

1
SEQUENCE LISTING

<110> Consejo Superior de Investigaciones Científicas (CSIC).
 <120> Genes reguladores de la ramificación de plantas, promotores, construcciones genéticas que los contienen y usos.
 <130> ES1664.344
 <160> 52
 <170> PatentIn version 3.4
 <210> 1
 <211> 346
 <212> PRT
 <213> Solanum lycopersicum
 <400> 1

Met Tyr Pro Ser Ser Asn Tyr Ser Pro Asn Ile Ser Ser Ser Ser Ser
 1 5 10 15

Phe Phe His Ile Asn Ile Pro Ser Pro Ser Met Gln Tyr Glu Pro Glu
 20 25 30

Phe Ile Gln Tyr Phe His Asp Phe Gln Phe Ile Gln Pro Ser Tyr Asp
 35 40 45

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

Asp Lys Ile Glu Glu Asp Gln Ser Ile Ile Lys Ser Cys Asn Asn Asn
 65 70 75 80

Lys Lys Asp Glu Lys Ser Ser Ser Ser Thr Ser Thr Ile Arg Arg Lys
 85 90 95

Asn Asn Lys Arg Thr Thr Ser Gly Ser Ala Gly Val Gly Pro Ser Lys
 100 105 110

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

Arg Met Arg Leu Ser Leu Glu Ile Ala Arg Lys Phe Phe Asn Leu Gln
 130 135 140

Asp Leu Leu Gly Phe Asp Lys Ala Ser Lys Thr Val Glu Trp Leu Leu
 145 150 155 160

Thr Lys Ser Lys Ser Ala Val Asn Asp Leu Val Gln Lys Ile Asn Lys
 165 170 175

Asp Lys Cys Ser Gly Ser Glu Asn Pro Asn Ile Ala Thr Val Ser Ser
 180 185 190

Pro Ser Ala Glu Ser Cys Glu Val Ile Asp Glu Ser Ala Ala Thr Asn

2

195	200	205
Thr Ala Glu Thr Gln Lys Gln Gln Lys Lys Lys Val Lys Ser Ile Arg		
210	215	220
Arg Ala Ile Ile His Pro Val Val Ala Lys Glu Ser Arg Lys Glu Ala		
225	230	235
Arg Ala Arg Ala Arg Glu Arg Thr Ile Ile Lys Lys Ser Leu Asn Asp		
245	250	255
Asn Thr Asn Asn Asn Asn Asn Gly Asp Gln Ser Met Ala Asp Glu Asp		
260	265	270
Leu Thr Arg Ser Leu Arg Ser Trp Asn Thr Thr Phe Glu Asp His Gln		
275	280	285
Ser Gly Ile Gln Gly Tyr Asn Asn Asn Asn Asn Met Asn Val Val Asp		
290	295	300
Asn Phe Asn Leu Val Asp Thr Ser Asn Trp Ser Pro Phe Met Phe Asn		
305	310	315
Tyr His Gln Ile Asn Thr Glu Ile Ser Gln Glu His Gln Phe Ala Asn		
325	330	335
Phe Arg Tyr Ser Gly Lys Leu Trp Glu Ala		
340	345	

<210> 2
 <211> 337
 <212> PRT
 <213> Solanum lycopersicum

<400> 2

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

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

<210> 3
 <211> 353
 <212> PRT
 <213> Solanum tuberosum

<400> 3

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

Phe Glu Asp His Gln Ser Gly Ile Gln Ala Tyr Asn Asn Thr Asn Asn
275 280 285

Ile Met Asn Ala Val Asp Asn Phe Asn Leu Val Asp Thr Ser Asn Trp
290 295 300

Ser Pro Phe Met Phe Asn Tyr His Gln Ile Asn Thr Glu Ile Ser Gln
305 310 315 320

Glu Val Cys Ile Asn Leu Ile Arg Leu Leu Leu Leu Leu Leu Ile
325 330 335

Arg Ser Pro Ile Tyr Leu Phe Leu Phe Leu Phe Phe Cys Cys Ser Ile
340 345 350

Asn

<210> 4
<211> 364
<212> PRT
<213> Solanum tuberosum

<220>
<221> misc_feature
<222> (28)..(28)
<223> Xaa can be any naturally occurring amino acid
<400> 4

