

LISTADO DE SECUENCIAS

<110> Dow AgroSciences LLC
 FIME
 Narva, Ken E.
 Worden, Sarah E.
 Frey, Meghan
 Rangasamy, Murugesan
 Gandra, Premchand
 Lo, Wendy
 Fishilevich, Elane
 Vilcinskas, Andreas
 Knorr, Eileen

<120> MOLECULAS DE ÁCIDOS NUCLEICOS DE SPT6 PARA CONTROLAR PLAGAS DE INSECTOS

<130> 2971-P12796.1US (77541-US-NP)

<160> 84

<170> PatentIn versión 3.5

<210> 1
 <211> 5948
 <212> ADN
 <213> Diabrotica virgifera

<400> 1
 gtcacttgtc aattgtcaac ctggaaaacg acttgtcgaa gtcgcatagt ttttataagt 60
 ttaaataaac taaattaaat ataaatactt cgagaatgca ataattatta ttctttaact 120
 agaccacag cttattaatt agcagaagta gtagcagact tatactaact agcataagga 180
 gaaacatatt aacataacat ggagacttc atagattctg aagcagaaga aagtagtgag 240
 gaggaggaat tagatcatag ggatcgtaaa aaagcccaa aagccaaagt ttagatagat 300
 tcagatgaag atgatgaaga tgatgacgaa agactgagag aggaattaaa ggatttgatt 360
 gatgataatc ctattgaaga aagtgatgct gagtctgatg cttcaggaag ggaaaaacgt 420
 aagaaatctg acgacgagga tttggatgat cgactggaag atgaagatta tgatttgctt 480
 gaagaaaatt tgggtgttaa agttgaaaga aggaaattca agcgactgcg gcgttttgaa 540
 gatgaagaaa gtgaaggaga agaagaacat gatcctgaac aagataggga acaaattgct 600
 atggatatat tttcagatga tgacgatgaa agacgatcag aacgaagtca cagacctgcc 660
 gtcgaacaag aaacttatgg ttagggcgag gaagaagagg aaggggagta ctcggatgcc 720
 gatgatttta tagttgacga tgacggtaga ccgatagctg aaaagaagaa gaagaaaaaa 780
 ccaatattta ctgatgccgc tctccaagag gctcaagaaa ccttcggtgt cgattttgat 840

tatgatgaat ttagtaaata cgatgaagat gattacgaag atgaagagga ggaggatgac	900
gaatacgagg aagatgatgt agagaaaagg aaacggccta aaaagacttc aaagaaaaaa	960
ccgacgaaga aatccatttt tgaagtgtat gaacctagtg aacttaaaag agggttcttt	1020
accgatctcg ataatgaaat ccgaaacact gatattcccg aaagaatgca acttcgtgat	1080
gttccaatca ccgctgttcc ggatgactca actgaacttg atgatgaagc agaatggatt	1140
tacaggcaag cgttttgtaa cagaactgtt tccaatgtgg attctcattt atcatcagag	1200
gcaagagaga aattaaagaa gactcatcat gccatcggaa aaatcagaaa agcattagat	1260
tttataagaa atcaacaatt agaagtaccg ttatttgctt tttatagaaa ggagtatgtt	1320
caaccggaac ttaatattaa cgatttgtgg aaagtatata aatacgaatgc aaagtgggtgc	1380
caattgaaaa cacgcaaaga aaacctcttg aagctttttg aaaaaatgag gtcatatcaa	1440
actgaccaca taatgaaaga tccagatgca ccaattccag acaaccttcg tattatgact	1500
gagtccgaca ttgagcgatt gaaaaatgtt caaacccgag aagagttaaa tgacgttcac	1560
aatcattttca ttttatatta tgctgcagat ttgccagcca tgcagccgc gtggagagtc	1620
aaagaaagag aaaggagaag acaggaaaaga aaggaggcta gacttaagct catcgctgaa	1680
agtgaagaag gtgctgaaat tcctgaagag cctgaggaaa ttgacgatga tgaaccagaa	1740
gctgaaacct taaaatacgc caatagatca ggcagctatg cactatgtaa taaaggaggt	1800
ttgggtcctc tagcgaagaa atttggttta acgcctgaag aatttgccga aaacctgaga	1860
gataattatc agaggcacga agtagatcaa gaacatatag aacctgtaga agtcgctaaa	1920
gaattcgtat cgccgaaatt tcctacagtg gaagaagtgt tgcaagctac taaacacatg	1980
gtagctttac aaatagcaag agaaccatta gtaaggaaat gcgtaagaga aattttcttt	2040
gaacgagcta gattaaacgt ttatccaacc aaaaaggggtg tgaaagtatt agatgaagct	2100
cataattgct atagtatgaa gtatgtaaaa aataaaccag taagagatct tgcaggcgac	2160
caatttttaa aattatgttt agccgaagag gagaacctcc ttactattac catcaatgac	2220
catattcaag gaaacactac taacaattac attgatgaag tcaaacaatt atatataaag	2280
gatgaattca gcaaacacgt tcaggattgg aatgcgctaa gaatggaatc ggtagaaagg	2340
gctttaacga aaagtgtctt accagattta agatctgaat taaaacgaac gttgctcaca	2400
gaggctaaag aattcgtatt aaaagcttgc tgtagaaaat tatataattg gataaagatt	2460
gctccatagc caataacttt tcccgatgaa gacgaagatg attgggatac atccaaaggt	2520
gttagaacta tgggtgtagc atacgtacca gagcacacag tatcagcttt tacctgtatt	2580

