

Ser Ser Gln Gly Arg Pro Leu Pro Asp Asp Asp Gly Ile Thr Ser Glu
 35 40 45

Met Gln Ile Arg Arg Tyr Leu Leu Ser His Gly Asn Gly Val Val Glu
 50 55 60

Gly Ala Val Ser Pro Ser Ser Glu Ile Gly Gly Pro Met Val Gly Ala
 65 70 75 80

Ser Gly Gly Val Arg Pro Thr Asn Pro Gly His Ser Pro Gly Ile Gly
 85 90 95

His His Val Ala Ile Asn Gly Asp Val Asp Asp Asp Asp Val Arg Pro
 100 105 110

Thr Asn Pro Gly His Ser Pro Gly Ile Gly His His Ala Ile Val Asn
 115 120 125

Gly Ala Asp Asp Ala Asp Asp Val Arg Pro Thr Asn Pro Gly His Ser
 130 135 140

Pro Gly Ile Gly His Ala Val Val Asn Ser Ala Asp Asp Asp Ala Asp
 145 150 155 160

Asp Val Arg Pro Thr Asn Pro Gly His Ser Pro Gly Ile Gly His Ala
 165 170 175

Phe Val Asn Lys Ile Asp Gly Pro Ala Gly Lys Lys Lys Leu
 180 185 190

<210> 122
 <211> 176
 <212> PRT
 <213> Oryza sativa CEP1

<400> 122

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Met Ala Asn Ile Cys Thr Met Leu Ala Ile Leu Val Phe Ser Leu Gln
1              5              10              15

Leu Phe Ser Ser Gln Gly Arg Pro Leu Pro Asp Asp Asp Gly Ile Thr
              20              25              30

Ser Glu Met Gln Ile Arg Arg Tyr Leu Leu Ser His Gly Asn Gly Val
              35              40              45

Val Glu Gly Ala Val Ser Pro Ser Ser Glu Ile Gly Gly Pro Met Val
              50              55              60

Gly Ala Ser Gly Gly Val Arg Pro Thr Asn Pro Gly His Ser Pro Gly
65              70              75              80

Ile Gly His His Val Val Ile Asn Gly Asp Val Asp Asp Asp Asp Val
              85              90              95

Arg Pro Thr Asn Pro Gly His Ser Pro Gly Ile Gly His His Ala Ile
              100             105             110

Val Asn Gly Ala Asp Asp Ala Asp Asp Val Arg Pro Thr Asn Pro Gly
              115             120             125

His Ser Pro Gly Ile Gly His Ala Val Val Asn Gly Ala Asp Asp Asn
              130             135             140

Ala Asp Asp Val Arg Pro Thr Asn Pro Gly His Ser Pro Gly Ile Gly
145             150             155             160

His Ala Phe Val Asn Lys Ile Asp Gly Pro Ala Gly Lys Lys Lys Leu
              165             170             175

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<210> 123
 <211> 102
 <212> PRT
 <213> Oryza sativa CEP2

<400> 123

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Met Ala Leu Asn Lys Ser Ser Asn Ser Ile Ser Lys Ala Phe Phe Leu
1              5              10              15

Val Leu Ile Ile Leu Ala Ser Gln Val Met Leu Ser His Gly Ile Pro
              20              25              30

Leu Glu Met His Arg Arg Tyr Leu Leu Ser His Ala Ala Asp Ala Thr
              35              40              45