Met Tyr Pro Pro Ser Asn Asn Asn Cys Asn Tyr Ser Pro Ile Leu Ser
1 5 10 15

Ser Phe Ile Cys Gln Asn Ile Pro Ser Ser Pro Xaa Met Gln Tyr Glu
20 25 30

His Glu Leu Tyr Phe Gln Asn Phe Asn His Asp Asp Gln Tyr Tyr Phe
35 40 45

Gln Leu Gln Gln Gln Val Pro Leu Ile Asp Asp Leu Ser Pro His Val
50 55 60

Leu Ala Asp Ser Cys Thr Glu Thr Val Thr Lys Pro Ser Asn Cys Asn
65 70 75 80

His Val Leu Glu Gly Met Glu Glu Gly Arg Gly Gly Asn Lys Gly Asp
85 90 95

Asp Val Val Met Ser Ser Arg Ile Ser Ile Ile Ser Gly Arg Ile Ser
100 105 110

Lys Asn Asn Lys Arg Ser Ser Asn Lys Asp Arg His Ser Lys Ile Asn
115 120 125

Thr Ala Arg Gly Pro Arg Asp Arg Arg Met Arg Leu Ser Leu Asp Ala
 130 135 140
 Ala Arg Lys Phe Phe Arg Leu Gln Asp Leu Leu Gly Phe Asp Lys Ala
 145 150 155 160
 Ser Lys Thr Val Glu Trp Leu Leu Thr Gln Ser Asp Ser Ala Ile Glu
 165 170 175
 Glu Leu Val Ala Val Lys Gly Asn Asp Ala Gln Val Pro Gln Gln Thr
 180 185 190
 Ser Cys Asn Thr Pro Thr Thr Thr Thr Gly Ile Gly Ala Ile Cys Ala
 195 200 205
 Ser Asn Ser Ile Ser Glu Ser Cys Glu Val Ile Ser Gly Thr Asp Glu
 210 215 220
 Thr Ser Ser Asn Asp Lys Asn Lys Glu Thr Thr Ala Lys Asp Glu Lys
 225 230 235 240
 Glu Lys Lys Lys Lys Pro Val Asn Thr Ala Arg Arg Pro Ala Phe Glu
 245 250 255
 Pro Leu Thr Lys Glu Ser Arg Asn Gln Ala Arg Ala Arg Ala Arg Glu
 260 265 270
 Arg Thr Lys Thr Lys Lys Met Ser Gln Val Gly Lys Ser Lys Ser Pro
 275 280 285
 Ala His Asp Leu Asn Pro Ser Gly Ser Arg Arg Pro Ala Asn Arg Thr
 290 295 300
 Cys Glu Glu Pro Gly Thr His Glu Gln His Thr Phe His His Val Asp
 305 310 315 320
 Asp Ser Ser Phe Val Val Asn Gly Asn Trp Asn Pro Phe Thr Ile Phe
 325 330 335
 Thr Ser His Glu Gln Tyr Ala Gly Ile Ser Asn Glu His Gln Leu Val
 340 345 350
 Thr Asp Leu Gln Phe Tyr Gly Lys Leu Trp Glu Ser
 355 360

<210> 5
 <211> 1723
 <212> PRT
 <213> Solanum lycopersicum
 <400> 5

```

agtctgaacc cctttcacct caactgtggg aagcaggaag aattcaccaa aactttaata      60
acatattcag taaaaatttt tataatgcgt ctaagaaaag taaaatgtac gtagaattta      120
tcctgcctcg taaaaataaa gattgtatct aaaaaaaacc tcgactcaaa taatacatat      180
taacaaaatt acaaattaac tatcactcaa cccaatatt tacttcaagt tgtagggat      240
cacttaaggg cttttctttt tctccttttt tttttttttt ttggagaaga tgaaggtgaa      300
agagatggtg gatgatggag ctaggaaaga ggagattgaa gggatattttt tttgtcaaag      360
tatgtgtcag ttgctatcac gtgaacttga aactaagggg caccattaga gaagacttta      420
gctataatat acattcattt ctataaaaaa aaatcacmac ataaacatgc ctttttttaa      480
cttagcttta atatatcttt taaatttgat tatgcagaaa tagatattta aatttatata      540
aaatttaaaa agtctatcta acaatgttgt gtcctacata tattatatct ggtatgatat      600
atatgtgtta cttgtttaat tttatataaa tttaaatatt ttttatgca aattcaaat      660
taagagatat aaatatcaag ctaaactgaa gttcaatgaa atatatatat ataattatgc      720
caatataaaa tcagtgtaac tatacaacaa gtactatagt gtcccctcca ctcttttttt      780
ctcaaattcc ctttcatact ttaaactccc acatgagcta gctagagaag tctttttttt      840
ttttaagat tcgkggtgtt tacatcaatt taaacatatt ttgactaatt tcatagaata      900
tttatcatct cttattaata acatgtgtca tattcataaa tgaatagaaa ttactaaata      960
cagtagtact ycttttaatt tttttctaataaaaat ttaaaa cgtgaaacct catgattcct     1020
aattatccac ttcagtaacc atcgactcac accaaccctt tgggtgcaagc gaagccttct     1080
ttatctttat agcagatagg ggtcctttga aaagatggaa gtacaattac acctctcttt     1140
gtccccttgc aggtataaac ataacatgac ttttctttat cttcatcttt ctttctttgt     1200
caacaagaac atacaccacc atgaatgtct ctcccattag ctaatatatt ccagctaact     1260
agcttaaaata tatagtgtca atacytgcac gaacacaaaa atagccacta atatacacct     1320
atacctagct attattatta ttatcataat taagcacwca ccaagcaaca tacatgtaaa     1380
gccacatatt tttaatcacc tgtctttctc aaccaaaaag ctatattatc atcattatat     1440
tgaaaaaaa attaaaaata accacatatc ctttccact ttctctatgt gctatctttg     1500
tattcaaat ttatatatcc aagagaatta tgaagagtct ctctcaaaaa aagttttaat     1560
taatttataa ctttttcttt tttcctactt tttgttgatg cagctaggta gctagattat     1620
taaaagtgtc aaactgaaga agctgatgtt tgtggttatt tcaacttcaa tacaagtgtg     1680
ctaggttgtc cttatcaacc agtttctttt ttttttttta aag                                1723