tcagcaccag acggagatat aactgattat ctcagattac caaatattct aaaaagaaaa	2640
aatagctttc gaactgaaga aaaactttatg aaggaagctg atcttcaagc actgaaaaat	2700
ttcatattcc ttaaaaagcc tcatgtgata gcagtagggg gtgagtcagc agaagcctta	2760
atgatcgctg atgatatcag aggagtaata agtgaactaa tagaatccga ccaattccca	2820
cagattaggg ttgaaattat tgataatgaa ttagccaaag tgtacgcaa ttccattaaa	2880
ggttcaactg atttcagaga ttatccagag ttgttaaggc aagctatttc attagctcga	2940
agaatgcaag atccttttgt tgaattttcc caattatgta atagcgatga ggaaattttg	3000
agtctgaggt ttcatccctt gcaggaacaa gtccagaaag aagaactact agaagctctc	3060
tgtttagaat ttgtcaacag aacaaatgaa gtaggtgtag atataaatct tgccgttcag	3120
cagattcata aaagtagttt agttcaattc atatgcggtc taggaccgcg taaaggtcaa	3180
gcgttactta aagttctgaa acaaactaat cagaggcttg aaaacagAAC ccaattgggt	3240
acattttgtc atatgggtcc aaaagttttt attaattggt ctggattcat aaagattgat	3300
accaatagtt taggagacag tactgaggca tatgttgaaa tattggatgg ctctcgagtt	3360
catcccgaac cttatgaatg ggacgaaaa atggctgtgg atgctttaga atatgacgat	3420
gatgaggag ctaatccggc gggagcttta gaggaattc tcgaggcgcc agagaggta	3480
aaagatcttg acttggatgc atttgcgag gaattggaaa gacaaggatt tggtaacaag	3540
agtataacat tgtatgacat tagagcagaa ctgaactcgc gatataaaga tttgagacaa	3600
ccttttcgtt ctgcaaatcc tgaagaacta ttcgatatgc ttactaaaga aactcccga	3660
acattttata ttggaaaaat ggttacatct accgtgtttg gcattgcaag gagaaaacca	3720
aagtcagacc agctcgatca agctaatccg gtccgtaatg acgaaactgg tttgtggcag	3780
tgcccccttct gtttgaaaa tgattttcct gaattatctg atgtatggaa tcattttgat	3840
gcaggagcat gtctgtgtca agctactgga gttaactaa gactggataa tggatatatta	3900
ggttatatatt atataaaaa tataagcgac aaaccagttg ctaatccgga agaaagagta	3960
ggcataggac aattaattca ctgtagaata ataaaaattg acgtagagaa gtttagtggt	4020
gattgtacat cgaaatctag cgatcttgct gataaaaatc atgaatggag acctcaacga	4080
gacctcatt atgatcaaga acgtgaagac aaagacaatc gattagaagc cgagaagaag	4140
aaagagaaac agcgtatgac gtacatcaag agggttatcg ttcatccggc gttccataac	4200
atatactatg ccgaagccga aaaatgtatg gttaatatgg accagggtga agttatcatt	4260

aggccttcga gtaaggggtgc ggatcatttg accattactt ggaagggttac ggatggaatc	4320
tatcaacaca ttgatattaa ggaacaaggg aaagttaacg ctttttcttt aggaaaatca	4380
ttatggattg gaaatgaaga atttgaagat cttgatgaaa taatagctag gcacgttaca	4440
ccaatggcgg cgcatgctag agatttactg tatttttaggt attacaaaga tttccaaggt	4500
ggtcataaag ataaggctga ggaatatcta aaagatgaaa aaaagaaaaa tgcttctaaa	4560
attcattatg tagttagtgc tgctaagaat atacctggta aatttcttct ttcgtacctt	4620
ccacgcaaca aagttagaca cgaatatgta acagttactc cagaaggctt tcggtttaga	4680
caacaaatgt ttgattccgt ttcttcgtta tttaaatggg tcaaagaaca tttccgggag	4740
cctccaccag gcggtgcaac accaggtagc acgccaagga tggcttcaag cagaactgga	4800
tatggaagtg ccacaccgc gtatagtatg aataatgaag ctattcaaag agttgctcaa	4860
aatttaccaa gtcatgtagt tcaagcgta tctgctgcc ccaaccaaac tccacattat	4920
ccccacacc ctggttatgg aggcaattat attaatacgc cttacactcc aagtgggtcaa	4980
actccataca tgactccgta cgctacaccc catacgcagc aaactccccg ctatgggtcat	5040
caaacacctt cccaacacat ggcgagctca gcaccacaag gtctcaacaa tcccttttta	5100
catcctggcg cggtgactcc ctccaacga actcctattt atcgcaacca tcctgcacaa	5160
tctccagtaa tgcttcctac aagccctgta ccaagtccag gttcccagag ttcatacagt	5220
agtcatttaa gtcataatca gcgaagtgga agttatgctg aatccttaag attccaacct	5280
cccgaatcgc cgagaagctc agtgagtaat agaagctttc aaactgatag atacggcggt	5340
gataggtatg gtaaaggagg aagtcataga tatggtggaa gctcaaacga agatagatat	5400
ggtaagggag gaggaggaaa tgaaaatacg gattggcaga aagctgcaga agcatgggct	5460
cgatctagat ctactccgag aagtgatggc cgtaatactc caagatctgt aggtcaacga	5520
actcctagat acgacaacga cgccgaacgt tctagaatga aacacctcag caagagcccg	5580
aggtctgtta ggtctactcc tcgaaccaat acatctccac attctatgtc cctaggtgat	5640
gctaccctc tgatgacga aagtatctaa attactttgt atttgggttat atagtagggg	5700
aacagtgata ttgtaaatgc taaaatcaac aatacagatt cgcgatatta agtcacaatg	5760
acgacctctc gtggagttcg gtgaaactaa ctttgagggc gtttttactg tcaaacgtcc	5820
agcgcatatg cacctgaaac aagtaggcaa tattcattat ttattttttac aggtttttta	5880
tacaaatatt atttacaaca tagacttcaa cttttactga aaggtgaagc tttcatatta	5940
ataatttt	5948