Lys Gly Val Met Glu Gly Thr Ile Thr Pro Thr Glu Gly Glu Gly Phe
              50              55              60

```

64

Ala Gly Ala Asn Asp Asp Val Arg Pro Thr Asn Pro Gly His Ser Pro
65 70 75 80

Gly Ile Gly His Ala Phe Thr Asn Asn Lys Ile Gly Arg Lys Leu Leu
85 90 95

Leu Ala Ala Asp Asp Val
100

<210> 124
<211> 137
<212> PRT
<213> Oryza sativa CEP3

<400> 124

Met Ser Ser Ser Lys Leu Asn Leu Ile Phe Val Leu Gly Ile Ile Phe
1 5 10 15

Phe Leu Ser Ser Asp Met Ile Ile Val Cys Ser Gln Gly Arg Pro Leu
20 25 30

Ile Ala Glu Ala Ala Ala Ala Ala Ala Ala Gln Gln Gln Arg His Leu
35 40 45

Leu Ser Ser Ser Ser Ser Ala Pro Arg Ser Gly Gly Asp Val Glu Glu
50 55 60

Ala Ala Ala Gly Gly Gly Lys Gly Thr Thr Thr Ala Met Thr Gln Gly
65 70 75 80

Thr Leu Ser Pro Asp Ala Ala Glu Ser Gly Gly Gly Gly Gly Gly Gly
85 90 95

Val Gly Ile Val Glu Asp Ala Arg Pro Thr Ala Pro Gly His Ser Pro
100 105 110

Gly Ala Gly His Ala Phe Thr Asn Lys Asn Gly Val Gly Arg Arg Leu
115 120 125

Leu Val Val Thr Ile Ser Thr Leu Ile
130 135

<210> 125
<211> 96
<212> PRT
<213> Oryza sativa CEP5

<400> 125

Met Ala Gly Leu Lys Leu Ser Ser Cys Val Leu Val Ala Leu Leu Phe
1 5 10 15

Val Ser Ser His Val Val Arg His Gly Glu Ala Arg Arg Leu Thr Ala
20 25 30

65

Gly Val Ala Ala Pro Ala Ser Lys Gly Gly Glu Glu Glu Ala Pro Gln
35 40 45

Tyr Ala Ser Ala Arg Gly Gly Gln Pro Ala Ala Ala Ala Gly Gly Gly
50 55 60

Val Thr Ala Ala Ser Lys Met Ala Ser Thr Asp Gly Arg Pro Thr Ser
65 70 75 80

Pro Gly His Ser Pro Gly Ile Gly Asn Lys Ala Thr Gly Asn Val Arg
85 90 95

<210> 126

<211> 182

<212> PRT

<213> Oryza barthii CEP1

<400> 126

Met Ala Leu Asn Lys Asn Val Ser Asn Ile Cys Thr Met Leu Ala Ile
1 5 10 15

Leu Val Phe Ser Leu Gln Leu Phe Ser Ser Gln Gly Arg Pro Leu Pro
20 25 30

Asp Asp Asp Gly Ile Thr Ser Glu Met Gln Ile Arg Arg Tyr Leu Leu
35 40 45

Ser His Gly Asn Arg Val Val Glu Gly Ala Val Ser Pro Ser Ser Glu
50 55 60

Ile Gly Gly Pro Met Val Gly Ala Ser Gly Gly Val Arg Pro Thr Asn
65 70 75 80

Pro Gly His Ser Pro Gly Ile Gly His His Val Val Ile Asn Gly Asp
85 90 95

Ile Asp Asp Asp Asp Val Arg Pro Thr Asn Pro Gly His Ser Pro Gly
100 105 110

Ile Gly His His Ala Ile Val Asn Gly Ala Asp Asp Ala Asp Asp Val
115 120 125

Arg Pro Thr Asn Pro Gly His Ser Pro Gly Ile Gly His Ala Val Val
130 135 140

Asn Gly Ala Asp Asp Asp Ala Asp Asp Val Arg Pro Thr Asn Pro Gly
145 150 155 160

His Ser Pro Gly Ile Gly His Ala Phe Val Asn Lys Ile Asp Gly Pro
165 170 175

Ala Gly Lys Lys Lys Leu
180

<210> 127

<211> 113

<212> PRT

66

<213> Sorghum bicolor CEP1

<400> 127

Met Ala Leu Asn Lys Lys Asn Thr Asn Asn Thr Cys Thr Ser Val Leu
1 5 10 15

Leu Leu Leu Ser Leu Val Ile Phe Ser Gln Phe Leu Ala Ser His Gly
20 25 30

Arg Pro Leu Pro Thr Gly Ser Tyr Ile Thr Thr Ala Ala Ala Val His
35 40 45

Gly Arg Asn Leu Leu Ser His Gly Ser Gly Ser Val Pro Lys Gly Met
50 55 60

Leu Glu Gly Thr Val Ser Pro Ser Ser Glu Ile His Gly Asp Asn Gly
65 70 75 80

Ser Met Val Gly Ala Asp Asp Val Arg Pro Ser Asn Pro Gly His Ser
85 90 95

Pro Gly Ile Gly His Ala Phe Ile Asn Glu Lys Gly Thr Gly Arg Lys
100 105 110

Leu

<210> 128

<211> 96

<212> PRT

<213> Sorghum bicolor CEP2

<400> 128

Met Ala Ser Ser Lys Val Val Cys Ala Cys Ile Leu Ile Ile Leu Val
1 5 10 15

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

Gly Lys Glu Gly Ala Cys Lys Gly Gly Val Val Val Val Glu Gly Tyr
35 40 45

Gly Gly Phe Ser Ala Lys Gln Lys Met Ala Thr Ala Thr Ser Ser Glu
50 55 60

Gln Val Gly Glu Gly Met Pro Ala Thr Thr Thr Asp Ser Arg Pro Thr
65 70 75 80

Ala Pro Gly Asn Ser Pro Gly Ile Gly Asn Arg Gly Lys Thr Asn Asn
85 90 95

<210> 129

<211> 93

<212> PRT

<213> Triticum aestivum CEP1

<400> 129

67

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

<210> 130
 <211> 99
 <212> PRT
 <213> Triticum aestivum CEP2

<400> 130

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

Lys Arg Asn

<210> 131
 <211> 99
 <212> PRT
 <213> Triticum aestivum CEP3

<400> 131

Met Ala Arg Ser Lys Val Leu Cys Thr Cys Ile Leu Ile Ile Ile Leu
 1 5 10 15
 Ser Ser Ile Gln Ala Glu Ala Arg Arg Leu Thr Thr Ala Thr Ala Val
 20 25 30

68

Thr Val Ala Ser Lys Gly Lys Glu Pro Trp Cys Ala Leu Glu Ser Asn
 35 40 45

Ser Arg Ser Leu Arg Ala Thr Ser Ser Glu Thr Ser Ile Ala Gly Ala
 50 55 60

Gln Gly Leu Asn Gly Gly Ala Met Ser Thr Ala Thr Thr Val Glu Ser
 65 70 75 80

Arg Gly Thr Ala Pro Gly Asn Ser Pro Gly Ile Gly Asn Lys Gly Lys
 85 90 95

Ile Asn Asn

<210> 132
 <211> 88
 <212> PRT
 <213> Hordeum vulgare CEP1

<400> 132

Phe Arg Pro Gly Ala Pro Ala Thr Gly Gly Arg Arg Arg Arg Arg Arg
 1 5 10 15

Trp Ser Gly Gly Ser Ser Arg Arg Thr Ser Thr Arg Trp Ala Ala Ala
 20 25 30

Trp Cys Cys Ala Arg Arg Thr Ser Arg Gly Arg Arg Cys Ser Trp Arg
 35 40 45

Pro Thr Thr Pro Gly Thr Ser Pro Gly Ile Thr Ser Trp Trp Thr Ala
 50 55 60

Gly Ser Pro Trp Arg Ser Arg Ser Thr Cys Arg Arg Ala Glu Asp Gly
 65 70 75 80

Gly Glu Gln Pro Glu Glu Asn Glu
 85

<210> 133
 <211> 71
 <212> PRT
 <213> Hordeum vulgare CEP1 #2

<400> 133

Arg His Glu Ala Ser Arg Arg Thr Ser Thr Arg Trp Ala Ala Ala Trp
 1 5 10 15

Cys Cys Ala Arg Arg Thr Ser Arg Gly Arg Arg Cys Ser Trp Arg Pro
 20 25 30

Thr Thr Pro Gly Thr Ser Pro Gly Ile Thr Ser Trp Trp Thr Ala Gly
 35 40 45

Ser Pro Trp Arg Ser Arg Ser Thr Cys Arg Arg Ala Glu Asp Gly Gly
 50 55 60

Glu Gln Pro Glu Glu Asn Glu
65 70

<210> 134
<211> 75
<212> PRT
<213> Hordeum vulgare CEP2

<400> 134

Met Ala Ile Ser Ser Lys Ile Ala Val Val Phe Met Leu Leu Leu Ser
1 5 10 15

Thr Thr Phe Met Gln Leu Pro Val Pro Ala Asp Ala Arg Arg Leu Glu
20 25 30

Val Lys Ala Pro Ile Leu Asn Val His Arg Pro Cys Thr Gly Arg Ser
35 40 45

Thr Leu Glu Thr Pro Pro Glu Gln Val Glu Ser Thr Thr Pro Gly His
50 55 60

Ser Pro Ser Ile Gly His Asn Ser Pro Pro Asn
65 70 75

<210> 135
<211> 96
<212> PRT
<213> Saccharum officinarum CEP1

<400> 135

Met Ala Ser Ser Lys Val Val Cys Ala Cys Ile Leu Ile Ile Leu Val
1 5 10 15

Ile Ser Ser Arg Ala Asp Ala Arg Arg Leu Val Ala Ala Thr Cys Asn
20 25 30

Gly Lys Glu Gly Ala Cys Lys Gly Gly Ile Ile Val Val Glu Gly Tyr
35 40 45

Gly Gly Phe Ser Ala Lys Gln Lys Met Ala Thr Ala Arg Ser Thr Glu
50 55 60

Glu Val Ser Glu Gly Met Pro Ala Thr Thr Met Asp Ser Arg Pro Thr
65 70 75 80

Tyr Pro Gly Asn Ser Pro Gly Ile Gly Asn Lys Gly Gln Ile Asn Asn
85 90 95

<210> 136
<211> 34
<212> PRT
<213> Saccharum officinarum CEP2

<400> 136

70

Thr Met Asp Ser Arg Pro Thr Tyr Pro Gly Asn Ser Pro Gly Ile Gly
1 5 10 15

Asn Lys Gly Glu Asn Gln Gln Leu Ala Gly Arg Val Leu Ile Cys Val
20 25 30

Leu Ile

<210> 137

<211> 60

<212> PRT

<213> Zea mays CEP1

<400> 137

Ser Ser His Ala Asp Ala Arg Arg Leu Val Ala Thr Thr Cys Asn Gly
1 5 10 15

Thr Glu Gly Gly Ala Cys Lys Gly Gly Ile Phe Val Gln Gly Tyr Ala
20 25 30

Gly Leu Ser Ala Arg Gln Lys Met Ala Ala Thr Ala Thr Ser Thr Glu
35 40 45

Gln Val Val Gly Gly Gly Gly Glu Gly Met Pro Ala
50 55 60

<210> 138

<211> 112

<212> PRT

<213> Zea mays CEP2

<400> 138

Met Gln Gln Pro Tyr Glu His Ser Gly Ser Ser Gly Ser Ser Pro Ala
1 5 10 15

Cys Arg Ser Arg Gln Ile Ala Pro Ala His Cys Thr Ala Pro Thr Thr
20 25 30

Val Ala Ser Thr Pro Arg Ser Arg Tyr Leu Leu Val Val Gln Ser Ser
35 40 45

Ser Ala Thr Thr Ala Thr Ala Tyr Ser Thr Thr Lys Ala Gly Met Ile
50 55 60

Glu Gly Thr Val Thr Pro Ser Glu Gly Gly Ala Pro Gly Ala Thr Glu
65 70 75 80

Asp Val Arg Pro Thr Asn Pro Ser His Ser Pro Gly Ile Gly His Ala
85 90 95

Phe Thr His Asn Lys Ile Gly Arg Lys Leu Leu Ala Ala Ile Ser Gln
100 105 110

<210> 139

71

<211> 90
 <212> PRT
 <213> Zea mays CEP3

<400> 139

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

<210> 140
 <211> 92
 <212> PRT
 <213> Zea mays CEP4

<400> 140

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

<210> 141
 <211> 113
 <212> PRT
 <213> Brachypodium distachyon CEP4

<400> 141

Met	Ala	Pro	Ser	Ile	Ser	Lys	Asn	Thr	Asn	Thr	Cys	Thr	Cys	Ala	Leu
1				5					10					15	

72

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

Leu

<210> 142
 <211> 109
 <212> PRT
 <213> *Setaria italica* CEP1

<400> 142

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

<210> 143
 <211> 135
 <212> PRT
 <213> *Phoenix dactylifera* CEP1

<400> 143

Met Ala Gly Lys Lys Gln Phe Tyr Ser Cys Ile Leu Val Ile Val Leu
 1 5 10 15

73

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

<210> 144
 <211> 92
 <212> PRT
 <213> Phoenix dactylifera CEP2

<400> 144

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

<210> 145
 <211> 115
 <212> PRT
 <213> Phoenix dactylifera CEP3

<400> 145

Met Pro Asn Leu Pro Leu Ser Leu Ser Leu Ser Leu Ser Leu Met Ala
 1 5 10 15

74

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

<210> 146
 <211> 99
 <212> PRT
 <213> Phoenix dactylifera CEP4

<400> 146

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

<210> 147
 <211> 100
 <212> PRT
 <213> Phoenix dactylifera CEP5

<400> 147

Met Ala Ala Asn Lys Pro Phe Tyr Thr Tyr Ala Leu Leu Ile Leu Met
 1 5 10 15

75

Ile Leu Ala Phe Glu Thr Phe Thr Ser Val Gly Arg Thr Leu Val Glu
 20 25 30

Asp Lys Thr Lys Val Cys Arg Arg Cys Leu Val Gln Asp Ala Gly Ala
 35 40 45

Lys Gly Met Val Glu Gly Pro Ile Ser Pro Pro Ala Ile His Gly Asp
 50 55 60

Asp Ala Leu Met Val Gly Ile Ser Asp Ala Arg Pro Thr Thr Pro Gly
 65 70 75 80

His Ser Pro Gly Val Gly His Ser Phe Asn Tyr Lys Asn Val Val Ile
 85 90 95

Asn Lys Asn Val
 100

<210> 148
 <211> 15
 <212> PRT
 <213> Arabidopsis thaliana CEP1 domain

<400> 148

Asp Phe Arg Pro Thr Asn Pro Gly Asn Ser Pro Gly Val Gly His
 1 5 10 15

<210> 149
 <211> 15
 <212> PRT
 <213> At CEP2 domain #1

<400> 149

Asp Phe Ala Pro Thr Asn Pro Gly Asp Ser Pro Gly Ile Arg His
 1 5 10 15

<210> 150
 <211> 15
 <212> PRT
 <213> At CEP3 domain

<400> 150

Thr Phe Arg Pro Thr Glu Pro Gly His Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 151
 <211> 15
 <212> PRT
 <213> At CEP4 domain

<400> 151

Ala Phe Arg Pro Thr His Gln Gly Pro Ser Gln Gly Ile Gly His
 1 5 10 15

76

<210> 152
 <211> 15
 <212> PRT
 <213> At CEP9 domain #1

<400> 152

Asp	Phe	Val	Pro	Thr	Ser	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 153
 <211> 15
 <212> PRT
 <213> At CEP9 domain #2

<400> 153

Asp	Phe	Ala	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 154
 <211> 15
 <212> PRT
 <213> At CEP9 domain #3

<400> 154

Asp	Phe	Ala	Pro	Thr	Ser	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 155
 <211> 15
 <212> PRT
 <213> At CEP9 domain #5

<400> 155

Asp	Phe	Lys	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 156
 <211> 15
 <212> PRT
 <213> At CEP5 domain

<220>
 <221> Hydroxylation
 <222> (4)..(4)

<220>
 <221> Hydroxylation
 <222> (11)..(11)

<400> 156

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

77

<210> 157
 <211> 15
 <212> PRT
 <213> At CEP6 domain #1

<400> 157

Asp	Phe	Gly	Pro	Thr	Ser	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 158
 <211> 15
 <212> PRT
 <213> At CEP6 domain #2

<400> 158

Asp	Phe	Glu	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 159
 <211> 15
 <212> PRT
 <213> A lyrata CEP1 domain

<400> 159

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 160
 <211> 15
 <212> PRT
 <213> A lyrata CEP2 domain

<400> 160

Thr	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 161
 <211> 15
 <212> PRT
 <213> A lyrata CEP3 domain #1

<400> 161

Asp	Phe	Ala	Pro	Thr	Ser	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 162
 <211> 15
 <212> PRT
 <213> A lyrata CEP3 domain #2

78

<400> 162

Asp	Phe	Ala	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 163

<211> 15

<212> PRT

<213> A lyrata CEP3 domain #3

<400> 163

Glu	Phe	Ala	Pro	Thr	Ser	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 164

<211> 15

<212> PRT

<213> A lyrata CEP3 domain #4

<400> 164

Asp	Phe	Ala	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Met	Gly	His
1				5					10					15

<210> 165

<211> 15

<212> PRT

<213> A lyrata CEP3 domain #5

<400> 165

Asp	Phe	Lys	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 166

<211> 15

<212> PRT

<213> M. truncatula CEP1 domain #1

<400> 166

Ala	Phe	Gln	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 167

<211> 15

<212> PRT

<213> M. truncatula CEP1 domain #2

<400> 167

Glu	Phe	Gln	Lys	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 168
 <211> 15
 <212> PRT
 <213> M. truncatula CEP2 domain

<400> 168

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 169
 <211> 15
 <212> PRT
 <213> M. truncatula CEP3 domain

<400> 169

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 170
 <211> 15
 <212> PRT
 <213> M. truncatula CEP4 domain

<400> 170

Ala	Phe	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 171
 <211> 15
 <212> PRT
 <213> M. truncatula CEP5 domain

<400> 171

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 172
 <211> 15
 <212> PRT
 <213> M. truncatula CEP6 domain

<400> 172

Asp	Phe	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 173
 <211> 15
 <212> PRT
 <213> M. truncatula CEP7 domain #1

<400> 173

Ser	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Ser	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 174

<211> 15

<212> PRT

<213> M. truncatula CEP7 domain #2

<400> 174

Gly	Phe	Lys	Pro	Thr	Asn	Pro	Ser	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 175

<211> 15

<212> PRT

<213> M. truncatula CEP8 domain

<400> 175

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 176

<211> 15

<212> PRT

<213> M. truncatula CEP9 domain #1

<400> 176

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Ser	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 177

<211> 15

<212> PRT

<213> M. truncatula CEP9 domain #2

<400> 177

Ala	Phe	Lys	Pro	Thr	Tyr	Pro	Asn	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 178

<211> 15

<212> PRT

<213> M. truncatula CEP10 domain #1

<400> 178

Ala	Phe	Arg	Pro	Thr	Pro	Ser	Gly	His	Ser	Leu	Gly	Val	Gly	His
1				5					10					15

<210> 179
 <211> 15
 <212> PRT
 <213> *M. truncatula* CEP10 domain #2

<400> 179

Ala	Phe	Arg	Pro	Thr	Pro	Pro	Gly	His	Ser	Pro	Gly	Gly	Gly	His
1				5					10					15

<210> 180
 <211> 15
 <212> PRT
 <213> *M. truncatula* CEP10 domain #3

<400> 180

Ala	Phe	Arg	Pro	Asn	Pro	Pro	Gly	His	Ser	Pro	Gly	Gly	Gly	His
1				5					10					15

<210> 181
 <211> 15
 <212> PRT
 <213> *M. truncatula* CEP10 domain #4

<400> 181

Ala	Phe	Arg	Pro	Thr	Pro	Pro	Gly	His	Ser	Pro	Gly	Gly	Gly	His
1				5					10					15

<210> 182
 <211> 15
 <212> PRT
 <213> *M. truncatula* CEP11 domain

<400> 182

Ala	Phe	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 183
 <211> 15
 <212> PRT
 <213> *S. lycopersicum* CEP1 domain

<400> 183

Ile	Ser	Glu	Glu	Gly	Gly	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 184
 <211> 15
 <212> PRT

82

<213> *S. lycopersicum* CEP2 domain

<400> 184

Val	Lys	Asp	Tyr	Ser	Gly	Pro	Gly	His	Ser	Pro	Gly	Met	Gly	His
1				5					10				15	

<210> 185

<211> 15

<212> PRT