```

```

<210> 6
<211> 665
<212> DNA
<213> Solanum lycopersicum

```

```

<400> 6
tcacatgaag gggcacgata acaagttggt cgtatccatc cattcacttc caacaatacc      60
gctacgtacc actacctgct tccttcctat cccagctctt tgtcaaactt cttttccctt     120

```

tccaattact	ttttctttaa	tagagatggt	tgtttccttt	tcccttcccc	ccatattctt	180
cccttttttt	tttatctctc	tttcacaata	gtagcaccat	gcctgtagct	ttgatgctta	240
gacgggcgca	cgcgcacgcg	cactcacaca	actagaatag	aatcactctc	tctatatatt	300
catagttatc	aaaactactt	atcatatacc	aaaaaaaaacc	actgtcattc	tcaagcaaat	360
aatatttttt	ttaaaaaaga	agaactacat	atatatatat	agtactacta	ctattttcat	420
catcactttg	gtcaatccat	acagttctaa	gtagtcattg	cttcctctgt	caaattactg	480
tatacagtac	attgaactag	ctaggggaaa	attaatctac	taactctaata	ttgtttgttt	540
aattctcttc	ttattgcagc	tagatttgcc	taattagcag	aaaaaccaa	agctgtgttc	600
atactgtctt	tctcaagatc	tagaccacc	atagaccg	cctcaactac	agctactcca	660
caaga						665

<210> 7
 <211> 1133
 <212> DNA
 <213> Solanum lycopersicum

<400> 7						
atgtaccctt	cgagcaatta	cagccccaat	atttccagct	cttcatcttt	ctttcacatt	60
aatattccat	ctccttctat	gcaatatgaa	cccgaattca	tccaatattt	ccatgatttt	120
caattcatcc	aacctagtta	cgatcagaat	accaatattc	ctgcagaaga	agctgctgat	180
tcggacaaac	tagataaaaat	agaagaagat	caatcaatca	taaaagctg	caataataac	240
aagaaggatg	agaagagtag	tagcagtact	agtactattc	gtagaaaaaa	caacaagaga	300
actacgagtg	gtagtgctgg	tgtaggacct	tcgaagaaag	atagacacag	caaatcaac	360
acggcacatg	gccaagaga	ccgaagaatg	agactatcac	ttgaaattgc	tcgcaaattc	420
ttcaatttgc	aagacttgct	tgggttcgat	aaagccagca	aaactgtaga	atggctactc	480
acaaagtcaa	aatcagcggg	gaacgatctg	gttcagaaaa	ttaacaaaga	caaatgcagc	540
ggtagtgaaa	atcctaatat	tgctactgta	tcctctctct	ccgccgaatc	atgtgaagtt	600
atcgacgaat	cagctgcaac	taatacagca	gaaactcaga	agcaacagaa	gaaaaaagtt	660
aagtcgattc	gtagggcaat	aattcatcca	gttggttgcaa	aggaatcaag	gaaagaagca	720
agagcaaggg	caaggggaaag	aacaataata	aagaaaagcc	taaatgataa	cacgaataat	780
aataataatg	gtgatcaatc	tatggctgat	gaggatttaa	caagatcatt	aagatcttgg	840
aatactacat	ttgaagatca	tcaatcaggt	attcaaggct	ataataataa	taataatatg	900
aatgttggtg	ataactttta	tttggtggat	actagcaatt	ggagcccatt	tatgttcaac	960
tatcaccaaa	tcaataactga	aattttctcaa	gaggatatgta	ctaatttaata	taataaatta	1020
ttttttctat	tattattatt	aacccgatcg	ccaagtattt	atttatattt	ttgtgttgca	1080
gcatcaatth	gcgaacttcc	agtattctgg	gaagttatgg	gaagcttaata	tag	1133

<210> 8
 <211> 1124
 <212> DNA

<213> *Solanum lycopersicum*

<400> 8

atgcaatatg aacacgaact atactttcaa agctttaatc atgataacca atattatTTTT	60
caacaacagc aactagttcc ctcgatagat gatttgagtc ctcacatctt agctgacagc	120
tgcaccgaga ttattactaa gccttcgaat tgcaaccacg aactacaagg aatggaagaa	180
ggccgaggcg aaaagaaagg agatgatgat gttatgagta gcagaattag tggacggatc	240
tcaaaaaata ataagagatc ttccaataaa gatcgacaca gcaagatcaa caccgctcgt	300
gggtccaagag atcgaaggat gagactttca cttgatgctg ctcgcaagtt tttccgtttg	360
caggacttat tgggattcga taaggccagc aaaactggtg aatgggttgct tactcaatcg	420
gattctgcaa ttgaagagct tgttgccgct aaaggcaatg atgcacaggt tgctcagcaa	480
actagctgca atacccccac tactactact ggaattgggtg caatttggtg atctaattct	540
atttctgagt cgtgtgaagt tatatcagga actgatgaaa cttcctctaa tgacaaaaac	600
aaggaaaccg ctcaagatga ggagaagaag aaaaggaaga aggtgggttaa cacagctcgt	660
agagctgtgt tagaacctct tacgaaggaa tcgaggaatc aagcaagagc cagggctaga	720
gagagaacaa aatcaaagaa aatgagccaa actggaaaat ccaaattcct agctaattgat	780
ttgaaccctt caggatctcg gaggccggt aataaaactt gtgaagaacc tggaacacat	840
gaagaactca acttccatca agagaagaac actgtcgatg actgtaattt tatggtaaatt	900
ggaaattgga atccatttac aatcttttagc tatcatgagc aatacgctgg aatttccaac	960
gagggtgaggg tttcagactt tgttttttag ggcttcaata attgaacca catattcttc	1020
tcatcttctg attattatTT tttttaaaaa aaaaaattct tgtttctctg cagcatcaat	1080
tggttacaga cttgcaattt tgtggaaagc tatgggaagg ctag	1124