<210> 2
 <211> 1823
 <212> PRT
 <213> *Diabrotica virgifera*

<400> 2

Met Ala Asp Phe Ile Asp Ser Glu Ala Glu Glu Ser Ser Glu Glu Glu
 1 5 10 15

Glu Leu Asp His Arg Asp Arg Lys Lys Ala Gln Lys Ala Lys Val Val
 20 25 30

Asp Ser Ser Asp Glu Asp Asp Glu Asp Asp Asp Glu Arg Leu Arg Glu
 35 40 45

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

Glu Ser Asp Ala Ser Gly Arg Glu Lys Arg Lys Lys Ser Asp Asp Glu
 65 70 75 80

Asp Leu Asp Asp Arg Leu Glu Asp Glu Asp Tyr Asp Leu Leu Glu Glu
 85 90 95

Asn Leu Gly Val Lys Val Glu Arg Arg Lys Phe Lys Arg Leu Arg Arg
 100 105 110

Phe Glu Asp Glu Glu Ser Glu Gly Glu Glu Glu His Asp Pro Glu Gln
 115 120 125

Asp Arg Glu Gln Ile Ala Met Asp Ile Phe Ser Asp Asp Asp Asp Glu
 130 135 140

Arg Arg Ser Glu Arg Ser His Arg Pro Ala Val Glu Gln Glu Thr Tyr
 145 150 155 160

Gly Val Gly Glu Glu Glu Glu Glu Gly Glu Tyr Ser Asp Ala Asp Asp
 165 170 175

Phe Ile Val Asp Asp Asp Gly Arg Pro Ile Ala Glu Lys Lys Lys Lys
 180 185 190

Lys Lys Pro Ile Phe Thr Asp Ala Ala Leu Gln Glu Ala Gln Glu Thr
 195 200 205

Phe Gly Val Asp Phe Asp Tyr Asp Glu Phe Ser Lys Tyr Asp Glu Asp
 210 215 220

Asp Tyr Glu Asp Glu Glu Glu Asp Asp Glu Tyr Glu Glu Asp Asp
 225 230 235 240

Val Glu Lys Arg Lys Arg Pro Lys Lys Thr Ser Lys Lys Lys Pro Thr
 245 250 255

Lys Lys Ser Ile Phe Glu Val Tyr Glu Pro Ser Glu Leu Lys Arg Gly
 260 265 270

Phe Phe Thr Asp Leu Asp Asn Glu Ile Arg Asn Thr Asp Ile Pro Glu
 275 280 285

Arg Met Gln Leu Arg Asp Val Pro Ile Thr Ala Val Pro Asp Asp Ser
 290 295 300

Thr Glu Leu Asp Asp Glu Ala Glu Trp Ile Tyr Arg Gln Ala Phe Cys
 305 310 315 320

Asn Arg Thr Val Ser Asn Val Asp Ser His Leu Ser Ser Glu Ala Arg
 325 330 335

Glu Lys Leu Lys Lys Thr His His Ala Ile Gly Lys Ile Arg Lys Ala
 340 345 350

Leu Asp Phe Ile Arg Asn Gln Gln Leu Glu Val Pro Phe Ile Ala Phe
 355 360 365

Tyr Arg Lys Glu Tyr Val Gln Pro Glu Leu Asn Ile Asn Asp Leu Trp
 370 375 380

Lys Val Tyr Lys Tyr Asp Ala Lys Trp Cys Gln Leu Lys Thr Arg Lys
 385 390 395 400

Glu Asn Leu Leu Lys Leu Phe Glu Lys Met Arg Ser Tyr Gln Thr Asp
 405 410 415

His Ile Met Lys Asp Pro Asp Ala Pro Ile Pro Asp Asn Leu Arg Ile

420	425	430
Met Thr Glu Ser Asp Ile Glu Arg Leu Lys Asn Val Gln Thr Ala Glu		
435	440	445
Glu Leu Asn Asp Val His Asn His Phe Ile Leu Tyr Tyr Ala Ala Asp		
450	455	460
Leu Pro Ala Met His Ala Ala Trp Arg Val Lys Glu Arg Glu Arg Arg		
465	470	475
Arg Gln Glu Arg Lys Glu Ala Arg Leu Lys Leu Ile Ala Glu Ser Glu		
	485	490
Glu Gly Ala Glu Ile Pro Glu Glu Pro Glu Glu Ile Asp Asp Asp Glu		
	500	505
Pro Glu Ala Glu Thr Leu Lys Tyr Ala Asn Arg Ser Gly Ser Tyr Ala		
	515	520
Leu Cys Asn Lys Gly Gly Leu Gly Pro Leu Ala Lys Lys Phe Gly Leu		
	530	535
Thr Pro Glu Glu Phe Ala Glu Asn Leu Arg Asp Asn Tyr Gln Arg His		
	545	550
Glu Val Asp Gln Glu His Ile Glu Pro Val Glu Val Ala Lys Glu Phe		
	565	570
Val Ser Pro Lys Phe Pro Thr Val Glu Glu Val Leu Gln Ala Thr Lys		
	580	585
His Met Val Ala Leu Gln Ile Ala Arg Glu Pro Leu Val Arg Lys Cys		
	595	600
Val Arg Glu Ile Phe Phe Glu Arg Ala Arg Leu Asn Val Tyr Pro Thr		
	610	615
Lys Lys Gly Val Lys Val Ile Asp Glu Ala His Asn Cys Tyr Ser Met		
	625	630
Lys Tyr Val Lys Asn Lys Pro Val Arg Asp Leu Ala Gly Asp Gln Phe		
	645	650
		655