<213> *S. lycopersicum* CEP3 domain

<400> 185

Val	Lys	Asp	Tyr	Ser	Gly	Pro	Gly	His	Ser	Pro	Gly	Met	Gly	His
1				5					10				15	

<210> 186

<211> 15

<212> PRT

<213> *S. lycopersicum* CEP4 domain

<400> 186

Asp	Phe	Gly	Pro	Thr	Gly	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 187

<211> 15

<212> PRT

<213> *G. hirsutum* CEP1 domain

<400> 187

Ala	Phe	Arg	Ser	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10				15	

<210> 188

<211> 15

<212> PRT

<213> *L. sativa* CEP1 domain #1

<400> 188

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Ala	Gly	His
1				5					10				15	

<210> 189

<211> 15

<212> PRT

<213> *L. sativa* CEP1 domain #2

<400> 189

Gly	Phe	Arg	Pro	Thr	Lys	Pro	Gly	Asn	Ser	Pro	Gly	Ala	Gly	His
1				5					10				15	

83

<210> 190
 <211> 15
 <212> PRT
 <213> E. esula CEP1 domain #1

<400> 190

Asp	Phe	Arg	Pro	Thr	Ser	Pro	Gly	Tyr	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 191
 <211> 15
 <212> PRT
 <213> E. esula CEP1 domain #2

<400> 191

Asp	Phe	Arg	Pro	Thr	Glu	Pro	Gly	Tyr	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 192
 <211> 15
 <212> PRT
 <213> E. esula CEP1 domain #3

<400> 192

Asp	Tyr	Arg	Pro	Thr	Glu	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10				15	

<210> 193
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 <212> PRT
 <213> E. esula CEP1 domain #4

<400> 193

Asp	Phe	Arg	Pro	Thr	Ala	Pro	Gly	Phe	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 194
 <211> 15
 <212> PRT
 <213> E. esula CEP2 domain #1

<400> 194

Ala	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 195
 <211> 15
 <212> PRT
 <213> E. esula CEP2 domain #2

84

<400> 195

Ala	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 196

<211> 15

<212> PRT

<213> E. esula CEP2 domain #3

<400> 196

Ala	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 197

<211> 15

<212> PRT

<213> E. esula CEP2 domain #4

<400> 197

Ala	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	Tyr
1				5					10				15	

<210> 198

<211> 15

<212> PRT

<213> E. esula CEP2 domain #5

<400> 198

Ala	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 199

<211> 15

<212> PRT

<213> G. max CEP1 domain #1

<400> 199

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Gly	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 200

<211> 15

<212> PRT

<213> G. max CEP1 domain #2

<400> 200

Asp	Phe	Lys	Pro	Thr	Asp	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

85

<210> 201
 <211> 15
 <212> PRT
 <213> G. max CEP2 domain
 <400> 201

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 202
 <211> 15
 <212> PRT
 <213> G. max CEP3 domain

<400> 202

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 203
 <211> 15
 <212> PRT
 <213> G. max CEP4 domain

<400> 203

Asn	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 204
 <211> 15
 <212> PRT
 <213> G. max CEP5 domain

<400> 204

Asp	Phe	Lys	Pro	Thr	Asp	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 205
 <211> 15
 <212> PRT
 <213> G. max CEP6 domain

<400> 205

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 206
 <211> 15
 <212> PRT
 <213> G. max CEP7 domain

<400> 206

86

Asp	Phe	Gln	Pro	Thr	Asp	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 207

<211> 15

<212> PRT

<213> G. max CEP8 domain #1

<400> 207

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 208

<211> 15

<212> PRT

<213> G. max CEP8 domain #2

<400> 208

Asp	Phe	Arg	Pro	Thr	Asp	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 209

<211> 15

<212> PRT

<213> G. max CEP9 domain

<400> 209

Asn	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 210

<211> 15

<212> PRT

<213> G. max CEP10 domain

<400> 210

Asp	Phe	Arg	Pro	Met	Asp	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 211

<211> 15

<212> PRT

<213> G. max CEP11 domain

<400> 211

Ala	Phe	Arg	Pro	Thr	Cys	Arg	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 212

87

<211> 15
 <212> PRT
 <213> G. max CEP12 domain

<400> 212

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 213
 <211> 15
 <212> PRT
 <213> G. max CEP13 domain

<400> 213

Gly	Phe	Lys	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 214
 <211> 15
 <212> PRT
 <213> G. max CEP14 domain

<400> 214

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 215
 <211> 15
 <212> PRT
 <213> G. max CEP15 domain #1

<400> 215

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Gly	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 216
 <211> 15
 <212> PRT
 <213> G. max CEP15 domain #2

<400> 216

Asp	Phe	Lys	Pro	Thr	Asp	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 217
 <211> 15
 <212> PRT
 <213> G. max CEP16 domain

<400> 217

88

Asp	Phe	Arg	Pro	Thr	Asp	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 218

<211> 15

<212> PRT

<213> L. japonicus CEP1 domain

<400> 218

Asp	Phe	Lys	Pro	Thr	Asp	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 219

<211> 15

<212> PRT

<213> L. japonicus CEP2 domain

<400> 219

Lys	Gln	Pro	Thr	Thr	Gly	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 220

<211> 15

<212> PRT

<213> L. japonicus CEP3 domain

<400> 220

Ala	Phe	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 221

<211> 15

<212> PRT

<213> L. japonicus CEP4 domain

<400> 221

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 222

<211> 15

<212> PRT

<213> L. japonicus CEP5 domain

<400> 222

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 223

89

<211> 15
 <212> PRT
 <213> L. japonicus CEP6 domain #1

<400> 223

Ala	Phe	Glu	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 224
 <211> 15
 <212> PRT
 <213> L. japonicus CEP6 domain #2

<400> 224

Asp	Phe	Lys	Pro	Thr	Asp	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 225
 <211> 15
 <212> PRT
 <213> P. trichocarpa CEP1 domain #1

<400> 225

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Val	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 226
 <211> 15
 <212> PRT
 <213> P. trichocarpa CEP1 domain #2

<400> 226

Asp	Phe	Gln	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 227
 <211> 15
 <212> PRT
 <213> P. trichocarpa CEP1 domain #3

<400> 227

Ala	Phe	Lys	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 228
 <211> 15
 <212> PRT
 <213> P. trichocarpa CEP1 domain #4

<400> 228

90

Ala Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 229

<211> 15

<212> PRT

<213> P. trichocarpa CEP1 domain #5

<400> 229

Asp Phe Arg Pro Thr Val Pro Gly His Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 230

<211> 15

<212> PRT

<213> P. trichocarpa CEP1 domain #6

<400> 230

Ala Phe Arg Pro Pro Thr Pro Gly His Ser Pro Gly Val Gly His
 1 5 10 15

<210> 231

<211> 15

<212> PRT

<213> P. trichocarpa CEP2 domain #1

<400> 231

Asp Phe Lys Pro Ile Thr Ser Gly Gln Ser Pro Gly Val Gly His
 1 5 10 15

<210> 232

<211> 15

<212> PRT

<213> P. trichocarpa CEP2 domain #2

<400> 232

Asp Phe Gln Pro Thr Thr Pro Gly Asn Ser Pro Gly Val Gly His
 1 5 10 15

<210> 233

<211> 15

<212> PRT

<213> P. trichocarpa CEP2 domain #3

<400> 233

Ala Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Val Gly His
 1 5 10 15

91

<210> 234
 <211> 15
 <212> PRT
 <213> P. trichocarpa CEP2 domain #4
 <400> 234

Ala Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Val Gly His
 1 5 10 15

<210> 235
 <211> 15
 <212> PRT
 <213> P. trichocarpa CEP2 domain #5

<400> 235

Glu His Ser Val Thr Thr Pro Gly His Ser Pro Ala Val Gly His
 1 5 10 15

<210> 236
 <211> 15
 <212> PRT
 <213> P. trichocarpa CEP2 domain #6

<400> 236

Ala Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 237
 <211> 15
 <212> PRT
 <213> P. trichocarpa CEP2 domain #7

<400> 237

Gly Phe Arg Pro Ala Val Pro Ile Gln Gly Pro Gly Val Gly His
 1 5 10 15

<210> 238
 <211> 15
 <212> PRT
 <213> P. trichocarpa CEP3 domain #1

<400> 238

Ala Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 239
 <211> 15
 <212> PRT
 <213> P. trichocarpa CEP3 domain #2

<400> 239

Thr Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 240

<211> 15

<212> PRT

<213> P. trichocarpa CEP3 domain #3

<400> 240

Lys His Ser Val Thr Thr Pro Gly His Ser Ser Arg Val Gly His
 1 5 10 15

<210> 241

<211> 15

<212> PRT

<213> P. trichocarpa CEP3 domain #4

<400> 241

Thr Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 242

<211> 15

<212> PRT

<213> P. trichocarpa CEP4 domain

<400> 242

Ala Phe Arg Pro Thr Thr Pro Gly His Ser Pro Gly Val Gly His
 1 5 10 15

<210> 243

<211> 15

<212> PRT

<213> P. trichocarpa CEP5 domain

<400> 243

Asp Phe Lys Pro Thr Thr Pro Gly His Ser Pro Gly Ala Gly His
 1 5 10 15

<210> 244

<211> 15

<212> PRT

<213> P. trichocarpa CEP6 domain

<400> 244

Asp Phe Arg Pro Thr Ala Pro Gly His Ser Pro Gly Val Gly His
 1 5 10 15

93

<210> 245
 <211> 15
 <212> PRT
 <213> V. vinifera CEP1 domain #1

<400> 245

Gly Phe Arg Pro Thr Thr Pro Gly Ser Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 246
 <211> 15
 <212> PRT
 <213> V. vinifera CEP1 domain #2

<400> 246

Asp Phe Arg Pro Thr Thr Pro Gly Ser Ser Pro Gly Val Gly His
 1 5 10 15

<210> 247
 <211> 15
 <212> PRT
 <213> V. vinifera CEP1 domain #3

<400> 247

Asp Tyr Arg Pro Thr Lys Pro Gly His Ser Pro Gly Val Gly His
 1 5 10 15

<210> 248
 <211> 15
 <212> PRT
 <213> V. vinifera CEP2 domain

<400> 248

Gly Phe Arg Pro Thr Thr Pro Gly Ser Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 249
 <211> 15
 <212> PRT
 <213> V. vinifera CEP3 domain #1

<400> 249

Asp Phe Arg Pro Thr Pro Pro Gly Ser Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 250
 <211> 15
 <212> PRT
 <213> V. vinifera CEP3 domain #2

94

<400> 250

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 251

<211> 15

<212> PRT

<213> V. vinifera CEP4 domain

<400> 251

Asp	Val	Gln	Ser	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 252

<211> 15

<212> PRT

<213> V. vinifera CEP5 domain

<400> 252

Asp	Phe	Arg	Pro	Thr	Pro	Pro	Gly	Ser	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 253

<211> 15

<212> PRT

<213> V. vinifera CEP6 domain #1

<400> 253

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Ser	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 254

<211> 15

<212> PRT

<213> V. vinifera CEP6 domain #2

<400> 254

Asp	Tyr	Arg	Pro	Thr	Lys	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 255

<211> 15

<212> PRT

<213> V. vinifera CEP7 domain

<400> 255

Asp	Phe	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 256
 <211> 15
 <212> PRT
 <213> R. communis CEP1 domain #1

<400> 256

Ala	Phe	Arg	Pro	Thr	Pro	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 257
 <211> 15
 <212> PRT
 <213> R. communis CEP1 domain #2

<400> 257

Asp	Phe	Arg	Pro	Thr	Ser	Pro	Gly	Tyr	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 258
 <211> 15
 <212> PRT
 <213> R. communis CEP1 domain #3

<400> 258

Asp	Phe	Arg	Pro	Thr	Ala	Pro	Gly	Phe	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 259
 <211> 15
 <212> PRT
 <213> R. communis CEP1 domain #4

<400> 259

Asp	Tyr	Arg	Pro	Thr	Gln	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 260
 <211> 15
 <212> PRT
 <213> R. communis CEP2 domain

<400> 260

Asp	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 261
 <211> 15
 <212> PRT
 <213> R. communis CEP3 domain

<400> 261

Ala	Phe	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 262

<211> 15

<212> PRT

<213> R. communis CEP4 domain

<400> 262

Asp	Phe	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 263

<211> 15

<212> PRT

<213> R. communis CEP5 domain

<400> 263

Asp	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 264

<211> 15

<212> PRT

<213> R. communis CEP6 domain

<400> 264

Ala	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Ser	Gly	Val	Gly	His
1				5					10					15

<210> 265

<211> 15

<212> PRT

<213> R. communis CEP7 domain

<400> 265

Ala	Phe	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 266

<211> 15

<212> PRT

<213> C. glauca CEP1 domain

<400> 266

Ala	Phe	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

97

<210> 267
 <211> 15
 <212> PRT
 <213> J. curcas CEP1 domain

<400> 267

Ala	Phe	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 268
 <211> 15
 <212> PRT
 <213> J. curcas CEP2 domain #1

<400> 268

Asp	Phe	Arg	Pro	Thr	Thr	Gly	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10				15	

<210> 269
 <211> 15
 <212> PRT
 <213> J. curcas CEP2 domain #2

<400> 269

Asp	Phe	Arg	Pro	Thr	Lys	Pro	Gly	Tyr	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 270
 <211> 15
 <212> PRT
 <213> J. curcas CEP2 domain #3

<400> 270

Asp	Phe	Arg	Pro	Thr	Ser	Pro	Gly	Tyr	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 271
 <211> 15
 <212> PRT
 <213> J. curcas CEP2 domain #4

<400> 271

Asp	Phe	Arg	Pro	Thr	Ser	Pro	Gly	Tyr	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 272
 <211> 15
 <212> PRT
 <213> J. curcas CEP2 domain #5

98

<400> 272

Asp	Phe	Arg	Pro	Thr	Ala	Pro	Gly	Tyr	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 273

<211> 15

<212> PRT

<213> T. cacao CEP1 domain

<400> 273

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 274

<211> 15

<212> PRT

<213> T. cacao CEP2 domain

<400> 274

Asp	Phe	Arg	Pro	Thr	Pro	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 275

<211> 15

<212> PRT

<213> T. cacao CEP4 domain

<400> 275

Asp	Phe	Arg	Pro	Pro	Thr	Pro	Gly	His	Gly	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 276

<211> 15

<212> PRT

<213> M. domestica CEP1 domain

<400> 276

Asp	Tyr	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 277

<211> 15

<212> PRT

<213> C. papaya CEP1 domain

<400> 277

Gly	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Ile	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 278
 <211> 15
 <212> PRT
 <213> C. papaya CEP2 domain

<400> 278

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 279
 <211> 15
 <212> PRT
 <213> C. papaya CEP3 domain

<400> 279

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 280
 <211> 15
 <212> PRT
 <213> F. vesca CEP1 domain #1

<400> 280

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Ala	Gly	His
1				5					10				15	

<210> 281
 <211> 15
 <212> PRT
 <213> F. vesca CEP1 domain #2

<400> 281

Asp	Tyr	Arg	Pro	Thr	Gln	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 282
 <211> 15
 <212> PRT
 <213> F. vesca CEP2 domain

<400> 282

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 283
 <211> 15
 <212> PRT
 <213> F. vesca CEP3 domain

100

<400> 283

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 284

<211> 15

<212> PRT

<213> *P. persica* CEP1 domain

<400> 284

Ala	Phe	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 285

<211> 15

<212> PRT

<213> *C. sativus* CEP1 domain #1

<400> 285

Ala	Phe	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 286

<211> 15

<212> PRT

<213> *M. esculenta* CEP1 domain #1

<400> 286