<210> 9

<211> 1059

<212> DNA

<213> *Solanum tuberosum*

<400> 9

atgtaccctt cgagcccca ttttccagc tcttcatctt tctttcacat taatattcca	60
tctccttcta tgcaatatga accggaattc atccaatatt tccatgactt tcaattcatc	120
caacctgctg cttacgatca gaataatttg gataccaata ttacggcaga agaagctgat	180
cataagatgg aagaagatga attgatcatg aaaagctgca agaacaagaa ggatgagagt	240
actagtacca ctactactat tcgtaggaaa aacaacaaga gaactacgag tggtagtggt	300
gtaggacctt cgaagaaaga tagacacagc aaaataaaca cggcacatgg cccaagagac	360
cgaagaatga gactttcact tgaaattgct agaaaattct tcaatttgca agacttgctt	420
gggttcgata aggctagcaa aactgtagaa tggctactca caaagtcaaa atcagctgta	480
aacgatctcg ttcagaaaat taacaaagga aaatgcagcg ctagtacaaa tcctaattatt	540
ggtgttgat catctccctc cgagtcatgt gaagtcatat ctggagtaat cgacgaatca	600
gcagcaacta ataatactca caagcaacag aagaaaaaaa agtcgattcg tagggcaata	660

tttcatccag ttgttgcaaa ggaatcaagg aaagaagcaa gggcaagggc aagggaaga	720
acaaaaataa agaaaagcct aaataataat aatggtgatc aatccatggc gcctgatgag	780
gatttaacaa gatcattagg atcttggagt actacatttg aagatcatca atcagggtatt	840
caagcctata ataataactaa caatattatg aatgctgttg ataactttaa tttggtggat	900
actagcaatt ggagcccatt tatgttcaac tatcaccaaa tcaataactga aatttctcag	960
gaggtagtga ttaacttaat tagattatta ttattattat tattaatccg atcgccaata	1020
tatttatattt tattttttatt cttctgttgc agcatcaat	1059

<210> 10
 <211> 1092
 <212> DNA
 <213> Solanum tuberosum

<400> 10 atgtatcctc caagcaacaa taactgcaac tacagcccaa ttttgtcttc tttcatatgc	60
caaaatattc catcttctcc ttgtatgcaa tatgaacacg aactatactt tcaaaacttc	120
aatcatgatg accaatatta ttttcaacta cagcaacaag ttcccttgat agatgacttg	180
agtcctcacg tcttagctga cagctgcact gagactgtta ctaagccttc aaattgcaat	240
cacgtactag aaggaatgga agaaggccga ggcggaaaca aaggagatga tgttgttatg	300
agtagcagaa ttagtattat tagtggacgg atctcgaaaa acaataagag atcttccaat	360
aaggatcgac acagcaagat caacacggct cgtggtccaa gagatcgaag gatgagactt	420
tcacttgatg ctgctcgcaa gtttttccgt ttgcaggact tgttgggatt tgataaggcc	480
agcaaaactg tagaatgggt gcttactcaa tcrgattccg caattgaaga gctcgtcgcc	540
gttaaaggca atgatgctca ggttcctcag caaactagct gcaatacccc cactactact	600
actggaattg gtgcaatttg tgcatctaata tctatttctg agtcatgtga agttatatca	660
ggaactgatg aaacttcctc taatgacaaa aacaaggaaa ctactgctaa agatgagaag	720
gagaaaaaga agaagccggt taacacagct cgtagacctg cgtttgaacc tcttacaag	780
gaatcaagga atcaagcaag agccagggct agagagagaa caaaaacaaa gaaaatgagc	840
caagttggaa aatccaaatc cccagctcat gatttgaacc cttcaggatc tcggaggccg	900
gctaatagaa cttgtgaaga acctggaaca catgaacaac acaccttcca tcatgttgat	960
gacagtagtt ttgtgggttaa tggaaattgg aatccattta caatcttcac ttctcatgaa	1020
caatatgctg gaattttcaa tgagcatcaa ttagttacag acttgcaatt ttatggaaag	1080
ctgtgggaaa gc	1092

<210> 11
 <211> 225
 <212> DNA
 <213> Artificial

<220>
 <223> RNAi para el gen S1BRC1L1

<400> 11
 tggctactca caaagtcaaa atcagcgggtg aacgatctgg ttcagaaaat taacaaagac 60
 aaatgcagcg gtagtgaaaa tcctaataatt gctactgtat catctccttc cgccgaatca 120
 tgtgaagtta tcgacgaatc agctgcaact aatacagcag aaactcagaa gcaacagaag 180
 aaaaaagtta agtcgattcg tagggcaata attcatccag ttggtt 225