Leu Lys Leu Cys Leu Ala Glu Glu Glu Asn Leu Leu Thr Ile Thr Ile
 660 665 670

Asn Asp His Ile Gln Gly Asn Thr Thr Asn Asn Tyr Ile Asp Glu Val
 675 680 685

Lys Gln Leu Tyr Ile Lys Asp Glu Phe Ser Lys His Val Gln Asp Trp
 690 695 700

Asn Ala Leu Arg Met Glu Ser Val Glu Arg Ala Leu Thr Lys Ser Val
 705 710 715 720

Leu Pro Asp Leu Arg Ser Glu Leu Lys Arg Thr Leu Leu Thr Glu Ala
 725 730 735

Lys Glu Phe Val Leu Lys Ala Cys Cys Arg Lys Leu Tyr Asn Trp Ile
 740 745 750

Lys Ile Ala Pro Tyr Ala Ile Thr Phe Pro Asp Glu Asp Glu Asp Asp
 755 760 765

Trp Asp Thr Ser Lys Gly Val Arg Thr Met Gly Val Ala Tyr Val Pro
 770 775 780

Glu His Thr Val Ser Ala Phe Thr Cys Ile Ser Ala Pro Asp Gly Asp
 785 790 795 800

Ile Thr Asp Tyr Leu Arg Leu Pro Asn Ile Leu Lys Arg Lys Asn Ser
 805 810 815

Phe Arg Thr Glu Glu Lys Leu Met Lys Glu Ala Asp Leu Gln Ala Leu
 820 825 830

Lys Asn Phe Ile Phe Leu Lys Lys Pro His Val Ile Ala Val Gly Gly
 835 840 845

Glu Ser Arg Glu Ala Leu Met Ile Ala Asp Asp Ile Arg Gly Val Ile
 850 855 860

Ser Glu Leu Ile Glu Ser Asp Gln Phe Pro Gln Ile Arg Val Glu Ile
 865 870 875 880

Ile Asp Asn Glu Leu Ala Lys Val Tyr Ala Asn Ser Ile Lys Gly Ser
 885 890 895

Thr Asp Phe Arg Asp Tyr Pro Glu Leu Leu Arg Gln Ala Ile Ser Leu
 900 905 910

Ala Arg Arg Met Gln Asp Pro Leu Val Glu Phe Ser Gln Leu Cys Asn
 915 920 925

Ser Asp Glu Glu Ile Leu Ser Leu Arg Phe His Pro Leu Gln Glu Gln
 930 935 940

Val Gln Lys Glu Glu Leu Leu Glu Ala Leu Cys Leu Glu Phe Val Asn
 945 950 955 960

Arg Thr Asn Glu Val Gly Val Asp Ile Asn Leu Ala Val Gln Gln Ile
 965 970 975

His Lys Ser Ser Leu Val Gln Phe Ile Cys Gly Leu Gly Pro Arg Lys
 980 985 990

Gly Gln Ala Leu Leu Lys Val Leu Lys Gln Thr Asn Gln Arg Leu Glu
 995 1000 1005

Asn Arg Thr Gln Leu Val Thr Phe Cys His Met Gly Pro Lys Val
 1010 1015 1020

Phe Ile Asn Cys Ser Gly Phe Ile Lys Ile Asp Thr Asn Ser Leu
 1025 1030 1035

Gly Asp Ser Thr Glu Ala Tyr Val Glu Ile Leu Asp Gly Ser Arg
 1040 1045 1050

Val His Pro Glu Thr Tyr Glu Trp Ala Arg Lys Met Ala Val Asp
 1055 1060 1065

Ala Leu Glu Tyr Asp Asp Asp Glu Gly Ala Asn Pro Ala Gly Ala
 1070 1075 1080

Leu Glu Glu Ile Leu Glu Ala Pro Glu Arg Leu Lys Asp Leu Asp
 1085 1090 1095

Leu Asp 1100	Ala Phe Ala Glu Glu 1105	Leu Glu Arg Gln Gly 1110	Phe Gly Asn
Lys Ser 1115	Ile Thr Leu Tyr Asp 1120	Ile Arg Ala Glu Leu 1125	Asn Ser Arg
Tyr Lys 1130	Asp Leu Arg Gln Pro 1135	Phe Arg Ser Ala Asn 1140	Pro Glu Glu
Leu Phe 1145	Asp Met Leu Thr Lys 1150	Glu Thr Pro Glu Thr 1155	Phe Tyr Ile
Gly Lys 1160	Met Val Thr Ser Thr 1165	Val Phe Gly Ile Ala 1170	Arg Arg Lys
Pro Lys 1175	Ser Asp Gln Leu Asp 1180	Gln Ala Asn Pro Val 1185	Arg Asn Asp
Glu Thr 1190	Gly Leu Trp Gln Cys 1195	Pro Phe Cys Leu Lys 1200	Asn Asp Phe
Pro Glu 1205	Leu Ser Asp Val Trp 1210	Asn His Phe Asp Ala 1215	Gly Ala Cys
Pro Gly 1220	Gln Ala Thr Gly Val 1225	Lys Leu Arg Leu Asp 1230	Asn Gly Ile
Leu Gly 1235	Tyr Ile Tyr Ile Lys 1240	Asn Ile Ser Asp Lys 1245	Pro Val Ala
Asn Pro 1250	Glu Glu Arg Val Gly 1255	Ile Gly Gln Leu Ile 1260	His Cys Arg
Ile Ile 1265	Lys Ile Asp Val Glu 1270	Lys Phe Ser Val Asp 1275	Cys Thr Ser
Lys Ser 1280	Ser Asp Leu Ala Asp 1285	Lys Asn His Glu Trp 1290	Arg Pro Gln
Arg Asp 1295	Pro His Tyr Asp Gln 1300	Glu Arg Glu Asp Lys 1305	Asp Asn Arg
Leu Glu	Ala Glu Lys Lys Lys	Glu Lys Gln Arg Met	Thr Tyr Ile

1310		1315		1320
Lys Arg Val Ile Val His Pro Ala Phe His Asn Ile Ser Tyr Ala				
1325		1330		1335
Glu Ala Glu Lys Cys Met Val Asn Met Asp Gln Gly Glu Val Ile				
1340		1345		1350
Ile Arg Pro Ser Ser Lys Gly Ala Asp His Leu Thr Ile Thr Trp				
1355		1360		1365
Lys Val Thr Asp Gly Ile Tyr Gln His Ile Asp Ile Lys Glu Gln				
1370		1375		1380
Gly Lys Val Asn Ala Phe Ser Leu Gly Lys Ser Leu Trp Ile Gly				
1385		1390		1395
Asn Glu Glu Phe Glu Asp Leu Asp Glu Ile Ile Ala Arg His Val				
1400		1405		1410
Thr Pro Met Ala Ala His Ala Arg Asp Leu Leu Tyr Phe Arg Tyr				
1415		1420		1425
Tyr Lys Asp Phe Gln Gly Gly His Lys Asp Lys Ala Glu Glu Tyr				
1430		1435		1440
Leu Lys Asp Glu Lys Lys Lys Asn Ala Ser Lys Ile His Tyr Val				
1445		1450		1455
Val Ser Ala Ala Lys Asn Ile Pro Gly Lys Phe Leu Leu Ser Tyr				
1460		1465		1470
Leu Pro Arg Asn Lys Val Arg His Glu Tyr Val Thr Val Thr Pro				
1475		1480		1485
Glu Gly Phe Arg Phe Arg Gln Gln Met Phe Asp Ser Val Ser Ser				
1490		1495		1500
Leu Phe Lys Trp Phe Lys Glu His Phe Arg Glu Pro Pro Pro Gly				
1505		1510		1515
Gly Ala Thr Pro Gly Ser Thr Pro Arg Met Ala Ser Ser Arg Thr				
1520		1525		1530

Gly	Tyr	Gly	Ser	Ala	Thr	Pro	Ala	Tyr	Ser	Met	Asn	Asn	Glu	Ala
1535						1540					1545			
Ile	Gln	Arg	Val	Ala	Gln	Asn	Leu	Pro	Ser	His	Val	Val	Gln	Ala
1550						1555					1560			
Leu	Ser	Ala	Ala	Thr	Asn	Gln	Thr	Pro	His	Tyr	Pro	His	Thr	Pro
1565						1570					1575			
Gly	Tyr	Gly	Gly	Asn	Tyr	Ile	Asn	Thr	Pro	Tyr	Thr	Pro	Ser	Gly
1580						1585					1590			
Gln	Thr	Pro	Tyr	Met	Thr	Pro	Tyr	Ala	Thr	Pro	His	Thr	Gln	Gln
1595						1600					1605			
Thr	Pro	Arg	Tyr	Gly	His	Gln	Thr	Pro	Ser	Gln	His	Met	Ala	Ser
1610						1615					1620			
Ser	Ala	Pro	Gln	Gly	Leu	Asn	Asn	Pro	Phe	Leu	His	Pro	Gly	Ala
1625						1630					1635			
Val	Thr	Pro	Ser	Gln	Arg	Thr	Pro	Ile	Tyr	Arg	Asn	His	Pro	Ala
1640						1645					1650			
Gln	Ser	Pro	Val	Met	Leu	Pro	Thr	Ser	Pro	Val	Pro	Ser	Pro	Gly
1655						1660					1665			
Ser	Gln	Ser	Ser	Tyr	Ser	Ser	His	Leu	Ser	His	Asn	Gln	Arg	Ser
1670						1675					1680			
Gly	Ser	Tyr	Ala	Glu	Ser	Leu	Arg	Phe	Gln	Pro	Pro	Glu	Ser	Pro
1685						1690					1695			
Arg	Ser	Ser	Val	Ser	Asn	Arg	Ser	Phe	Gln	Thr	Asp	Arg	Tyr	Gly
1700						1705					1710			
Gly	Asp	Arg	Tyr	Gly	Lys	Gly	Gly	Ser	His	Arg	Tyr	Gly	Gly	Ser
1715						1720					1725			
Ser	Asn	Glu	Asp	Arg	Tyr	Gly	Lys	Gly	Gly	Gly	Gly	Asn	Glu	Asn
1730						1735					1740			