Cys	Phe	Arg	Pro	Thr	Asp	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 287

<211> 15

<212> PRT

<213> *M. esculenta* CEP1 domain #2

<400> 287

Gly	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Tyr	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 288

<211> 15

<212> PRT

<213> *M. esculenta* CEP1 domain #3

<400> 288

Asp	His	Arg	Pro	Thr	Gln	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 289
 <211> 15
 <212> PRT
 <213> *C. sinensis* CEP1 domain

<400> 289

Ala	Phe	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 290
 <211> 15
 <212> PRT
 <213> *C. clementina* CEP1 domain

<400> 290

Ala	Phe	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 291
 <211> 15
 <212> PRT
 <213> *C. roseus* CEP1 domain

<400> 291

Ser	Phe	Arg	Pro	Thr	Asn	Pro	Gly	Arg	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 292
 <211> 15
 <212> PRT
 <213> *S. tuberosum* CEP1 domain

<400> 292

Val	Lys	Asp	Tyr	Ser	Gly	Pro	Gly	His	Ser	Pro	Gly	Met	Gly	His
1				5					10				15	

<210> 293
 <211> 15
 <212> PRT
 <213> *S. tuberosum* CEP2 domain

<400> 293

Asp	Ile	Pro	Tyr	Val	Thr	Pro	Gly	His	Ser	Pro	Gly	Met	Gly	His
1				5					10				15	

<210> 294
 <211> 15
 <212> PRT
 <213> *B. napus* CEP1 domain

102

<400> 294

Asp	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 295

<211> 15

<212> PRT

<213> B. napus CEP2 domain

<400> 295

Ala	Tyr	Ala	Pro	Thr	Asp	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 296

<211> 15

<212> PRT

<213> B. napus CEP3 domain #1

<400> 296

Ala	Tyr	Ala	Pro	Thr	Asp	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 297

<211> 15

<212> PRT

<213> B. napus CEP3 domain #2

<400> 297

Ala	Tyr	Ala	Pro	Thr	Asp	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 298

<211> 15

<212> PRT

<213> E. grandis CEP1 domain

<400> 298

Asp	Phe	Arg	Pro	Thr	Gln	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 299

<211> 15

<212> PRT

<213> E. grandis CEP2 domain

<400> 299

Ser	Tyr	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 300
 <211> 15
 <212> PRT
 <213> A. coerulea CEP1 domain

<400> 300

Ala	Phe	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 301
 <211> 15
 <212> PRT
 <213> O. sativa CEP1 domain #1

<400> 301

Gly	Val	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 302
 <211> 15
 <212> PRT
 <213> O. sativa CEP1 domain #2

<400> 302

Asp	Val	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 303
 <211> 15
 <212> PRT
 <213> O. sativa CEP1 domain #3

<400> 303

Asp	Val	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 304
 <211> 15
 <212> PRT
 <213> O. sativa CEP1 domain #4

<400> 304

Asp	Val	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 305
 <211> 15
 <212> PRT

104

<213> O. sativa CEP2 domain

<400> 305

Asp	Val	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 306

<211> 15

<212> PRT

<213> O. sativa CEP3 domain

<400> 306

Asp	Ala	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 307

<211> 15

<212> PRT

<213> O. sativa CEP5 domain

<400> 307

Asp	Gly	Arg	Pro	Thr	Ser	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 308

<211> 15

<212> PRT

<213> O. sativa CEP6 domain

<400> 308

Asp	Ser	Arg	Pro	Thr	Ala	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 309

<211> 15

<212> PRT

<213> O. sativa CEP7 domain

<400> 309

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

<210> 310

<211> 15

<212> PRT

<213> Brachypodium distachyon CEP1 domain

<220>

<221> Hydroxylation

<222> (7)..(7)

<220>

<221> Hydroxylation

<222> (11)..(11)

<400> 310

Leu	Ala	Asp	Ser	Thr	Thr	Pro	Gly	His	Ser	Pro	Ser	Ile	Gly	His
1				5					10				15	

<210> 311

<211> 15

<212> PRT

<213> Brachypodium distachyon CEP2 domain

<400> 311

Asp	Ser	Arg	Pro	Thr	Gly	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10				15	

<210> 312

<211> 15

<212> PRT

<213> O. barthii CEP1 domain #1

<400> 312

Gly	Val	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 313

<211> 15

<212> PRT

<213> O. barthii CEP1 domain #2

<400> 313

Asp	Val	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 314

<211> 15

<212> PRT

<213> O. barthii CEP1 domain #3

<400> 314

Asp	Val	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 315

<211> 15

<212> PRT

<213> S. bicolor CEP1 domain

106

<400> 315

Asp	Val	Arg	Pro	Ser	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 316

<211> 15

<212> PRT

<213> S. bicolor CEP2 domain

<400> 316

Asp	Ser	Arg	Pro	Thr	Ala	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 317

<211> 15

<212> PRT

<213> T. aestivum CEP1 domain

<400> 317

Asp	Gly	Arg	Gly	Thr	Gly	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 318

<211> 15

<212> PRT

<213> T. aestivum CEP2 domain #1

<400> 318

Asp	Ser	Arg	Gly	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 319

<211> 15

<212> PRT

<213> T. aestivum CEP2 domain #2

<400> 319

Asp	Ser	Arg	Gly	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 320

<211> 15

<212> PRT

<213> T. aestivum CEP3 domain

<400> 320

Glu	Ser	Arg	Gly	Thr	Ala	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 321
 <211> 15
 <212> PRT
 <213> H. vulgare CEP1 domain

<400> 321

Ser	Trp	Arg	Pro	Thr	Thr	Pro	Gly	Thr	Ser	Pro	Gly	Ile	Thr	Ser
1				5					10					15

<210> 322
 <211> 15
 <212> PRT
 <213> H. vulgare CEP2 domain

<400> 322

Ser	Trp	Arg	Pro	Thr	Thr	Pro	Gly	Thr	Ser	Pro	Gly	Ile	Thr	Ser
1				5					10					15

<210> 323
 <211> 15
 <212> PRT
 <213> H. vulgare CEP3 domain

<400> 323

Gln	Val	Glu	Ser	Thr	Thr	Pro	Gly	His	Ser	Pro	Ser	Ile	Gly	His
1				5					10					15

<210> 324
 <211> 15
 <212> PRT
 <213> S. officinarum CEP1 domain

<400> 324

Asp	Ser	Arg	Pro	Thr	Tyr	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 325
 <211> 15
 <212> PRT
 <213> S. officinarum CEP2 domain

<400> 325

Asp	Ser	Arg	Pro	Thr	Tyr	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 326
 <211> 15
 <212> PRT
 <213> Z. mays CEP1 domain

108

<400> 326

Asp	Ser	Arg	Pro	Thr	Ala	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 327

<211> 15

<212> PRT

<213> Z. mays CEP2 domain

<400> 327

Asp	Val	Arg	Pro	Thr	Asn	Pro	Ser	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 328

<211> 15

<212> PRT

<213> Z. mays CEP3 domain

<400> 328

Asp	Gly	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 329

<211> 15

<212> PRT

<213> Z. mays CEP4 domain

<400> 329

Asp	Ser	Arg	Pro	Thr	Ala	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 330

<211> 15

<212> PRT

<213> B. distachyon CEP4 domain

<400> 330

Gly	Val	Arg	Pro	Ser	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 331

<211> 15

<212> PRT

<213> S. italica CEP1 domain

<400> 331

Asp	Val	Arg	Pro	Ser	Thr	Pro	Arg	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 332
 <211> 15
 <212> PRT
 <213> P. dactylifera CEP1 domain

<400> 332

Asp	Ser	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 333
 <211> 15
 <212> PRT
 <213> P. dactylifera CEP2 domain

<400> 333

Gly	Asp	Arg	Pro	Ser	Val	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 334
 <211> 15
 <212> PRT
 <213> P. dactylifera CEP3 domain

<400> 334

Asp	Ala	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 335
 <211> 15
 <212> PRT
 <213> P. dactylifera CEP4 domain

<400> 335

Asp	Ala	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 336
 <211> 15
 <212> PRT
 <213> P. dactylifera CEP5 domain

<400> 336

Asp	Ala	Arg	Pro	Thr	Thr	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 337
 <211> 2187
 <212> DNA

<213> Medicago truncatula CEP1 gene promoter

<400> 337

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tatcatcata gatataaaac attagagcta gtaatgatgc attcaaaacc caatcaaatt	120
gtttatacat gcagtgtagt acaaaatfff gctacaagtc aattcaatat ttcaatttga	180
gagaagaaac ttatacaatt cattatffff tcttcaactt tgagcatgcg gtgcacccaa	240
tttgataatt agcctactat aaagtfftaa caagagagga acccagaaaa agctgccttt	300
cacttcaact tgtccatcaa aataaaatgc tgaaatttaa tagagaccat aaactgctta	360
agtagtgctt aattatacta taatcaatga aattaattaa actataccac tgttagtgga	420
agggaaggta caagagaatc tcatatatac atatctttct tcatcagggg tccattctaa	480
attaatgggtg cgccagtcct tcaactattc tttattgggt catcataact tcaaattctta	540
ccagttttcc aaaggaacaa aattacaact acatatctca actacttgct aaatgtccct	600
ttctcaacct tcatattaac ctataccaag cacatatatt aacctatact catcggatta	660
gacgtgtctt actgttggtt acatattgtg tctgacatca tcacatatgt ttttttaacg	720
gaaaaattta ttaaaaatca agtccctaaa gagagaccga caagttagaa acaacataat	780
aaattattat tgacacatat gattacatta aattgtataa atttttcaaa taattatcga	840
tgttgacgtt ctgtattgtg ttccgtgtcc gtgtcttagt ccatacttca tacataataa	900
ctattacaat gtatggccat gcaaaattga caaaaaataa ttggccaact acattggaga	960
ttcgtattga ttgaacttaa ttttgtatgg aatagagata cgattcacat gtattatagg	1020
atgctgataa taatcatgtt ttggacataa atagaatgga atagagaaaa caagagagca	1080
gaataaagca aaacttccat tagaggccac aattatffat attaaaaaat aataattaat	1140
tatgcttcaa catacattgt gatagattct catcatttct gaaaagaatt ggaagatttc	1200
aacactaatt ttgagagtat atagtctaaa aaattttatac ggtttacgat tcagttatgg	1260
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tttaaatgag tttttgacaa aactgtgaca atgtaacaaa atacataaaa ataattggaaa	1440
aatcacaagt ttccgaaaat ttgcaaaaca aacattaaag ttcgatagaa aacatagaat	1500
actgaaccgt aagcaattga tccattgctc ggcccataat ctaaataatat aaaataaatg	1560
tcaccatttt aaaaaatgta tatatttata caccaaaaac ttaagtaatt tgagctcacc	1620
atftcttata ttattgagca tatctaagcg taattgtgac tgttcactt aaaatcaaga	1680
tatttagatc ttaaatcata tataataagg ttgatatgca atgcaacata agaagagagg	1740

tgaatatcaa aagagacata tatcatattc ataataatgc aaatgactaa aaagagaaag 1800
 atttttatat atgcaccccc aaaagagcat gttcgcccac gtgagatagt gatgtgaccc 1860
 atagaattaa aaaatatact aatttgacat ataaaattaa aagctagcta tttttgacac 1920
 ataaacggtc caaatttgca gatcataaca ctccacaaat taagtcaaat gaaataatta 1980
 gcactaagaa tcttataaga gagcactgtc acactcacac acattctaca ttataaatac 2040
 ccctcaagat ccataacat ttcatatcat atatcttcta atttgaacta taacaagctt 2100
 aaactttcaa tacatatagt tcattcattc tctctactct accttctcta tttgttcgtg 2160
 ttaatggctt ataaatttca atacaca 2187

<210> 338
 <211> 140
 <212> PRT
 <213> Picea glauca CEP-like 1

<400> 338

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

<210> 339
 <211> 140
 <212> PRT
 <213> Picea glauca CEP-like 2

<400> 339

112

Met Lys Gly Tyr Ala Met Ile Val Leu Leu Leu Leu Ala Ser Arg Leu
 1 5 10 15

Gly Glu Ala Ala Arg Ile Phe Gly Phe Lys Pro Phe Tyr Leu Asn Ser
 20 25 30

Asp Ser Gln Val Arg Ala Ala Leu Ala Ser Ser Tyr Pro Ser Val Glu
 35 40 45

Glu Lys Thr Pro Glu Lys Ala Val Leu Ala Leu Asn Glu Arg Leu Arg
 50 55 60

Arg Arg Ala Ser Val Glu Lys His Pro Gly Ser Glu Ser Asn Leu Lys
 65 70 75 80

Pro Asn Leu Ser Ala Lys Ser Lys Ala Ser Asn Gln Arg Ser Asn Glu
 85 90 95

Leu Leu Arg Thr Ile Leu Pro Ser Val Lys Phe Asp Ala Val Glu Pro
 100 105 110

Asp Met Glu Lys Thr Val Ala Pro Phe Glu Pro Leu Gly His Ser Pro
 115 120 125

Gly Ile Gly His Asp Asp Pro Pro Arg Ser Arg His
 130 135 140

<210> 340

<211> 141

<212> PRT

<213> Picea glauca CEP-like 3

<400> 340

Met Lys Gly Cys Ala Met Ile Val Leu Leu Phe Leu Ala Ala Pro Leu
 1 5 10 15

Gly Glu Ala Ala Arg Ile Leu Cys Phe Lys Leu Phe Leu Met Asn Ser
 20 25 30

Asp Ser Gln Val Lys Ala Ala Pro Ala Arg Ser Tyr Ala Leu Val Gln
 35 40 45

Glu Arg Ala Pro Gly Lys Ala Val Leu Glu Leu Lys Glu Arg Leu Ser
 50 55 60

Arg Lys Ala Ser Arg Glu Lys Tyr His Gly Ser Glu Ala Asn Met Asn
 65 70 75 80

Pro Asn Ile Ser Ala Asn Ser Thr Ala Ser His Gln His Ser Asn Gly
 85 90 95

Leu Leu Gln Lys Ile His Pro Ser Leu Lys Phe Asp Val Val Glu Pro
 100 105 110

Glu Arg Glu Lys Ser Phe Thr Pro Phe Leu Pro Leu Leu Gly His Ser
 115 120 125

Pro Gly Val Gly His Asn Asn Pro Pro Gly Phe Arg His
 130 135 140

113

<210> 341
 <211> 142
 <212> PRT
 <213> Picea glauca CEP-like 4

<400> 341

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

<210> 342
 <211> 142
 <212> PRT
 <213> Picea glauca CEP-like 5

<400> 342

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

114

Gly Leu Leu Gln Lys Ile His Pro Ser Leu Lys Phe Asp Val Val Glu
 100 105 110

Pro Glu Arg Glu Lys Ser Phe Thr Pro Phe Leu Pro Leu Leu Gly His
 115 120 125

Ser Pro Gly Ile Gly His Asn Asn Pro Pro Gly Phe Ser His
 130 135 140

<210> 343
 <211> 142
 <212> PRT
 <213> Picea glauca CEP-like 6

<400> 343

Met Met Lys Gly Cys Ala Met Ile Val Leu Leu Phe Leu Ala Ala Pro
 1 5 10 15

Leu Arg Glu Ala Ser Arg Ile Leu Cys Phe Lys Leu Phe Leu Met Asn
 20 25 30

Ser Asp Ser Gln Val Lys Ala Ala Pro Ala Arg Ser Tyr Ala Leu Val
 35 40 45

Gln Glu Arg Ala Pro Gly Lys Ala Val Leu Glu Leu Lys Glu Arg Leu
 50 55 60

Ser Arg Lys Ala Ser Arg Glu Lys Tyr His Gly Ser Glu Ala Asn Met
 65 70 75 80

Asn Pro Asn Ile Ser Ala Asn Ser Thr Ala Ser His Gln His Ser Asn
 85 90 95

Gly Leu Leu Gln Lys Ile His Pro Ser Leu Lys Phe Asp Val Val Glu
 100 105 110

Pro Glu Arg Glu Lys Ser Phe Thr Pro Phe Leu Pro Leu Leu Gly His
 115 120 125

Ser Pro Gly Val Gly His Asn Asn Pro Pro Gly Phe Arg His
 130 135 140

<210> 344
 <211> 136
 <212> PRT
 <213> Picea glauca CEP-like 7

<400> 344

Met Met Lys Ile Cys Ala Val Ile Ile Leu Leu Leu Phe Ala Ala Pro
 1 5 10 15

Leu Gly Glu Ala Ser Arg Ile Phe Gly Phe Lys Pro Phe Ser Leu Lys
 20 25 30

Asn Asp Ser Gln Val Lys Ala Thr Thr Ala Val Glu Glu Ser Thr Ala
 35 40 45

115

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

<210> 345
 <211> 155
 <212> PRT
 <213> Picea glauca CEP-like 8

<400> 345

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

<210> 346
 <211> 73

116

<212> PRT

<213> Pinus contorta CEP-like 1

<400> 346

Ala Asp Leu Glu Glu His Pro Gly Ser Asp Ala Asn Phe Lys Pro Ser
1 5 10 15

Val Phe Val Lys Ser Asn Ala Ser Asp Gln Arg Ser Asp Gly His Val
20 25 30

Glu Glu Leu Val Pro Ser Leu Lys Phe Glu Val Val Gln His Asp Val
35 40 45

Gln Lys Thr Ile Ser Pro Phe Lys Pro Leu Gly His Ser Pro Gly Ile
50 55 60

Gly His Asp Asp Pro Pro Gly Ser Lys
65 70

<210> 347

<211> 74

<212> PRT

<213> Pinus contorta CEP-like 2

<400> 347

Ala Asp Leu Glu Glu His Pro Gly Ser Asp Ala Asn Phe Lys Pro Ser
1 5 10 15

Val Phe Val Lys Ser Asn Ala Ser Asp Gln Arg Phe Asp Gly His Val
20 25 30

Glu Glu Leu Val Pro Ser Leu Lys Phe Glu Val Val Gln His Asp Val
35 40 45

Gln Lys Thr Ile Ser Pro Phe Lys Pro Leu Gly His Ser Pro Gly Ile
50 55 60

Gly His Asp Asp Pro Pro Gly Ser Lys His
65 70

<210> 348

<211> 143

<212> PRT

<213> Pinus contorta CEP-like 3

<400> 348

Met Lys Thr Ser Val Leu Ile Met Leu Met Phe Leu Ala Ala Pro Leu
1 5 10 15

Val Glu Ala Ala Arg Ile Ile Gly Phe Lys Pro Phe Ser Leu Asn Arg
20 25 30

Asp Ser Gln Val Lys Ala Thr Pro Ala Thr Ser Tyr Pro Leu Val Glu
35 40 45

117

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

<210> 349
 <211> 137
 <212> PRT
 <213> Pinus contorta CEP-like 4

<400> 349

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

<210> 350
 <211> 112
 <212> PRT
 <213> Pinus engelmannii x CEP-like 1

118

<400> 350