<210> 12
 <211> 415
 <212> DNA
 <213> Artificial

<220>
 <223> RNAi para el gen SlBRC1L2

<400> 12
 caacaccgct cgtgggtccaa gagatcgaag gatgagactt tcacttgatg ctgctcgcaa 60
 gtttttccgt ttgcaggact tattgggatt cgataaggcc agcaaaactg ttgaatgggtt 120
 gcttactcaa tcggattctg caattgaaga gcttggtgcc gctaaaggca atgatgcaca 180
 gggtgctcag caaactagct gcaatacccc cactactact actggaattg gtgcaatttg 240
 tgcattctaatt tctattttctg agtcgtgtga agttatatca ggaactgatg aaacttcctc 300
 taatgacaaa aacaaggaaa ccgctcaaga tgaggagaag aagaaaagga agaaggtggt 360
 taacacagct cgtagagctg tgtagaacc tcttaciaag gaatcgagga atcaa 415

<210> 13
 <211> 185
 <212> DNA
 <213> Artificial

<220>
 <223> RNAi para el gen StBRC1L1

<400> 13
 agaaaattag caaaggaaaa tgcagcgcta gtacaaatcc taatattggt gttgtatcat 60
 ctccctccga gtcattgtgaa gtcattatctg gagtaatcga cgaatcagca gcaactaata 120
 atactcacia gcaacagaag aaaaaaaagt cgattcgtag ggcaatattt catccagttg 180
 ttgca 185

<210> 14
 <211> 168
 <212> DNA
 <213> Artificial

<220>
 <223> RNAi para el gen StBRC1L2

<400> 14
 gccgttaaag gcaatgatgc tcagggttcct cagcaaaacta gctgcaatac cccactact 60
 actactggaa ttggtgcaat ttgtgcatct aattctattt ctgagtcatg tgaagttata 120
 tcaggaactg atgaaacttc ctctaattgac aaaaacaagg aaactgct 168

<210> 15

<211> 1041
 <212> DNA
 <213> *Solanum lycopersicum*

<400> 15
 atgtaccctt cgagcaatta cagccccaat atttccagct cttcatcttt ctttcacatt 60
 aatattccat ctccttctat gcaatatgaa cccgaattca tccaatattt ccatgatttt 120
 caattcatcc aacctagtta cgatcagaat accaatattc ctgcagaaga agctgctgat 180
 tcggacaaac tagataaaat agaagaagat caatcaatca taaaaagctg caataataac 240
 aagaaggatg agaagagtag tagcagtact agtactattc gtagaaaaaa caacaagaga 300
 actacgagtg gtagtgctgg tgtaggacct tcgaagaaag atagacacag caaaatcaac 360
 acggcacatg gcccaagaga ccgaagaatg agactatcac ttgaaattgc tcgcaaattc 420
 ttcaatttgc aagacttgct tgggttcgat aaagccagca aaactgtaga atggctactc 480
 acaaagtcaa aatcagcggg gaacgatctg gttcagaaaa ttaacaaaga caaatgcagc 540
 ggtagtgaaa atcctaatat tgctactgta tcatctcctt ccgccgaatc atgtgaagtt 600
 atcgacgaat cagctgcaac taatacagca gaaactcaga agcaacagaa gaaaaaagtt 660
 aagtcgattc gtagggcaat aattcatcca gttgttgcaa aggaatcaag gaaagaagca 720
 agagcaaggg caagggaaag aacaataata aagaaaagcc taaatgataa cacgaataat 780
 aataataatg gtgatcaatc tatggctgat gaggatttaa caagatcatt aagatcttgg 840
 aatactacat ttgaagatca tcaatcaggt attcaaggct ataataataa taataatatg 900
 aatgttgttg ataactttta tttggtggat actagcaatt ggagcccatt tatgttcaac 960
 tatcaccaaa tcaatactga aatttctcaa gagcatcaat ttgcgaactt ccagtattct 1020
 gggaagttat gggaagctta a 1041

<210> 16
 <211> 1014
 <212> DNA
 <213> *Solanum lycopersicum*

<400> 16
 atgcaatatg aacacgaact atactttcaa agctttaatc atgataacca atattatttt 60
 caacaacagc aactagttcc ctcgatagat gatttgagtc ctcacatctt agctgacagc 120
 tgcaccgaga ttattactaa gccttcgaat tgcaaccacg aactacaagg aatggaagaa 180
 ggccgaggcg aaaagaaagg agatgatgat gttatgagta gcagaattag tggacggatc 240
 tcaaaaaata ataagagatc ttccaataaa gatcgacaca gcaagatcaa caccgctcgt 300
 ggtccaagag atcgaaggat gagactttca cttgatgctg ctcgcaagtt tttccgtttg 360
 caggacttat tgggattcga taaggccagc aaaactgttg aatgggttgct tactcaatcg 420
 gattctgcaa ttgaagagct tggtgccgct aaaggcaatg atgcacaggt tgctcagcaa 480
 actagctgca ataccccccac tactactact ggaattgggtg caatttgtgc atctaattct 540
 atttctgagt cgtgtgaagt tatatcagga actgatgaaa cttcctctaa tgacaaaaac 600
 aaggaaaccg ctcaagatga ggagaagaag aaaaggaaga aggtgggttaa cacagctcgt 660