Thr Asp Trp Gln Lys Ala Ala Glu Ala Trp Ala Arg Ser Arg Ser
 1745 1750 1755

Thr Pro Arg Ser Asp Gly Arg Asn Thr Pro Arg Ser Val Gly Gln
 1760 1765 1770

Arg Thr Pro Arg Tyr Asp Asn Asp Ala Glu Arg Ser Arg Met Lys
 1775 1780 1785

His Leu Ser Lys Ser Pro Arg Ser Val Arg Ser Thr Pro Arg Thr
 1790 1795 1800

Asn Thr Ser Pro His Ser Met Ser Leu Gly Asp Ala Thr Pro Leu
 1805 1810 1815

Tyr Asp Glu Ser Ile
 1820

<210> 3
 <211> 499
 <212> ADN
 <213> *Diabrotica virgifera*

<400> 3
 cgccttacac tccaagtggc caaactccat acatgactcc gtacgctaca ccccatagc 60
 agcaaaactcc ccgctatggc catcaaacac cttcccaaca catggcgagc tcagcaccac 120
 aaggtctcaa caatcccttt ttacatcctg gcgcgggtgac tccctcccaa cgaactccta 180
 tttatcgcaa ccacccctgca caatctccag taatgcttcc tacaagccct gtaccaagtc 240
 cagggttccca gagttcatac agtagtcatt taagtcataa tcagcgaagt ggaagttatg 300
 ctgaatcctt aagattccaa cctcccgaat cgccgagaag ctcaagtgcg aatagaagct 360
 ttcaaactga tagatacggc ggtgataggt atggtaaagg aggaagtcac agatatgggtg 420
 gaagctcaaa cgaagataga tatggtaagg gaggaggagg aaatgaaaat acggattggc 480
 agaaagctgc agaagcatg 499

<210> 4
 <211> 145
 <212> ADN
 <213> *Diabrotica virgifera*

<400> 4
 gactccgtac gctacacccc atacgcagca aactccccgc tatgggtcatc aaacaccttc 60

ccaacacatg gcgagctcag caccacaagg tctcaacaat ccctttttac atcctggcgc 120

ggtgactccc tccaacgaa ctcct 145

<210> 5
 <211> 108
 <212> ADN
 <213> Diabrotica virgifera

<400> 5
 agagttcata cagtagtcat ttaagtcata atcagcgaag tggaagttat gctgaatcct 60

taagattcca acctcccga tgcgcgagaa gctcagtgag taatagaa 108

<210> 6
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Secuencia promotora de fago T7

<400> 6
 ttaatacgac tcactatagg gaga 24

<210> 7
 <211> 503
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> región codificante de YFP parcial sintetizada

<400> 7
 caccatgggc tccagcggcg ccttgctgtt ccacggcaag atcccctacg tgggtggagat 60

ggagggcaat gtggatggcc acaccttcag catccgcggc aagggtacg gcgatgccag 120

cgtgggcaag gtggatgcc agttcatctg caccacggc gatgtgccg tgcctggag 180

caccctggtg accaccctga cctacggcgc ccagtgttc gccaaagtacg gccccgagct 240

gaaggatttc tacaagagct gcatgcccga tggctacgtg caggagcgca ccatcacctt 300

cgagggcgat ggcaatttca agaccgcgc cgaggtgacc ttcgagaatg gcagcgtgta 360

caatgcgtg aagctgaatg gccagggctt caagaaggat ggccacgtgc tgggcaagaa 420

tctggagttc aatttcaccc cccactgcct gtacatctgg ggcgatcagg ccaatcacgg 480

cctgaagagc gccttcaaga tct 503

<210> 8
 <211> 49
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Dvv-spt6-1_For

 <400> 8
 ttaatacgac tcactatagg gagacgcctt acactccaag tggtaaac 49

 <210> 9
 <211> 50
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Dvv-spt6-1_Rev

 <400> 9
 ttaatacgac tcactatagg gagacatgct tctgcagctt tctgccaatc 50

 <210> 10
 <211> 48
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Dvv-spt6-1_v1_For

 <400> 10
 ttaatacgac tcactatagg gagagactcc gtacgtaca cccatac 48

 <210> 11
 <211> 48
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Dvv-spt6-1_v1_Rev