```

Met Asn Ser Asp Ser Gln Val Lys Ala Thr Pro Ala Arg Ser Tyr Ala
1           5           10           15

Leu Val Gln Glu Arg Ala Pro Gly Lys Ala Val Leu Glu Leu Lys Glu
          20           25           30

Arg Leu Ser Arg Lys Ala Ser Arg Glu Lys His His Gly Ser Glu Ala
          35           40           45

Asn Met Asn Pro Asn Ile Ser Ala Asn Ser Thr Ala Ser His Gln Arg
          50           55           60

Ser Asn Gly Ile Leu Gln Lys Ile His Ser Ser Leu Lys Phe Asp Val
65           70           75           80

Val Glu Pro Glu Arg Glu Lys Ser Phe Thr Pro Phe Leu Pro Leu Leu
          85           90           95

Gly His Ser Pro Gly Val Gly His Asn Asn Pro Pro Gly Phe Lys His
          100          105          110

```

<210> 351

<211> 15

<212> PRT

<213> P. glauca CEP-like 1 domain

<400> 351

```

Val Ala Tyr Pro Glu Leu Leu Gly Lys Ser Pro Gly Val Gly His
1           5           10           15

```

<210> 352

<211> 15

<212> PRT

<213> P. glauca CEP-like 2 domain

<400> 352

```

Val Ala Pro Phe Glu Pro Leu Gly His Ser Pro Gly Ile Gly His
1           5           10           15

```

<210> 353

<211> 15

<212> PRT

<213> P. glauca CEP-like 3 domain

<400> 353

```

Thr Pro Phe Leu Pro Leu Leu Gly His Ser Pro Gly Val Gly His
1           5           10           15

```

<210> 354

<211> 15

<212> PRT

119

<213> P. glauca CEP-like 4 domain

<400> 354

Thr	Pro	Phe	Leu	Pro	Leu	Leu	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 355

<211> 15

<212> PRT

<213> P. glauca CEP-like 5 domain

<400> 355

Thr	Pro	Phe	Leu	Pro	Leu	Leu	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 356

<211> 15

<212> PRT

<213> P. glauca CEP-like 6 domain

<400> 356

Thr	Pro	Phe	Leu	Pro	Leu	Leu	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 357

<211> 15

<212> PRT

<213> P. glauca CEP-like 7 domain

<400> 357

Val	Pro	Pro	Phe	Gln	Pro	Leu	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 358

<211> 15

<212> PRT

<213> P. glauca CEP-like 8 domain

<400> 358

Ala	Phe	Arg	Pro	Ser	Ser	Ser	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 359

<211> 15

<212> PRT

<213> P. contorta CEP-like 1 domain

<400> 359

Ile	Ser	Pro	Phe	Lys	Pro	Leu	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

120

<210> 360
 <211> 15
 <212> PRT
 <213> P. contorta CEP-like 2 domain

<400> 360

Ile Ser Pro Phe Lys Pro Leu Gly His Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 361
 <211> 15
 <212> PRT
 <213> P. contorta CEP-like 3 domain

<400> 361

Ile Ser Pro Phe Lys Pro Leu Gly His Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 362
 <211> 15
 <212> PRT
 <213> P. contorta CEP-like 4 domain

<400> 362

Ile Ser Pro Phe Lys Pro Leu Gly His Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 363
 <211> 15
 <212> PRT
 <213> P. engelmannii x CEP-like 1 domain

<400> 363

Thr Pro Phe Leu Pro Leu Leu Gly His Ser Pro Gly Val Gly His
 1 5 10 15

<210> 364
 <211> 201
 <212> DNA
 <213> Meloidogyne hapla CEP1 cDNA

<400> 364

atgattaata ttaattcaat tagatTTTTT attatTTTTa taattaattt tatgatttat 60
 caagtaatgg ctgttaataa ttcagctaatt gacttccgac caacaaaccc aggccattca 120
 ccaggaattg gacattgtaa tttaatttta tattttattg gcaaaataat atatcaaaaa 180
 ataagattag tcagaaaata a 201

121

<210> 365
 <211> 66
 <212> PRT
 <213> Meloidogyne hapla CEP1

<400> 365

Met Ile Asn Ile Asn Ser Ile Arg Phe Phe Ile Ile Phe Ile Ile Asn
 1 5 10 15
 Phe Met Ile Tyr Gln Val Met Ala Val Asn Asn Ser Ala Asn Asp Phe
 20 25 30
 Arg Pro Thr Asn Pro Gly His Ser Pro Gly Ile Gly His Cys Asn Leu
 35 40 45
 Ile Leu Tyr Phe Ile Gly Lys Ile Ile Tyr Gln Lys Ile Arg Leu Val
 50 55 60
 Arg Lys
 65

<210> 366
 <211> 183
 <212> DNA
 <213> Meloidogyne hapla CEP2 cDNA

<400> 366

atgattaaaa ttaattctat tataattttttt attatttttta taattaattt tatgatttat 60
 caaataatgg ctgctaataa ttcagttgat gccttccgac caacagcccc aggccattca 120
 cccggagttg gacattgtaa tttaatttta aattttatat acaaaattaa atataaaaaa 180
 taa 183

<210> 367
 <211> 60
 <212> PRT
 <213> Meloidogyne hapla CEP2

<400> 367

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

<210> 368
 <211> 183

122

<212> DNA

<213> Meloidogyne hapla CEP3 cDNA

<400> 368

```

atgattaata ttaattttat tatatttttt attattttta ttattaattt tatgatttat      60
ttcacaatgg ctggttacca accaacaac ccaggccatt caccggaat tggccattgt      120
aatgaattat ctcaaaaaag attagggagt aataatttat cagatctgat taggggtttt      180
tag                                                                    183

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<210> 369

<211> 60

<212> PRT

<213> Meloidogyne hapla CEP3

<400> 369

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

```

<210> 370

<211> 213

<212> DNA

<213> Meloidogyne hapla CEP4 cDNA

<400> 370

```

atgactaaaa ttaattctat tatatttttt attattttta ttattaattt tatgatttat      60
tacaatttgg ctgataatga taaaccagcc aaaattccac ctttcaaac agtcccaggc      120
cagagttcac ctggagtagg gcatggaatt ccaaatggag gtccacctgg agttggacat      180
tgtgatttaa ttaaatttga tttacaaaat taa                                213

```

<210> 371

<211> 70

<212> PRT

<213> Meloidogyne hapla CEP4

<400> 371