agagctgtgt tagaacctct tacgaaggaa tcgaggaatc aagcaagagc cagggctaga 720
gagagaacaa aatcaaagaa aatgagccaa actggaaaat ccaaatccct agctaataat 780
ttgaaccctt caggatctcg gaggccggct aataaaactt gtgaagaacc tggaacacat 840
gaagaactca acttccatca agagaagaac actgtcgatg actgtaattt tatggtaaata 900
ggaaattgga atccatttac aatcttttagc tatcatgagc aatacgctgg aatttccaac 960
gagcatcaat tgggttacaga cttgcaattt tgtggaaagc tatgggaagg ctag 1014

<210> 17
<211> 30
<212> DNA
<213> Artificial

<220>
<223> cebador Le1

<400> 17
atgtaccctt cgagcaatta cagccccaat 30

<210> 18
<211> 31
<212> DNA
<213> Artificial

<220>
<223> cebador Le2

<400> 18
tatttccagc tcttcatctt tctttcacat t 31

<210> 19
<211> 22
<212> DNA
<213> Artificial

<220>
<223> cebador LeTCP2-F1

<400> 19
caacaccgct cgtgggtccaa ga 22

<210> 20
<211> 28
<212> DNA
<213> Artificial

<220>
<223> cebador LeTCP2-F1 nested

<400> 20
ccaagagatc gaaggatgag actttcac 28

<210> 21
<211> 23
<212> DNA
<213> Artificial

<220>
<223> cebador LeTCP2-R1

<400> 21	
ttgattcctc gattcctttg taa	23
<210> 22	
<211> 25	
<212> DNA	
<213> Artificial	
<220>	
<223> cebador LeTCP2-R1 nested	
<400> 22	
gaggttctaa cacagctcta cgagc	25
<210> 23	
<211> 22	
<212> DNA	
<213> Artificial	
<220>	
<223> cebador LeTCP2 cDNA-F	
<400> 23	
gaatgcaata tgaacacgaa ct	22
<210> 24	
<211> 24	
<212> DNA	
<213> Artificial	
<220>	
<223> cebador LeTCP2 cDNA-R	
<400> 24	
atgaactgca tcgtagtttt attc	24
<210> 25	
<211> 30	
<212> DNA	
<213> Artificial	
<220>	
<223> cebador Le3	
<400> 25	
attgagaatg acttgaaaga taaagatgag	30
<210> 26	
<211> 27	
<212> DNA	
<213> Artificial	
<220>	
<223> cebador GSP1-TCP1	
<400> 26	
tgtgaaagaa agatgaagag ctggaaa	27
<210> 27	
<211> 25	
<212> DNA	
<213> Artificial	

<220>
 <223> cebador GSP2-TCP1

 <400> 27
 ttggggctgt aattgctcga aggggt 25

 <210> 28
 <211> 27
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador GSP1-TCP2

 <400> 28
 tcagctaaga tgtgaggact caaatca 27

 <210> 29
 <211> 28
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador GSP2-TCP2

 <400> 29
 atctatcgag ggaactagtt gctgttgt 28

 <210> 30
 <211> 34
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador para el extremo 5' de S1BRC1L1

 <400> 30
 ggggctcgag ggatccagaa aattagcaaa ggaa 34

 <210> 31
 <211> 34
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador para el extremo 3' de S1BRC1L1

 <400> 31
 ggggggtacc atcgattgca acaactggat gaaa 34

 <210> 32
 <211> 40
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador para el extremo 5' de S1BRC1L2

 <400> 32
 ggggctcgag ggatccgccg ttaaaggcaa tgatgctcag 40

 <210> 33

<211> 41
 <212> DNA
 <213> Artificial

<220>
 <223> cebador para el extremo 3' de S1BRC1L2

<400> 33
 ggggggtacc atcgatagca gtttccttgt tttgtcatt a 41

<210> 34
 <211> 26
 <212> DNA
 <213> Artificial

<220>
 <223> cebador racest1-5'

<400> 34
 tgggctccaa ttgctagtat ccacca 26

<210> 35
 <211> 26
 <212> DNA
 <213> Artificial

<220>
 <223> cebador StTCP1-ORF1

<400> 35
 atgtaccctt cgagcccaa tatttc 26

<210> 36
 <211> 34
 <212> DNA
 <213> Artificial

<220>
 <223> cebador B26

<400> 36
 gactcgagtc gacatcgttt tttttttttt tttt 34

<210> 37
 <211> 17
 <212> DNA
 <213> Artificial

<220>
 <223> cebador B25

<400> 37
 gactcgagtc gacatcg 17

<210> 38
 <211> 27
 <212> DNA
 <213> Artificial

<220>
 <223> cebador genómico-StTCP1A

<400> 38
 tgaatagaag tgtagtaggt tgtcctt 27

<210> 39
 <211> 25
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador genómico-StTCP1B