 <400> 11
 ttaatacgac tcactatagg gagaaggagt tcgttgggag ggagtcac 48

 <210> 12
 <211> 51
 <212> ADN
 <213> Cebador Dvv-spt6-1_v2_For

 <220>
 <223> oligonucleótido cebador sintetizado

 <400> 12

ttaatacgac tcactatagg gagaagagtt catacagtag tcatttaagt c 51

<210> 13

<211> 48

<212> ADN

<213> Secuencia artificial

<220>

<223> Cebador Dvv-spt6-1_v2_Rev

<400> 13

ttaatacgac tcactatagg gagattctat tactcactga gcttctcg 48

<210> 14

<211> 705

<212> ADN

<213> Secuencia artificial

<220>

<223> secuencia artificial sintetizada

<400> 14

atgtcatctg gagcacttct ctttcatggg aagattcctt acgttgtgga gatggaaggg 60

aatgttgatg gccacacctt tagcatacgt gggaaaggct acggagatgc ctcaagtggga 120

aagggttgatg cacagttcat ctgcacaact ggtgatgttc ctgtgccttg gagcacactt 180

gtcaccactc tcacctatgg agcacagtgc tttgccaaagt atgggtccaga gttgaaggac 240

ttctacaagt cctgtatgcc agatggctat gtgcaagagc gcacaatcac ctttgaaggga 300

gatggcaact tcaagactag ggctgaagtc acctttgaga atgggtctgt ctacaatagg 360

gtcaaactca atgggtcaagg cttcaagaaa gatgggtcatg tgttgggaaa gaacttggag 420

ttcaacttca ctccccactg cctctacatc tgggggtgacc aagccaacca cgggtctcaag 480

tcagccttca agatctgtca tgagattact ggcagcaaag gcgacttcat agtgggtgac 540

cacacccaga tgaacactcc cattggtgga ggtccagttc atgttccaga gtatcatcac 600

atgtcttacc atgtgaaact ttccaaagat gtgacagacc acagagacaa catgtccttg 660

aaagaaactg tcagagctgt tgactgtcgc aagacctacc tttga 705

<210> 15

<211> 218

<212> ADN

<213> Diabrotica virgifera

<400> 15

tagctctgat gacagagccc atcgagtttc aagccaaaca gttgcataaa gctatcagcg 60

gattgggaac tgatgaaagt acaatmgmtg aaattttaag tgtmcacaac aacgatgaga 120
 ttataagaat ttcccaggcc tatgaaggat tgtaccaacg mtcattggaa tctgatatca 180
 aaggagatac ctcaggaaca ttaaaaaaga attattag 218

<210> 16
 <211> 424
 <212> ADN
 <213> Diabrotica virgifera

<220>
 <221> misc_feature
 <222> (393)..(393)
 <223> n e s a, c, g, o t

<220>
 <221> misc_feature
 <222> (394)..(394)
 <223> n e s a, c, g, o t

<220>
 <221> misc_feature
 <222> (395)..(395)
 <223> n e s a, c, g, o t

<400> 16
 ttgttacaag ctggagaact tctctttgct ggaaccgaag agtcagtatt taatgctgta 60
 ttctgtcaaa gaaataaacc acaattgaat ttgatattcg acaaatatga agaaattggt 120
 gggcatccca ttgaaaaagc cattgaaaac gagttttcag gaaatgctaa acaagccatg 180
 ttacacctta tccagagcgt aagagatcaa gttgcatatt tggttaaccag gctgcatgat 240
 tcaatggcag gcgtcggtag tgacgataga actttaatca gaattgttgt ttcgagatct 300
 gaaatcgatc tagaggaaat caaacaatgc tatgaagaaa tctacagtaa aaccttggtc 360
 gataggatag cggtatgacac atctggcgac tannnaaaag ccttattagc cgttggttggt 420
 taag 424

<210> 17
 <211> 397
 <212> ADN
 <213> Diabrotica virgifera

<400> 17
 agatgttggc tgcattctaga gaattacaca agttcttcca tgattgcaag gatgtactga 60
 gcagaatagt ggaaaaacag gtatccatgt ctgatgaatt gggaaggagc gcaggagctg 120
 tcaatgccct tcaacgcaaa caccagaact tcctccaaga cctacaaaca ctccaatcga 180

acgtccaaca aatccaagaa gaatcagcta aacttcaagc tagctatgcc ggtgatagag 240
 ctaaagaaat caccaacagg gagcaggaag tggtagcagc ctgggcagcc ttgcagatcg 300
 cttgcgatca gagacacgga aaattgagcg atactggtga tctattcaaa ttctttaact 360
 tgggtacgaac gttgatgcag tggatggacg aatggac 397

<210> 18
 <211> 490
 <212> ADN
 <213> *Diabrotica virgifera*

<400> 18
 gcagatgaac accagcgaga aaccaagaga tgtagtggt gttgaattgt tgatgaacaa 60
 ccatcagaca ctcaaggctg agatcgaagc cagagaagac aactttacgg cttgtatttc 120
 tttaggaaag gaattgttga gccgtaatca ctatgctagt gctgatatta aggataaatt 180
 ggtcgcgttg acgaatcaaa ggaatgctgt actacagagg tgggaagaaa gatgggagaa 240
 cttgcaactc atcctcgagg tataccaatt cgccagagat gcggccgtcg ccgaagcatg 300
 gttgatcgca caagaacctt acttgatgag ccaagaacta ggacacacca ttgacgacgt 360
 tgaaaacttg ataaagaaac acgaagcgtt cgaaaaatcg gcagcggcgc aagaagagag 420
 attcagtgct ttggagagac tgacgacgtt cgaattgaga gaaataaaga ggaaacaaga 480
 agctgccag 490

<210> 19
 <211> 330
 <212> ADN
 <213> *Diabrotica virgifera*

<400> 19
 agtgaaatgt tagcaaatat aacatccaag tttcgtaatt gtacttgctc agttagaaaa 60
 tattctgtag tttcactatc ttcaaccgaa aatagaataa atgtagaacc tcgcgaactt 120
 gcctttcctc caaaatatca agaacctcga caagtgttgg tggagagttt agatacgata 180
 gacgacaaaa aattgggtat tcttgagctg catcctgatg tttttgctac taatccaaga 240
 atagatatta tacatcaaaa tgtagatgg caaagtttat atagatatgt aagctatgct 300
 catacaaagt caagatttga agtgagaggt 330

<210> 20
 <211> 320
 <212> ADN

<213> *Diabrotica virgifera*

<400> 20
 caaagtcaag atttgaagtg agaggtggag gtcgaaaacc gtggccgcaa aagggattgg 60
 gacgtgctcg acatggttca attagaagtc cactttggag aggtggagga gttgttcatg 120
 gaccaaaatc tccaaccct catttttaca tgattccatt ctacaccgt ttgctgggtt 180
 tgactagcgc actttcagta aaatttgccc aagatgactt gcacgttgtg gatagtctag 240
 atctgccaac tgacgaaca agttatatag aagagctggt caaaagccgc ttttgggggt 300
 ccttcttggt ttattttag 320

<210> 21

<211> 47

<212> ADN

<213> Secuencia artificial

<220>

<223> Cebador YFP-F_T7

<400> 21

ttaatacgac tcactatagg gagacaccat gggtccagc ggcgcc 47

<210> 22

<211> 23

<212> ADN

<213> Secuencia artificial

<220>

<223> Cebador YFP-R

<400> 22

agatcttgaa ggcgctcttc agg 23

<210> 23

<211> 23

<212> ADN

<213> Secuencia artificial

<220>

<223> Cebador YFP-F

<400> 23

caccatgggc tccagcggcg ccc 23

<210> 24

<211> 47

<212> ADN

<213> Secuencia artificial

<220>
 <223> Cebador YFP-R_T7

 <400> 24
 ttaatacgac tcactatagg gagaagatct tgaaggcgct cttcagg 47

 <210> 25
 <211> 46
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Ann-F1_T7