```

Met Thr Lys Ile Asn Ser Ile Ile Phe Phe Ile Ile Phe Ile Ile Asn
1           5           10           15
Phe Met Ile Tyr Tyr Asn Leu Ala Asp Asn Asp Lys Pro Ala Lys Ile
          20           25           30

```

123

Pro Pro Phe Lys Thr Val Pro Gly Gln Ser Ser Pro Gly Val Gly His
35 40 45

Gly Ile Pro Asn Gly Gly Pro Pro Gly Val Gly His Cys Asp Leu Ile
50 55 60

Lys Phe Asp Leu Gln Asn
65 70

<210> 372
<211> 133
<212> DNA
<213> Meloidogyne hapla CEP5 cDNA

<400> 372
atgactaaaa ttaattctat tatatTTTTT attcTTTTta taattaattt tatgatttat 60
cacataatgg cagataatgt tattaaacca gcatgcattg gtaattcacc tggagttgga 120
cattgtaatt gaa 133

<210> 373
<211> 43
<212> PRT
<213> Meloidogyne hapla CEP5

<400> 373

Met Thr Lys Ile Asn Ser Ile Ile Phe Phe Ile Leu Phe Ile Ile Asn
1 5 10 15

Phe Met Ile Tyr His Ile Met Ala Asp Asn Val Ile Lys Pro Ala Cys
20 25 30

Ile Gly Asn Ser Pro Gly Val Gly His Cys Asn
35 40

<210> 374
<211> 171
<212> DNA
<213> Meloidogyne hapla CEP6 cDNA

<400> 374
atgattaata ttaattctat tttatTTTTT attTTTTtta taattaattt tatgatttat 60
ttcactatgg ctgccttccg accaacaat ccaggccctt caccgcaat tggacatgga 120
attccaaatg gagttccaca acctccacc gtaaatggac attgtaatta a 171

<210> 375
<211> 56
<212> PRT
<213> Meloidogyne hapla CEP6

<400> 375

124

Met Ile Asn Ile Asn Ser Ile Leu Phe Phe Ile Phe Phe Ile Ile Asn
 1 5 10 15

Phe Met Ile Tyr Phe Thr Met Ala Ala Phe Arg Pro Thr Asn Pro Gly
 20 25 30

Pro Ser Pro Ala Ile Gly His Gly Ile Pro Asn Gly Val Pro Gln Pro
 35 40 45

Pro Pro Val Asn Gly His Cys Asn
 50 55

<210> 376
 <211> 153
 <212> DNA
 <213> Meloidogyne hapla CEP7 cDNA

<400> 376
 atgcctaaaa ttaattctat tttatTTTTT attctTTTTa ttattaattt tatgatttat 60
 ttcacaatgg ctggattccg accaacaaat ccaggcaatt caccgggagc tggacatgga 120
 gctccaaatg gaccccaaag tctccacccg taa 153

<210> 377
 <211> 50
 <212> PRT
 <213> Meloidogyne hapla CEP7

<400> 377

Met Pro Lys Ile Asn Ser Ile Leu Phe Phe Ile Leu Phe Ile Ile Asn
 1 5 10 15

Phe Met Ile Tyr Phe Thr Met Ala Gly Phe Arg Pro Thr Asn Pro Gly
 20 25 30

Asn Ser Pro Gly Ala Gly His Gly Ala Pro Asn Gly Pro Gln Ser Leu
 35 40 45

His Pro
 50

<210> 378
 <211> 168
 <212> DNA
 <213> Meloidogyne hapla CEP8 cDNA

<400> 378
 atgactaaaa ttaattctat tatatTTTTT attatTTTTa taattaattt tatgatttat 60
 caaataatgg ccgctaataa gtcattgtaac accttccgac ccacagctcc gggccattca 120
 cccggaattg gaaattgtag tttaattaaa ttttatTTTtac aaaattaa 168

<210> 379

125

<211> 55
 <212> PRT
 <213> Meloidogyne hapla CEP8

<400> 379

Met	Thr	Lys	Ile	Asn	Ser	Ile	Ile	Phe	Phe	Ile	Ile	Phe	Ile	Ile	Asn
1				5				10						15	
Phe	Met	Ile	Tyr	Gln	Ile	Met	Ala	Ala	Asn	Lys	Ser	Cys	Asn	Thr	Phe
		20					25						30		
Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	Asn	Cys	Ser	Leu
		35				40						45			
Ile	Lys	Phe	Tyr	Leu	Gln	Asn									
	50					55									

<210> 380
 <211> 177
 <212> DNA
 <213> Meloidogyne hapla CEP9 cDNA

<400> 380
 atgactaaaa ttaattctat tatatttttt attattttta ttattaattt tatgatttat 60
 caaataatag cacctcaacc tcctttctgc acaggaccag gccattcacc tggagttgga 120
 catggaattc caaatggact tccatgtaag ccaccagtaa atggacaatg taattaa 177

<210> 381
 <211> 58
 <212> PRT
 <213> Meloidogyne hapla CEP9

<400> 381

Met	Thr	Lys	Ile	Asn	Ser	Ile	Ile	Phe	Phe	Ile	Ile	Phe	Ile	Ile	Asn
1				5				10						15	
Phe	Met	Ile	Tyr	Gln	Ile	Ile	Ala	Pro	Gln	Pro	Pro	Phe	Cys	Thr	Gly
		20					25					30			
Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His	Gly	Ile	Pro	Asn	Gly	Leu	Pro
		35				40					45				
Cys	Lys	Pro	Pro	Val	Asn	Gly	Gln	Cys	Asn						
	50					55									

<210> 382
 <211> 212
 <212> DNA
 <213> Meloidogyne hapla CEP10 cDNA

<400> 382
 atgactaaaa ttaactttct atttatattt ttttatttat ttttgattat taattttatg 60

126

atttatcaaa taatagcacc tcaacctcct ttctgcacag gatcaggcca ttcacccgga 120
 gttggacatg gaattccaaa tggacttcca tgtaagccac cagtaaattgg acattgtaat 180
 ttaattaaat tttatttgca aaattatata at 212

<210> 383
 <211> 70
 <212> PRT
 <213> Meloidogyne hapla CEP10

<400> 383

Met Thr Lys Ile Asn Phe Leu Phe Ile Phe Phe Tyr Leu Phe Leu Ile
 1 5 10 15
 Ile Asn Phe Met Ile Tyr Gln Ile Ile Ala Pro Gln Pro Pro Phe Cys
 20 25 30
 Thr Gly Ser Gly His Ser Pro Gly Val Gly His Gly Ile Pro Asn Gly
 35 40 45
 Leu Pro Cys Lys Pro Pro Val Asn Gly His Cys Asn Leu Ile Lys Phe
 50 55 60
 Tyr Leu Gln Asn Tyr Ile
 65 70

<210> 384
 <211> 183
 <212> DNA
 <213> Meloidogyne hapla CEP11 cDNA

<400> 384

atgactaaaa ttaattctat tatattttta ttatttttta taattaattt tatgatttat 60
 caaataatgg ctgtaataa ttcagttgat gccttccgac caacagcccc aggccattca 120
 cccggagttg gacattgtaa tttaatttta aaatttattg ccaaaattaa atctctcaaa 180
 taa 183

<210> 385
 <211> 60
 <212> PRT
 <213> Meloidogyne hapla CEP11

<400> 385

Met Thr Lys Ile Asn Ser Ile Ile Phe Leu Leu Phe Phe Ile Ile Asn
 1 5 10 15
 Phe Met Ile Tyr Gln Ile Met Ala Val Asn Asn Ser Val Asp Ala Phe
 20 25 30
 Arg Pro Thr Ala Pro Gly His Ser Pro Gly Val Gly His Cys Asn Leu
 35 40 45

127

Ile Leu Lys Phe Ile Ala Lys Ile Lys Ser Leu Lys
 50 55 60

<210> 386
 <211> 135
 <212> DNA
 <213> Meloidogyne hapla CEP12 cDNA

<400> 386
 atgattaata ttaattctat tatatTTTTT attatTTTaa taattaattt tatgatttat 60
 ttgacaatgg caggcaatcc acctttccat actggcactg gccgttcacc cggagctggc 120
 catcattgta ttttaa 135

<210> 387
 <211> 44
 <212> PRT
 <213> Meloidogyne hapla CEP12

<400> 387

Met Ile Asn Ile Asn Ser Ile Ile Phe Phe Ile Ile Leu Ile Ile Asn
 1 5 10 15

Phe Met Ile Tyr Leu Thr Met Ala Gly Asn Pro Pro Phe His Thr Gly
 20 25 30

Thr Gly Arg Ser Pro Gly Ala Gly His His Cys Ile
 35 40

<210> 388
 <211> 39
 <212> PRT
 <213> Meloidogyne incognita CEP1

<400> 388

Met Thr Lys Ile Asn Ser Ile Ile Phe Leu Ile Phe Leu Ile Ile Asn
 1 5 10 15

Phe Met Asn Tyr Tyr Ile Ile Ala Asp Val His Pro Asn Asn Pro Gly
 20 25 30

His Ser Pro Gly Ile Gly His
 35

<210> 389
 <211> 39
 <212> PRT
 <213> Meloidogyne incognita CEP2

<400> 389

Met Thr Lys Ile Asn Ser Ile Ile Phe Leu Ile Phe Leu Ile Ile Asn
 1 5 10 15

128

Phe Met Asn Tyr Tyr Ile Met Ala Ser Arg Pro Thr Gly Pro Gly His
 20 25 30

Ser Pro Gly Val Gly Asn Ser
 35

<210> 390

<211> 39

<212> PRT

<213> Meloidogyne incognita CEP3

<400> 390

Met Thr Lys Ile Asn Ser Ile Ile Phe Leu Ile Phe Leu Ile Ile Asn
 1 5 10 15

Phe Met Asn Tyr Tyr Ile Met Ala Ala Phe Arg Pro Thr Asn Pro Gly
 20 25 30

His Ser Pro Gly Val Gly His
 35

<210> 391

<211> 39

<212> PRT

<213> Meloidogyne incognita CEP4

<400> 391

Met Thr Lys Ile Asn Ser Ile Ile Phe Leu Ile Phe Leu Ile Ile Asn
 1 5 10 15

Phe Met Asn Tyr Tyr Ile Ile Ala Glu Val His Pro Asn Asn Pro Gly
 20 25 30

His Ser Pro Gly Ile Gly His
 35

<210> 392

<211> 39

<212> PRT

<213> Meloidogyne incognita CEP5

<400> 392

Met Thr Lys Ile Asn Ser Ile Ile Phe Leu Ile Phe Leu Ile Ile Asn
 1 5 10 15

Phe Met Asn Tyr Tyr Ile Ile Ala Ser Arg Pro Thr Gln Pro Gly His
 20 25 30

Ser Pro Gly Val Gly Asn Gly
 35

<210> 393

<211> 57

129

<212> PRT

<213> Meloidogyne incognita CEP6

<400> 393

Met Thr Lys Ile Asn Ser Ile Ile Phe Leu Ile Ile Leu Ile Ile Asn
 1 5 10 15

Phe Met Asn Tyr Tyr Ile Val Ala Gly Thr Arg Ala Thr Glu Pro Gly
 20 25 30

His Ser Pro Gly Ala Gly His Asp Ala Pro Asn Val Ala Ala His Gly
 35 40 45

Ala His Gly His Gly Gly Pro Gly Lys
 50 55

<210> 394

<211> 57

<212> PRT

<213> Meloidogyne incognita CEP7

<400> 394

Met Thr Lys Ile Asn Ser Ile Ile Phe Leu Ile Phe Leu Ile Ile Asn
 1 5 10 15

Phe Met Asn Tyr Tyr Ile Met Ala Gly Thr Arg Pro Thr Glu Pro Gly
 20 25 30

His Ser Pro Gly Ala Gly His Asp Ala Pro Asn Val Ala Ala Tyr Gly
 35 40 45

Ala His Gly His Gly Pro Glu Asn Lys
 50 55

<210> 395

<211> 43

<212> PRT

<213> Meloidogyne incognita CEP8

<400> 395

Met Ile Lys Ile Asn Ser Lys Ile Ile Phe Leu Leu Phe Leu Leu Ile
 1 5 10 15

Ile Phe Met Ile Tyr Tyr Thr Met Ala Pro Ala Pro Pro Gly Arg Asn
 20 25 30

Thr Ala Pro Gly His Ser Pro Gly Ile Gly His
 35 40

<210> 396

<211> 17

<212> PRT

<213> M. hapla CEP1 domain

130

<400> 396

Ile	Gly	Asp	Phe	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly
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His

<210> 397

<211> 15

<212> PRT

<213> M. hapla CEP2 domain

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Ala	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
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<211> 15

<212> PRT

<213> M. hapla CEP3 domain

<400> 398

Gly	Tyr	Gln	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

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<213> M. hapla CEP4 domain

<400> 399

Pro	Phe	Lys	Thr	Val	Pro	Gly	Gln	Ser	Ser	Pro	Gly	Val	Gly	His
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<210> 400

<211> 15

<212> PRT

<213> M. hapla CEP5 domain

<400> 400

Val	Ile	Lys	Pro	Ala	Cys	Ile	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 401

<211> 15

<212> PRT

<213> M. hapla CEP6 domain

<400> 401

Ala	Phe	Arg	Pro	Thr	Asn	Pro	Gly	Pro	Ser	Pro	Ala	Ile	Gly	His
1				5					10					15

131

<210> 402
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 <213> M. hapla CEP7 domain

<400> 402

Gly	Phe	Arg	Pro	Thr	Asn	Pro	Gly	Asn	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 403
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 <213> M. hapla CEP8 domain

<400> 403

Thr	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	Asn
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<400> 404

Pro	Pro	Phe	Cys	Thr	Gly	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
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 <212> PRT
 <213> M. hapla CEP10 domain

<400> 405

Pro	Pro	Phe	Cys	Thr	Gly	Ser	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

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 <213> M. hapla CEP11 domain

<400> 406

Ala	Phe	Arg	Pro	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
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<210> 407
 <211> 15
 <212> PRT
 <213> M. hapla CEP12 domain

132

<400> 407

Pro	Pro	Phe	His	Thr	Gly	Thr	Gly	Arg	Ser	Pro	Gly	Ala	Gly	His
1				5					10					15

<210> 408

<211> 15

<212> PRT

<213> M. incognita CEP1 domain

<400> 408

Asp	Val	His	Pro	Asn	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 409

<211> 15

<212> PRT

<213> M. incognita CEP2 domain

<400> 409

Ala	Ser	Arg	Pro	Thr	Gly	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	Asn
1				5					10					15

<210> 410

<211> 15

<212> PRT

<213> M. incognita CEP3 domain

<400> 410

Ala	Phe	Arg	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 411

<211> 15

<212> PRT

<213> M. incognita CEP4 domain

<400> 411

Glu	Val	His	Pro	Asn	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 412

<211> 15

<212> PRT

<213> M. incognita CEP5 domain

<400> 412

Ser	Arg	Pro	Thr	Gln	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	Asn	Gly
1				5					10					15

133

<210> 413
 <211> 15
 <212> PRT
 <213> M. incognita CEP6 domain

<400> 413

Gly	Thr	Arg	Ala	Thr	Glu	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
1				5					10				15	

<210> 414
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 <212> PRT
 <213> M. incognita CEP7 domain

<400> 414

Gly	Thr	Arg	Pro	Thr	Glu	Pro	Gly	His	Ser	Pro	Gly	Ala	Gly	His
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 <213> M. incognita CEP8 domain

<400> 415

Pro	Gly	Arg	Asn	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
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 <223> Xaa can be any naturally occurring amino acid

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<210> 418
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 <213> M. truncatula CEP1 reverse primer

<400> 418
 tcaatttcca attttgtttt ggt 23

<210> 419
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 <213> M. truncatula CEP1 forward PCR primer

<400> 419
 ccgatgaaga tatcgacgtg aa 22

<210> 420
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 <212> DNA
 <213> M. truncatula CEP1 reverse PCR primer

<400> 420
 gaactcattt gtagtatacct cagtcacat 29

<210> 421
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 <213> M. truncatula CEP2 forward PCR primer

<400> 421
 tagctcgcat ttgcttggtc 20

<210> 422
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 <212> DNA

135

<213> M. truncatula CEP2 reverse PCR primer

<400> 422

ggctgaatgc tttgtctcaa

20

<210> 423

<211> 20

<212> DNA

<213> M. truncatula CEP3 forward PCR primer

<400> 423

acgttgagct ccaccatddd

20

<210> 424

<211> 20

<212> DNA

<213> M. truncatula CEP3 reverse PCR primer

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20

<210> 425

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<213> M. truncatula CEP4 forward PCR primer

<400> 425

catggaggtg gtgtttgatg

20

<210> 426

<211> 20

<212> DNA

<213> M. truncatula CEP4 reverse PCR primer

<400> 426

ttttcgccct acaagtccag

20

<210> 427

<211> 20

<212> DNA

<213> M. truncatula CEP5 forward PCR primer

<400> 427

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20

<210> 428

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<400> 428

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20

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 ggccaactcc aggactatga 20

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<210> 434
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ccccaccagg actatgacc	19
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ggagaaggag aaagggtctc a	21
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138

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tcagaaggcc tagttgaaat g 21

<210> 443
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<400> 443
gaaccgaagg gaagcataa 19

<210> 444
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<210> 446
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<400> 446
gagctggtct ctgtggttca 20

<210> 447
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<400> 447
gcacctcaac ctcctttctg ca 22

<210> 448
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<212> DNA
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<400> 448
tgtccattta ctggtggctt acatgg 26

139

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<400> 449
 aacttggtgc atgggtcttg a 21

<210> 450
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 <212> DNA
 <213> M. truncatula UBQ10 reverse PCR primer

<400> 450
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<210> 451
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 <222> (4)..(4)

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 <222> (7)..(7)

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 <222> (11)..(11)
 <223> may be mono-, di-, or tri-arabinosylated

<400> 451

Ala	Phe	Gln	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

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 <211> 15
 <212> PRT
 <213> M. truncatula CEP1 conserved domain #2

<220>
 <221> hydroxyproline
 <222> (11)..(11)

<400> 452

Glu	Phe	Gln	Lys	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10				15	

<210> 453
 <211> 19
 <212> PRT

140

<213> M. hapla CEP2 conserved domain #1

<220>

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<222> (9)..(9)

<220>

<221> hydroxyproline

<222> (15)..(15)

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Ala	Phe	Arg	His	Tyr	Pro	Thr	Ala	Pro	Gly	His	Ser	His	Tyr	Pro	Gly
1				5					10					15	

Val Gly His

<210> 454

<211> 14

<212> PRT

<213> RKN and plant CEP peptide consensus sequence

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<221> D, A, P, G, S, V, E, P, T, Q, I, N, K, C,

<222> (1)..(1)

<223> N-terminal additional amino acid

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<221> F, V, T, S, A, K, Y, R, G, I, Q, H, D, G, W

<222> (1)..(1)

<220>

<221> R, A, Q, G, E, V, D, K, P, S, H, Q

<222> (2)..(2)

<220>

<221> P, G, S, T, A, N, C, H, V, E, Y, K

<222> (3)..(3)

<220>

<221> T, S, A, P, G, V, N, M, I,

<222> (4)..(4)

<220>

<221> T, N, A, G, P, D, K, S, V, Y, Q, E, C, H

<222> (5)..(5)

<220>

<221> H, N, S, Y, P, R, T, G, V, F, Q, D,

<222> (8)..(8)

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<221> I, V, A

<222> (12)..(12)

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<221> H, N

<222> (14)..(14)

141

<400> 454

Xaa	Xaa	Xaa	Xaa	Xaa	Pro	Gly	Xaa	Ser	Pro	Gly	Xaa	Gly	Xaa
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<210> 455

<211> 15

<212> PRT

<213> At CEP2 domain #2

<400> 455

Glu	Phe	Ala	Pro	Thr	Asn	Pro	Glu	Asp	Ser	Leu	Gly	Ile	Gly	His
1				5					10				15	

<210> 456

<211> 15

<212> PRT

<213> At CEP9 domain #4

<400> 456

Asp	Phe	Ala	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Met	Gly	His
1				5					10				15	

<210> 457

<211> 15

<212> PRT

<213> At CEP7 domain

<400> 457

Ala	Phe	Arg	Pro	Thr	Asn	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 458

<211> 15

<212> PRT

<213> At CEP8 domain

<400> 458

Glu	Phe	Arg	Pro	Thr	Thr	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 459

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<212> PRT

<213> At CEP10 domain #1

<400> 459

Asp	Phe	Ala	Pro	Thr	Asn	Pro	Gly	His	Asn	Pro	Gly	Ile	Gly	His
1				5					10				15	

<210> 460

142

<211> 15
 <212> PRT
 <213> At CEP10 domain #2

<400> 460

Asp	Phe	Ala	Pro	Thr	Asn	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	His
1				5					10					15

<210> 461
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 <212> PRT
 <213> At CEP10 domain #3

<400> 461

Asp	Phe	Ala	Pro	Thr	Asn	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Arg	His
1				5					10					15

<210> 462
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 <213> At CEP11 domain

<400> 462

Ala	Phe	Arg	Ser	Thr	Glu	Pro	Gly	His	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 463
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 <212> PRT
 <213> At CEP12 domain

<400> 463

Ala	Phe	Arg	Pro	Thr	Gly	Gln	Gly	Pro	Ser	Gln	Gly	Ile	Gly	His
1				5					10					15

<210> 464
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 <212> PRT
 <213> At CEP13 domain

<400> 464

Ile	Tyr	Arg	Arg	Leu	Glu	Ser	Val	Pro	Ser	Pro	Gly	Val	Gly	His
1				5					10					15

<210> 465
 <211> 15
 <212> PRT
 <213> At CEP14 domain

<400> 465

143

Val Asp Arg Tyr Leu Arg Ser Val Pro Ser Pro Gly Val Gly His
 1 5 10 15

<210> 466
 <211> 15
 <212> PRT
 <213> At CEP15 domain

<400> 466

Ile Tyr Arg Arg Gln Gly Asp Val Pro Ser Pro Gly Ile Gly His
 1 5 10 15

<210> 467
 <211> 228
 <212> DNA
 <213> Arabidopsis thaliana CEP7 cDNA

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 atggctaaat gcactttgac tagcttaata ctactactaa tagtgctggt tcttattcaa 60
 gaatctcaca tcgttgaagg tcgaccttg aagtcacgc gaatctctaa tgtctcgaag 120
 aaattcgctg cgggcaactc gaatctgtcg agcaagttaa cgacagaaga tcattctttg 180
 gatgcatttc ggctaccaa ccctgggaac agtccaggaa ttggtcac 228

<210> 468
 <211> 76
 <212> PRT
 <213> Arabidopsis thaliana CEP7

<400> 468

Met Ala Lys Cys Thr Leu Thr Ser Leu Ile Leu Leu Leu Ile Val Leu
 1 5 10 15

Val Leu Ile Gln Glu Ser His Ile Val Glu Gly Arg Pro Leu Lys Ser
 20 25 30

Ser Arg Ile Ser Asn Val Ser Lys Lys Phe Ala Ala Gly Asn Ser Asn
 35 40 45

Leu Ser Ser Lys Leu Thr Thr Glu Asp His Ser Leu Asp Ala Phe Arg
 50 55 60

Pro Thr Asn Pro Gly Asn Ser Pro Gly Ile Gly His
 65 70 75

<210> 469
 <211> 261
 <212> DNA
 <213> Arabidopsis thaliana CEP8 cDNA

<400> 469
 atggcaaaag ctctgttctt caatttctgc atatctcttc ttattattgc catacttgtg 60

144

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agccatgaaa tcataccaac agaggcaaga cacttgagga cccatagaaa gtcaatcaag      120
aacagtactc ttactgtaca cgaaggagcc ggtggccttga gaaccggtgg tggctctgtg      180
aagactgaca ttagcaaaga agaacatggc gttgatgagt tccggccaac aactccggga      240
aacagccccg gcattggcca t                                              261

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<210> 470
 <211> 87
 <212> PRT
 <213> Arabidopsis thaliana CEP8

<400> 470

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Met Ala Lys Ala Leu Phe Phe Asn Phe Cys Ile Ser Leu Leu Ile Ile
1              5              10              15
Ala Ile Leu Val Ser His Glu Ile Ile Pro Thr Glu Ala Arg His Leu
                20              25              30
Arg Thr His Arg Lys Ser Ile Lys Asn Ser Thr Leu Thr Val His Glu
          35              40              45
Gly Ala Gly Gly Leu Arg Thr Gly Gly Gly Ser Val Lys Thr Asp Ile
          50              55              60
Ser Lys Glu Glu His Gly Val Asp Glu Phe Arg Pro Thr Thr Pro Gly
65              70              75              80
Asn Ser Pro Gly Ile Gly His
          85

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<210> 471
 <211> 196
 <212> DNA
 <213> Arabidopsis thaliana CEP10 cDNA

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acacttgtca ccattgaagc aagaaatttg aggaagatgg accgtcatga gcatttcaat      120
gctaatagaag atttcgtgga agcaaaaatg ttaaagaaaa ttgacaataa aaataatcta      180
aataatagat gtataa                                              196

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<210> 472
 <211> 132
 <212> PRT
 <213> Arabidopsis thaliana CEP10

<400> 472

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Met Lys Leu Phe Ile Ile Ile Val Val Thr Ser Leu Thr Ile Ser Lys
1              5              10              15

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

146

Pro Pro Glu Glu Leu Gln Gly Ser Ile Lys Thr Arg Arg Ser Lys Asp
65 70 75 80

Ile Tyr Gly Leu Asn Ala Phe Arg Ser Thr Glu Pro Gly His Ser Pro
85 90 95

Gly Val Gly His Leu Ile Lys Thr
100

<210> 475

<211> 279

<212> DNA

<213> Arabidopsis thaliana CEP12 cDNA

<400> 475

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ttacatctgc attttgaaac tacaacagct gcgcgaaaac cagtttagagt gtttggtccg 120

ccaagttcta tcgagtggtc accaccatca ccaccaaagg atgactttga atggttcgag 180

atcaatatat acaagaacat tgaacaaact gcattccgac ccactgggtca aggtcctagc 240

caaggcatcg gacacaagga tccacctggt gtcacataa 279

<210> 476

<211> 92

<212> PRT

<213> Arabidopsis thaliana CEP12

<400> 476

Met Val Asn Arg Asp Asn Ser Ile Val Ala Leu Ser Phe Phe Met Leu
1 5 10 15

Phe Leu Leu Val Leu His Leu His Phe Glu Thr Thr Thr Ala Ala Arg
20 25 30

Lys Pro Val Arg Val Phe Gly Pro Pro Ser Ser Ile Glu Trp Ser Pro
35 40 45

Pro Ser Pro Pro Lys Asp Asp Phe Glu Trp Phe Glu Ile Asn Ile Tyr
50 55 60

Lys Asn Ile Glu Gln Thr Ala Phe Arg Pro Thr Gly Gln Gly Pro Ser
65 70 75 80

Gln Gly Ile Gly His Lys Asp Pro Pro Gly Ala Pro
85 90

<210> 477

<211> 551

<212> DNA

<213> Arabidopsis thaliana CEP13 cDNA

<400> 477

aaataaacta aaaatttctt gcttcataac taattaatta atatctaaaa ttataaca 60

147

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aatcaatca ggtaatggct cgtccaagga tctccatttc gatgatttgc ttactcattt      120
tgattgttgg ttttgtcttg caatcttctc aagctagaaa agttctagtc ccttacggca      180
caagcaaggg tttgtttctt agtgccttac ccaagggcaa tgtaccacct tcgggtccaa      240
gcgacaaggg tcacacttct cctccggatg ataccgacca gcgtatggta ccagaaaact      300
cgccggagat ataccgtcga ctagaatcag tccctagccc cggcgtgggt cattaggcac      360
attaattgat tgtcgtcttt tcacttcata tatgttgaca tgttgtcgaa ttctattcac      420
aatgatatca tataccgttc gtaagtcttc tcaagaatgt ttgtgtatgt gtgtcttcat      480
atataattga tatagatatg tttgtgtgtg atccgatccg ttattgagta ataaaaaacc      540
actattctac a                                                                551

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<210> 478
<211> 93
<212> PRT
<213> Arabidopsis thaliana CEP13

<400> 478

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Ile Val Gly Phe Val Leu Gln Ser Ser Gln Ala Arg Lys Val Leu Val
                20              25              30

Pro Tyr Gly Thr Ser Lys Gly Leu Phe Leu Ser Ala Leu Pro Lys Gly
          35              40              45

Asn Val Pro Pro Ser Gly Pro Ser Asp Lys Gly His Thr Ser Pro Pro
          50              55              60

Asp Asp Thr Asp Gln Arg Met Val Pro Glu Asn Ser Pro Glu Ile Tyr
65              70              75              80

Arg Arg Leu Glu Ser Val Pro Ser Pro Gly Val Gly His
          85              90