 <400> 39
 tgaaagataa agatgagctt attta 25

 <210> 40
 <211> 29
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador StTCP2-A

 <400> 40
 agagatcttc caataaggat cgacacagc 29

 <210> 41
 <211> 29
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador StTCP2-B

 <400> 41
 atcaacacgg tcgtgggtcc aagagatcg 29

 <210> 42
 <211> 30
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador St2-Seq 1

 <400> 42
 tcattctcctt tgtttccgcc tcggccttct 30

 <210> 43
 <211> 27
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador St2-Seq 2

 <400> 43
 cttccattcc ttctagtacg tgattgc 27

 <210> 44
 <211> 26
 <212> DNA
 <213> Artificial

 <220>
 <223> cebador StTCP2-5'

<400> 44
 atgtatcctc caagcaacaa taactg 26

<210> 45
 <211> 28
 <212> DNA
 <213> Artificial

<220>
 <223> cebador StTCP2-3'

<400> 45
 gctttccac agctttccat aaaattgc 28

<210> 46
 <211> 34
 <212> DNA
 <213> Artificial

<220>
 <223> cebador del extremo 5' de StBRC1L1

<400> 46
 ggggctcgag ggatccagaa aattagcaaa ggaa 34

<210> 47
 <211> 34
 <212> DNA
 <213> Artificial

<220>
 <223> cebador del extremo 3' de StBRC1L1

<400> 47
 ggggggtacc atcgattgca acaactggat gaaa 34

<210> 48
 <211> 40
 <212> DNA
 <213> Artificial

<220>
 <223> cebador del extremo 5'

<400> 48
 ggggctcgag ggatccgccg ttaaaggcaa tgatgctcag 40

<210> 49
 <211> 41
 <212> DNA
 <213> Artificial

<220>
 <223> cebador del extremo 3' del gen StBRC1L2

<400> 49
 ggggggtacc atcgatagca gtttccttgt ttttgtcatt a 41

<210> 50
 <211> 325
 <212> PRT
 <213> Solanum lycopersicum

<400> 50

Met Tyr Pro Ser Ser Asn Tyr Ser Pro Asn Ile Ser Ser Ser Ser Ser
 1 5 10 15

Phe Phe His Ile Asn Ile Pro Ser Pro Ser Met Gln Tyr Glu Pro Glu
 20 25 30

Phe Ile Gln Tyr Phe His Asp Phe Gln Phe Ile Gln Pro Ser Tyr Asp
 35 40 45

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

Asp Lys Ile Glu Glu Asp Gln Ser Ile Ile Lys Ser Cys Asn Asn Asn
 65 70 75 80

Lys Lys Asp Glu Lys Ser Ser Ser Ser Thr Ser Thr Ile Arg Arg Lys
 85 90 95

Asn Asn Lys Arg Thr Thr Ser Gly Ser Ala Gly Val Gly Pro Ser Lys
 100 105 110

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

Arg Met Arg Leu Ser Leu Glu Ile Ala Arg Lys Phe Phe Asn Leu Gln
 130 135 140

Asp Leu Leu Gly Phe Asp Lys Ala Ser Lys Thr Val Glu Trp Leu Leu
 145 150 155 160

Thr Lys Ser Lys Ser Ala Val Asn Asp Leu Val Gln Lys Ile Asn Lys
 165 170 175

Asp Lys Cys Ser Gly Ser Glu Asn Pro Asn Ile Ala Thr Val Ser Ser
 180 185 190

Pro Ser Ala Glu Ser Cys Glu Val Ile Asp Glu Ser Ala Ala Thr Asn
 195 200 205

Thr Ala Glu Thr Gln Lys Gln Gln Lys Lys Lys Val Lys Ser Ile Arg
 210 215 220

Arg Ala Ile Ile His Pro Val Val Ala Lys Glu Ser Arg Lys Glu Ala
 225 230 235 240

Arg Ala Arg Ala Arg Glu Arg Thr Ile Ile Lys Lys Ser Leu Asn Asp
 245 250 255

Asn Thr Asn Asn Asn Asn Asn Gly Asp Gln Ser Met Ala Asp Glu Asp
 260 265 270

Leu Thr Arg Ser Leu Arg Ser Trp Asn Thr Thr Phe Glu Asp His Gln
 275 280 285

Ser Ala Ile Gly Ala His Leu Cys Ser Thr Ile Thr Lys Ser Ile Leu
 290 295 300

Lys Phe Leu Lys Ser Ile Asn Leu Arg Thr Ser Ser Ile Leu Gly Ser
 305 310 315 320

Tyr Gly Lys Leu Asn
 325

<210> 51
 <211> 362
 <212> PRT
 <213> Solanum tuberosum

<220>
 <221> misc_feature
 <222> (28)..(28)
 <223> Xaa can be any naturally occurring amino acid
 <400> 51