 <400> 25
 ttaatacgac tcactatagg gagagctcca acagtgggttc cttatc 46

 <210> 26
 <211> 29
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Ann-R1

 <400> 26
 ctaataattc ttttttaatg ttcctgagg 29

 <210> 27
 <211> 22
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Ann-F1

 <400> 27
 gctccaacag tggttcctta tc 22

 <210> 28
 <211> 53
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Ann-R1_T7

 <400> 28
 ttaatacgac tcactatagg gagactaata attctttttt aatgttcctg agg 53

 <210> 29
 <211> 48

<212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Ann-F2_T7

 <400> 29
 ttaatacgac tcactatagg gagattgtta caagctggag aacttctc 48

 <210> 30
 <211> 24
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Ann-R2

 <400> 30
 cttaaccaac aacggctaata aagg 24

 <210> 31
 <211> 24
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Ann-F2

 <400> 31
 ttggttacaag ctggagaact tctc 24

 <210> 32
 <211> 48
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Ann-R2_T7

 <400> 32
 ttaatacgac tcactatagg gagacttaac caacaacggc taataagg 48

 <210> 33
 <211> 47
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Betasp2-F1_T7

 <400> 33
 ttaatacgac tcactatagg gagaagatgt tggctgcac tagagaa 47

<210> 34
 <211> 22
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador Betasp2-R1

<400> 34
 gtccattcgt ccatccactg ca

22

<210> 35
 <211> 23
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador Betasp2-F1

<400> 35
 agatggttggc tgcactctaga gaa

23

<210> 36
 <211> 46
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador Betasp2-R1_T7

<400> 36
 ttaatacgcac tcactatagg gagagtccat tcgtccatcc actgca

46

<210> 37
 <211> 46
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador Betasp2-F2_T7

<400> 37
 ttaatacgcac tcactatagg gagagcagat gaacaccagc gagaaa

46

<210> 38
 <211> 22
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador Betasp2-R2

<400> 38
 ctgggcagct tcttggttcc tc 22

<210> 39
 <211> 22
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador Betasp2-F2

<400> 39
 gcagatgaac accagcgaga aa 22

<210> 40
 <211> 46
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador Betasp2-R2_T7

<400> 40
 ttaatacgac tcactatagg gagactgggc agcttcttgt ttcctc 46

<210> 41
 <211> 51
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador L4-F1_T7

<400> 41
 ttaatacgac tcactatagg gagaagtga atggttagcaa atataacatc c 51

<210> 42
 <211> 26
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador L4-R1

<400> 42
 acctctcact tcaaattcttg actttg 26

<210> 43
 <211> 27
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador L4-F1

 <400> 43
 agtgaaatgt tagcaaatat aacatcc 27

 <210> 44
 <211> 50
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador L4-R1_T7

 <400> 44
 ttaatacgac tcactatagg gagaacctct cacttcaaatt cttgactttg 50

 <210> 45
 <211> 50
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador L4-F2_T7

 <400> 45
 ttaatacgac tcactatagg gagacaaagt caagatttga agtgagaggt 50

 <210> 46
 <211> 25
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador L4-R2

 <400> 46
 ctacaaataa aacaagaagg acccc 25

 <210> 47
 <211> 26
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador L4-F2

 <400> 47
 caaagtcaag atttgaagtg agaggt 26

 <210> 48
 <211> 49

<212> ADN

<213> Secuencia artificial

<220>

<223> Cebador L4-R2_T7

<400> 48

ttaatacgac tcactatagg gagactacaa ataaaacaag aaggacccc

49

<210> 49

<211> 1150

<212> ADN

<213> Zea mays

<400> 49

caacggggca gcactgcact gcactgcaac tgcaaatctc cgtcagcttg gagcgggtcca	60
agcgccctgc gaagcaaact acgccgatgg cttcggcggc ggcgtgggag ggtccgacgg	120
ccgcggagct gaagacagcg ggggcggagg tgattcccgg cggcgtgcga gtgaaggggt	180
gggtcatcca gtcccacaaa ggccctatcc tcaacgccgc ctctctgcaa cgctttgaag	240
atgaacttca aacaacacat ttacctgaga tggtttttgg agagagtttc ttgtcacttc	300
aacatacaca aactggcatc aaatttcatt ttaatgcgct tgatgcactc aaggcatgga	360
agaaagaggc actgccacct gttgaggttc ctgctgcagc aaaatggaag ttcagaagta	420
agccttctga ccaggttata cttgactacg actatacatt tacgacacca tattgtggga	480
gtgatgctgt gggtgtgaac tctggcactc cacaacaag tttagatgga tgcggcactt	540
tgtgttgga ggatacta atgatcgattg acattgttgc cttttcagca aaagaaccca	600
ttcttttcta cgacgaggtt atcttgtatg aagatgagtt agctgacaat ggtatctcat	660
ttcttactgt gcgagtgagg gtaatgccaa ctggttggtt tctgcttttg cgtttttggc	720
ttagagttga tgggtgtactg atgaggttga gagacactcg gttacattgc ctgtttggaa	780
acggcgacgg agccaagcca gtggtacttc gtgagtgtcg ctggagggaa gcaacatttg	840
ctactttgtc tgcgaaagga tatccttcgg actctgcagc gtacgcggac ccgaacctta	900
ttgcccataa gcttcctatt gtgacgcaga agacccaaaa gctgaaaaat cctacctgac	960
tgacacaaag gcgccctacc gcgtgtacat catgactgtc ctgtcctatc gttgcctttt	1020
gtgttttgca catgttgttg atgtacgttt ctatgacgaa acaccatagt ccatttcgcc	1080
tgggccgaac agagatagct gattgtcatg tcacgtttga attagaccat tccttagccc	1140
tttttcccc	1150

<210> 50
 <211> 22
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador T20VN

<220>
 <221> misc_feature
 <222> (22)..(22)
 <223> n es a, c, g, o t

<400> 50
 tttttttttt tttttttttt vn 22

<210> 51
 <211> 20
 <212> ADN
 <213> Secuencia artificial

<220>
 <223>Cebador P5U76S (F)

<400> 51
 ttgtgatggt ggtggcgtat 20

<210> 52
 <211> 24
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador P5U76A (R)

<400> 52
 tgttaaataa aaccccaaag atcg 24

<210> 53
 <211> 21
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador TIPmxF