```

```

<210> 479
<211> 607
<212> DNA
<213> Arabidopsis thaliana CEP14 cDNA

```

```

<400> 479
atagcaatct tgagtcttaa gaatttcatt gaatttatct ctctcgctct ctctctcttt      60
atttctcaac ccaaagatca aagctcttca tggcggttcg tctaattccg accatctggc      120
tcttcatagt ctttgccgtc atcgtgtcag ccttgccctc gctggtatct tcaagaaaac      180
tgttggaggt gaagaaacaa gaaaacttga cggtgagaga ggaagagaag agtcacatgc      240

```

148

```

ctcatgtgac caaaactagt acgttaagtg ctctaccaa ggggaaaatt cccaactcga      300
caccgagcaa aaaggggtcac gcggccgtct tcgccggaaa gctccgatca cgacatctct      360
ccaccgttga tcggtatctc cgatccgttc ctagtcccgg tgttggccat tgatagtctc      420
ggctagattc atatatatat ttttttcttc catttagtac attctttatt ctaactatat      480
aatacgaaat ttcctacaag gtataccttt gtttttagaa ttcttttttt ttttcaggtt      540
actacaactt ttgcatatgt aaattagtca aaagtttatt ttcttcata tcacacgagg      600
ttaata                                           607

```

<210> 480

<211> 107

<212> PRT

<213> Arabidopsis thaliana CEP14

<400> 480

```

Met Ala Val Arg Leu Ile Pro Thr Ile Trp Leu Phe Ile Val Phe Ala
1              5              10              15

```

```

Val Ile Val Ser Ala Leu Pro Ser Leu Val Ser Ser Arg Lys Leu Leu
                20              25              30

```

```

Glu Val Lys Lys Gln Glu Asn Leu Thr Val Arg Glu Glu Glu Lys Ser
        35              40              45

```

```

His Met Pro His Val Thr Lys Thr Ser Thr Leu Ser Ala Leu Pro Lys
        50              55              60

```

```

Gly Lys Ile Pro Asn Ser Thr Pro Ser Lys Lys Gly His Ala Ala Val
65              70              75              80

```

```

Phe Ala Gly Lys Leu Arg Ser Arg His Leu Ser Thr Val Asp Arg Tyr
                85              90              95

```

```

Leu Arg Ser Val Pro Ser Pro Gly Val Gly His
        100              105

```

<210> 481

<211> 707

<212> DNA

<213> Arabidopsis thaliana CEP15 cDNA

<400> 481

```

ataaccacaa cgctacaatc tcttcttgaa cctaaagaaa acaagaagaa agaaaaaatt      60
catataaatt ctcttatatt ttttcacctt tatattgaat ggatgcaacg aagattaagt      120
ttgacgttat attactctcc ttcttactaa ttatctccgg aattccttcg aatcttgggt      180
tgagtacaag tgtgagaggc actactagat cggagccgga agcctttcac ggcgggtaaat      240
tcccggcaat gaagatgagg aagttgatgg caccaaacat ggaagttgat tattcgagtg      300