Met Tyr Pro Pro Ser Asn Asn Asn Cys Asn Tyr Ser Pro Ile Leu Ser
 1 5 10 15

Ser Phe Ile Cys Gln Asn Ile Pro Ser Ser Pro Xaa Met Gln Tyr Glu
 20 25 30

His Glu Leu Tyr Phe Gln Asn Phe Asn His Asp Asp Gln Tyr Tyr Phe
 35 40 45

Gln Leu Gln Gln Gln Val Pro Leu Ile Asp Asp Leu Ser Pro His Val
 50 55 60

Leu Ala Asp Ser Cys Thr Glu Thr Val Thr Lys Pro Ser Asn Cys Asn
 65 70 75 80

His Val Leu Glu Gly Met Glu Glu Gly Arg Gly Gly Asn Lys Gly Asp
 85 90 95

Asp Val Met Ser Ser Arg Ile Ser Ile Ile Ser Gly Arg Ile Ser Lys
 100 105 110

Asn Asn Lys Arg Ser Ser Asn Lys Asp Arg His Ser Lys Ile Asn Thr
 115 120 125

Ala Arg Gly Pro Arg Asp Arg Arg Met Arg Leu Ser Leu Asp Ala Ala
 130 135 140

Arg Lys Phe Phe Arg Leu Gln Asp Leu Leu Gly Phe Asp Lys Ala Ser
 145 150 155 160

Lys Thr Val Glu Trp₁₆₅ Leu Leu Thr Gln Ser₁₇₀ Asp Ser Ala Ile Glu₁₇₅ Glu

Leu Val Ala Val₁₈₀ Lys Gly Asn Asp Ala₁₈₅ Gln Val Pro Gln Gln₁₉₀ Thr Ser

Cys Asn Thr₁₉₅ Pro Thr Thr Thr Thr₂₀₀ Gly Ile Gly Ala Ile₂₀₅ Cys Ala Ser

Asn Ser₂₁₀ Ile Ser Glu Ser Cys₂₁₅ Glu Val Ile Ser Gly₂₂₀ Thr Asp Glu Thr

Ser₂₂₅ Ser Asn Asp Lys Asn₂₃₀ Lys Glu Thr Ala Lys₂₃₅ Asp Glu Lys Glu Lys₂₄₀

Lys Lys Lys Pro Val₂₄₅ Asn Thr Ala Arg Arg₂₅₀ Ala Ala Phe Glu Pro₂₅₅ Leu

Thr Lys Glu Ser₂₆₀ Arg Asn Gln Ala Arg₂₆₅ Ala Arg Ala Arg Glu₂₇₀ Arg Thr

Lys Thr Lys₂₇₅ Lys Met Ser Gln Val₂₈₀ Gly Lys Ser Lys Ser₂₈₅ Pro Val His

Asp Leu₂₉₀ Asn Pro Ser Gly Ser₂₉₅ Arg Arg Pro Ala Asn₃₀₀ Arg Thr Cys Glu

Glu₃₀₅ Pro Gly Thr His Glu₃₁₀ Gln His Thr Phe His₃₁₅ His Val Asp Asp Thr₃₂₀

Asn Phe Val Val₃₂₅ Asn Gly Asn Trp Asn₃₃₀ Phe Thr Ile Phe Ser₃₃₅ Ser

His Glu Gln Tyr₃₄₀ Ala Gly Ile Ser Asn₃₄₅ Glu His Gln Leu Val₃₅₀ Thr Asp

Leu Gln Phe₃₅₅ Tyr Gly Lys Leu Trp₃₆₀ Glu Ser

<210> 52

<211> 1086

<212> DNA

<213> Solanum tuberosum

<400> 52

atgtatcctc caagcaacaa taactgcaac tacagcccaa ttttgtcttc tttcatatgc 60

caaaatattc catcttctcc ttgtatgcaa tatgaacacg aactatactt tcaaaacttc 120

aatcatgatg accaatatta ttttcaacta cagcaacaag ttcccttgat agatgacttg 180

agtcctcacg tcttagctga cagctgcact gagactgtta ctaagccttc aaattgcaat 240

cacgtactag aaggaatgga agaaggccga ggcggaaaca aaggagatga tgttatgagt 300

agcagaatta gtattattag tggacggatc tcaaaaaaca ataagagatc ttccaataag	360
gatcgacaca gcaagatcaa cacggctcgt ggtccaagag atcgaaggat gagactttca	420
cttgatgctg ctcgcaagtt tttccgtttg caggacttat tgggatttga taaggccagc	480
aaaactgtag aatggttgct tactcaatca gattccgcaa ttgaagagct cgtcgccggt	540
aaaggcaatg atgctcaggt tcctcagcaa actagctgca atacccccac tactactact	600
ggaattggtg caatttgtgc atctaattct atttctgagt catgtgaagt tatatcagga	660
actgatgaaa cttcctctaa tgacaaaaac aaggaaactg ctaaagatga gaaggagaaa	720
aagaagaagc cggttaacac agctcgtaga gctgcgtttg aacctcttac aaaggaatca	780
aggaatcaag caagagccag ggctagagag agaacaaaaa caaagaaaat gagccaagtt	840
ggaaaatcca aatccccagc tcatgatttg aacccttcag gatctcggag gccggcta	900
agaacttggtg aagaacctgg aacacatgaa caacacacct tccatcatgt tgatgacact	960
aattttgtgg ttaatggaaa ttggaatcca ttacaatct tcagctctca tgaacaatat	1020
gctggaattt ccaatgagca tcaattagtt acagacttgc aattttatgg aaagctgtgg	1080
gaaagc	1086