```

149

actattatga tggaggatca tcatcatcaa caacatcacc atcacctcca gtgcctgatt 360
 atgatgatat ttatagaagg caaggatgatg tcccaagccc tggatttggc cactgatcca 420
 tacatgtcat gcgtatatac acacacatat agacattttg tgtaaataat atttatacat 480
 acatgttggt tataatgttt ttgtccttgg aggtcgtctc cgtatgatca gttttatttt 540
 gctcttttcc ttcatttttt tatattttga tcttatttca tttgtcttt ttagttcata 600
 aaatataatt gtgcccttcc tcttgaattg tctcatttcc tcgtgttgat gggagttcat 660
 gtattcatgt atgtaataca actcataata aaaaaactgt atttgtc 707

<210> 482

<211> 105

<212> PRT

<213> Arabidopsis thaliana CEP15

<400> 482

Met Asp Ala Thr Lys Ile Lys Phe Asp Val Ile Leu Leu Ser Phe Leu
 1 5 10 15

Leu Ile Ile Ser Gly Ile Pro Ser Asn Leu Gly Leu Ser Thr Ser Val
 20 25 30

Arg Gly Thr Thr Arg Ser Glu Pro Glu Ala Phe His Gly Gly Lys Phe
 35 40 45

Pro Ala Met Lys Met Arg Lys Leu Met Ala Pro Asn Met Glu Val Asp
 50 55 60

Tyr Ser Ser Asp Tyr Tyr Asp Gly Gly Ser Ser Ser Ser Thr Thr Ser
 65 70 75 80

Pro Ser Pro Pro Val Pro Asp Tyr Asp Asp Ile Tyr Arg Arg Gln Gly
 85 90 95

Asp Val Pro Ser Pro Gly Ile Gly His
 100 105

<210> 483

<211> 198

<212> DNA

<213> Brachypodium distachyon CEP1 cDNA

<400> 483

atggccgttc cggtgaaagc tgttaccatt ttcgtgttgc tgctgagcac taccttctgc 60

cagctccctg tgcctgtgca tgcaaggagg ctagaagtgc gagcgctac cgtcgacatg 120

catcctccct gactggaag gagcactctg gaggcattctg ctgtgctagc tgattcgacc 180

actccaggcc atagccct 198

<210> 484

150

<211> 75
 <212> PRT
 <213> Brachypodium distachyon CEP1

<400> 484

Met	Ala	Val	Pro	Leu	Lys	Ala	Val	Thr	Ile	Phe	Val	Leu	Leu	Leu	Ser
1				5					10					15	
Thr	Thr	Phe	Cys	Gln	Leu	Pro	Val	Pro	Val	His	Ala	Arg	Arg	Leu	Glu
			20					25					30		
Val	Arg	Ala	Pro	Thr	Val	Asp	Met	His	Pro	Pro	Cys	Thr	Gly	Arg	Ser
		35					40					45			
Thr	Leu	Glu	Ala	Ser	Ala	Val	Leu	Ala	Asp	Ser	Thr	Thr	Pro	Gly	His
	50					55					60				
Ser	Pro	Ser	Ile	Gly	His	Asn	Ser	Pro	Pro	Asn					
65					70					75					

<210> 485
 <211> 196
 <212> DNA
 <213> Brachypodium distachyon CEP2 cDNA

<400> 485

ctgagcaaag	cagccctcct	gcttgcgctc	ttgatecttt	cctgtagcca	catcatgtgc	60
tcccaaggca	caagtactct	catgacgacg	atgcatggga	gaaacttgct	gcgccattcc	120
gaggaagcct	cgaaggcgat	gattagagcc	accctctcgg	ctgacggcta	caatggaaaa	180
ggcgggtggca	gcggtta					196

<210> 486
 <211> 101
 <212> PRT
 <213> Brachypodium distachyon CEP2

<400> 486

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

151

Pro Gly Ala Gly His Ala Asp Thr Ser Asn Gly Val Gly Arg Lys Leu
85 90 95

Leu Gly Leu Asn Gln
100

```
<210> 487
<211> 197
<212> DNA
<213> Brachypodium distachyon CEP3 cDNA
```

<400>	487	
atggccctga	tcagtatcag	caaagttgct
ctccttgctg	tgттаатссt	ttcctctcag
		60
atcatgtttt	ctcctctgac	caacggcgcg
atcactccgg	cagaagacca	aggcctggtg
		120
gggacggcgg	acgatgttcg	cccctcgaac
cctggccaca	gcccgggtat	aggccatgca
		180
ttcaccaaca	acaaggt	
		197

```
<210> 488
<211> 77
<212> PRT
<213> Brachypodium distachyon CEP3
```

<400> 488

Met Ala Leu Ile Ser Ile Ser Lys Val Ala Leu Leu Ala Val Leu Ile
1 5 10 15

Leu Ser Ser Gln Ile Met Phe Ser Pro Leu Thr Asn Gly Ala Ile Thr
20 25 30

Pro Ala Glu Asp Gln Gly Leu Val Gly Thr Ala Asp Asp Val Arg Pro
35 40 45

Ser Asn Pro Gly His Ser Pro Gly Ile Gly His Ala Phe Thr Asn Asn
50 55 60

Lys Val Gly Arg Arg Leu Leu Ile Thr Ser Ala Arg Glu
65 70 75

<210> 489
<211> 198
<212> DNA
<213> *Brachypodium distachyon* CEP4 cDNA

```
<400> 489
atggcaccta gcataagcaa gaacactaac acttgcactt gtgcattact actaattttt      60
gtagttctgt tctcccagct cgtggaatct cagagcaggt ctctgcccc a tggcagcttg      120
atctctacca tgcatacggag atacttgtaa tcgcatgtaa acggagcatc gcccaatgga      180
ctggccgagg gcgccgta                                     198
```

152

<210> 490
 <211> 193
 <212> DNA
 <213> *Brachypodium distachyon* CEP5 cDNA

<400> 490
 atggctggtt caaaggcttt gtgcatttgc attctcatct tcatcgatcat ctcgagccag 60
 caggcggagg cgaggcggct aacgaagggtg gcggccacga gcaagagcga gctaggcgcg 120
 ttgaaagatg atgggcaaag cttcaaagca agggcagggc aagacggcaa agccatgccg 180
 atggcgacca cgg 193

<210> 491
 <211> 87
 <212> PRT
 <213> *Brachypodium distachyon* CEP5

<400> 491
 Met Ala Gly Ser Lys Ala Leu Cys Ile Cys Ile Leu Ile Phe Ile Val
 1 5 10 15
 Ile Ser Ser Gln Gln Ala Glu Ala Arg Arg Leu Thr Lys Val Ala Ala
 20 25 30
 Thr Ser Lys Ser Glu Leu Gly Ala Leu Lys Asp Asp Gly Gln Ser Phe
 35 40 45
 Lys Ala Arg Ala Gly Gln Asp Gly Lys Ala Met Pro Met Ala Thr Thr
 50 55 60
 Val Asp Ser Arg Ser Thr Ser Pro Gly Asn Ser Pro Gly Ile Gly Asn
 65 70 75 80
 Lys Gly Lys Thr Thr Asn Asn
 85

<210> 492
 <211> 194
 <212> DNA
 <213> *Brachypodium distachyon* CEP6 cDNA

<400> 492
 atggcaggtt ccaaggtatc aataccacca tgcacatgca ttctgatcgt cttgatggtg 60
 tcgagccact tgggtgcccgg cgaggcaagg aggcttatgg cctcggcaac aggcaacggc 120
 gaggacgaag cctgcaaatac agcagcaggg tgccgcgccg tgcaaggcag tgtaaccttc 180
 gcggcggcgg cgac 194

<210> 493
 <211> 95
 <212> PRT
 <213> *Brachypodium distachyon* CEP6

153

<400> 493

Met Ala Gly Ser Lys Val Ser Ile Pro Pro Cys Thr Cys Ile Leu Ile
 1 5 10 15

Val Leu Met Val Ser Ser His Leu Val Pro Gly Glu Ala Arg Arg Leu
 20 25 30

Met Ala Ser Ala Thr Gly Asn Gly Glu Asp Glu Ala Cys Lys Ser Ala
 35 40 45

Ala Gly Cys Arg Ala Val Gln Gly Ser Val Thr Phe Ala Ala Ala Ala
 50 55 60

Thr Ala Lys Met Ala Thr Thr Asp Gly Arg Ser Thr Ala Pro Gly His
 65 70 75 80

Ser Pro Gly Ile Gly Asn Lys Leu His Ala Ala Gly Asn Asp Arg
 85 90 95

<210> 494

<211> 198

<212> DNA

<213> Oryza sativa CEP1 cDNA

<400> 494

atggccaaca tttgcactat gctagctata cttgtgtttt cctgcagct attttcttct 60

cagggcaggc ctttgccctga cgacgatggc atcacctctg aaatgcagat caggagatac 120

ctgttatcgc atggcaatgg agtggtcgag ggcgccgtgt cccctcgtc ggagattggc 180

ggtcccatgg tcggcgcc 198

<210> 495

<211> 197

<212> DNA

<213> Oryza sativa CEP2 cDNA

<400> 495

ctaaacaagt cttccaacag tattagcaaa gcttttttcc ttgtgctaatt tattcttgcc 60

tctcaagtaa tgctttctca tggcatacct cttgagatgc ataggaggta cttattatcg 120

catgcagccg atgcaacaaa aggggtgatg gagggaacaa tcaccctac agaaggtgaa 180

ggatttgctg gggcaaa 197

<210> 496

<211> 196

<212> DNA

<213> Oryza sativa CEP3 cDNA

<400> 496

ctgaatctca tcttcgtcct tgggatcatc ttcttccttt cttccgacat gatcatcgtg 60

154

tgctcacagg gaagacctct cattgcggag gcggcggcgg gcggcggcgg gcagcagcag 120
 agacacctgc tatcgtcgtc gtcgtcggca ccgcgttccg gcggcgacgt cgaagaagct 180
 gccgccggcg gcggca 196

<210> 497
 <211> 194
 <212> DNA
 <213> Oryza sativa CEP5 cDNA

<400> 497
 atggcaggtc tcaagctctc atcatgcgtt ctggtcgctt tgctcttcgt gtcgagccac 60
 gttgtgcgcc acggcgaggc gaggcggctg actgcggggg tggcggcgcc ggcgagcaag 120
 ggcggcgagg aggaggcgcc gcagtacgca tccgctcgag gcggccagcc ggcggtgct 180
 gccggtggcg gcgt 194

<210> 498
 <211> 195
 <212> DNA
 <213> Oryza sativa CEP6 cDNA

<400> 498
 atggctggac acaaggtggt attctgcact tgcattctga tttcatcgt cgtcgtcatc 60
 tcaggccagg ccgaagcacg gcggctggcg gcggtggcca acggcaatga ggatgccgtc 120
 gccgtggaag gtgacgggag cttcagagca gtgcaagaaa ctgcttcttc tgcgtcgact 180
 gatcatgcag ctgca 195

<210> 499
 <211> 106
 <212> PRT
 <213> Oryza sativa CEP6

<400> 499

Met	Ala	Gly	His	Lys	Val	Val	Phe	Cys	Thr	Cys	Ile	Leu	Ile	Phe	Ile
1				5					10					15	
Val	Val	Val	Ile	Ser	Gly	Gln	Ala	Glu	Ala	Arg	Arg	Leu	Ala	Ala	Val
			20					25				30			
Ala	Asn	Gly	Asn	Glu	Asp	Ala	Val	Ala	Val	Glu	Gly	Asp	Gly	Ser	Phe
		35					40					45			
Arg	Ala	Val	Gln	Glu	Thr	Ala	Ser	Ser	Ala	Ser	Thr	Asp	His	Ala	Ala
		50				55					60				
Ala	Gly	Arg	Gly	Gly	Gly	Gly	Ala	Ala	Ala	Ala	Val	Gln	Gly	Ser	Met
65					70					75					80

155

Pro Met Thr Thr Thr Asp Ser Arg Pro Thr Ala Pro Gly Asn Ser Pro
85 90 95

Gly Ile Gly Asn Lys Gly Lys Ile Asn Asn
100 105

<210> 500

<211> 198

<212> DNA

<213> Oryza sativa CEP7 cDNA

<400> 500

atggccattt cgtcgaaaaa tgttgctgtg ttcatgttgc ttctgagtgt catctttttc 60

atgcagcgcct ctgtgccagt tcatgcaagg aagctggtag tgaggggcacc tatgatctgc 120

atgcatcctc catgcacacg gaggaatgcc ctggaggtgc cagctgaaca agttgattca 180

accactccag gccatagc 198

<210> 501

<211> 76

<212> PRT

<213> Oryza sativa CEP7

<400> 501

Met Ala Ile Ser Ser Lys Asn Val Ala Val Phe Met Leu Leu Leu Ser
1 5 10 15

Val Ile Phe Phe Met Gln Arg Ser Val Pro Val His Ala Arg Lys Leu
20 25 30

Val Val Arg Ala Pro Met Ile Cys Met His Pro Pro Cys Thr Arg Arg
35 40 45

Asn Ala Leu Glu Val Pro Ala Glu Gln Val Asp Ser Thr Thr Pro Gly
50 55 60

His Ser Pro Ser Ile Gly His Asn Thr Pro Pro Asn
65 70 75

<210> 502

<211> 15

<212> PRT

<213> B. distachyon CEP3 domain

<400> 502

Asp Val Arg Pro Ser Asn Pro Gly His Ser Pro Gly Ile Gly His
1 5 10 15

<210> 503

<211> 15

<212> PRT

<213> B. distachyon CEP5 domain

156

<400> 503

Asp	Ser	Arg	Ser	Thr	Ser	Pro	Gly	Asn	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15

<210> 504

<211> 15

<212> PRT

<213> B. distachyon CEP6 domain

<400> 504

Asp	Gly	Arg	Ser	Thr	Ala	Pro	Gly	His	Ser	Pro	Gly	Ile	Gly	Asn
1				5					10					15