<400> 53
 tgagggtaat gccaaactggt t 21

<210> 54
 <211> 24
 <212> ADN

<213> Secuencia artificial
 <220>
 <223> Cebador TIPmxR
 <400> 54
 gcaatgtaac cgagtgtctc tcaa 24
 <210> 55
 <211> 32
 <212> ADN
 <213> Secuencia artificial
 <220>
 <223> Sonda HXTIP
 <400> 55
 tttttggcctt agagttgatg gtgtactgat ga 32
 <210> 56
 <211> 20
 <212> ADN
 <213> Secuencia artificial
 <220>
 <223> Cebador Spt6v1_360 R
 <400> 56
 ggaaatacgc aagcagctcg 20
 <210> 57
 <211> 20
 <212> ADN
 <213> Secuencia artificial
 <220>
 <223> Cebador Spt6v1_224 P
 <400> 57
 catcctggcg cggtgactcc 20
 <210> 58
 <211> 20
 <212> ADN
 <213> Secuencia artificial
 <220>
 <223> Cebador Spt6-1v1_62 F
 <400> 58
 aagatcctgc ctgaacctgc 20

<210> 59
 <211> 20
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Spt6-1v2_323 R

 <400> 59
 ggaaatacgc aagcagctcg 20

 <210> 60
 <211> 20
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Spt6-1v2_182 P

 <400> 60
 ccaacctccc gaatcgccga 20

 <210> 61
 <211> 20
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Spt6-1v2_86 F

 <400> 61
 tcctgcaaga acgtgggtac 20

 <210> 62
 <211> 151
 <212> ADN
 <213> Escherichia coli

 <400> 62
 gaccgtaagg cttgatgaaa caacgcggcg agctttgatc aacgaccttt tggaaacttc 60
 ggcttcccct ggagagagcg agattctccg cgctgtagaa gtcaccattg ttgtgcacga 120
 cgacatcatt ccgtggcggtt atccagctaa g 151

 <210> 63
 <211> 69
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Región codificante de AAD1 parcial

<400> 63
 tgttcggttc cctctaccaa gcacagaacc gtcgcttcag caacacctca gtcaaggatga 60
 tggatgttg 69

<210> 64
 <211> 4233
 <212> ADN
 <213> Zea mays

<400> 64
 agcctggtgt ttccggagga gacagacatg atccctgccg ttgctgatcc gacgacgctg 60
 gacggcgggg gcgcgcgcag gccgttgctc ccggagacgg accctcgggg gcgtgctgcc 120
 gccggcgccg agcagaagcg gccgccggtc acgccgaccg ttctcaccgc cgtcgtctcc 180
 gccgtgctcc tgctcgtcct cgtggcggtc acagtccctc cgtcgcagca cgtcgacggg 240
 caggctgggg gcgttcccg cggcgaagat gccgtcgtc tcgaggtggc cgcctcccgt 300
 ggcgtggctg agggcggtc ggagaagtcc acggccccgc tcctcggctc cggcgcgctc 360
 caggacttct cctggaccaa cgcgatgctg gcgtggcagc gcacggcggt ccacttccag 420
 ccccccaaga actggatgaa cgttagttg gaccgcgcg catcggtgac gacgcgcgga 480
 tcgttttttt cttttttcct ctggttctg ctctaacttg gttccgcgtt tctgtcacgg 540
 acgcctcgtg cacatggcga taccgatcc gccggccgcg tatactctatc tacctcgacc 600
 ggctttctca gatccgaac gtaagttgtt ggctccgata cgatcgatca catgtgagct 660
 cggcatgctg cttttctgcg cgtgcatgcg gctcctagca ttccacgtcc acgggtcgtg 720
 acatcaatgc acgatataat cgtatcggtc cagagatatt gtcccatcag ctgctagctt 780
 tcgcgtattg atgtcgtgac attttgacg caggctccgt gtatcacaag ggctggtacc 840
 acctcttcta ccagtggaac ccggactccg cggatatggg caacatcacc tggggccacg 900
 ccgtctcgcg cgacctctc cactggctgc acctaccgt ggccatggtg cccgatcacc 960
 cgtacgacgc caacggcgtc tggccgggt cggcgacgcg cctgcccgcg ggccggatcg 1020
 tcatgctcta cacgggctcc acggcgaggt cgtcggcgca ggtgcagaac ctgcgggagc 1080
 cggccgacgc gtccgacctg ctgctgcggg agtgggtcaa gtcggacgcc aaccgggtgc 1140
 tgggtgccgc gccgggcatc gggccgacgg acttcgcgga cccgacgacg gcgtgtcggg 1200
 cgccggcccg caacgacacg gcgtggcggg tcgccatcgg gtccaaggac cgggaccacg 1260
 cggggctggc gctggtgtac cggacggagg acttcgtgcg gtacgacctg gcgccggcgc 1320
 tgatgcacgc cgtgccgggc accggcatgt gggagtgcgt ggacttctac ccggtggccg 1380

cgggatcagg cgccgcggcg ggcagcgggg acgggctgga gacgtccgcg gcgccgggac	1440
ccgggggtgaa gcacgtgctc aaggctagcc tcgacgacga caagcacgac tactacgcga	1500
tcggcaccta cgacccggcg acggacacct ggacccccga cagecgaggag gacgacgtcg	1560
ggatcggcct ccggtacgac tatggcaagt actacgcgtc gaagaccttc tacgaccccg	1620
tccttcgccg gcgggtgctc tgggggtggg tcggcgagac cgacagcgag cgcgcggaca	1680
tcctcaaggg ctgggcatcc gtgcaggtag gtctcagggt ttgaggctag catggcttca	1740
atcttgctgg catcgaatca ttaatgggca gatattataa cttgataatc tgggttggtt	1800
gtgtgtggtg gggatggtga cacacgcgcg gtaataatgt agctaagctg gttaaggatg	1860
agtaatgggg ttgcgtataa acgacagctc tgctaccatt acttctgaca cccgattgaa	1920
ggagacaaca gtaggggtag ccggtagggt tcgtcgactt gccttttctt ttttcctttg	1980
ttttgttgtg gatcgtccaa cacaaggaaa ataggatcat ccaacaaaca tggaagtaat	2040
cccgtaaaac atttctcaag gaaccatcta gctagacgag cgtggcatga tccatgcatg	2100
cacaaacact agataggtct ctgcagctgt gatgttctt tacatatacc accgtccaaa	2160
ctgaatccgg tctgaaaatt gttcaagcag agaggccccg atcctcacac ctgtacacgt	2220
ccctgtacgc gccgtcgtgg tctcccgtag tcctgccccg tcccctccac gcggccacgc	2280
ctgctgcagc gctctgtaca agcgtgcacc acgtgagaat ttccgtctac tcgagcctag	2340
tagttagacg ggaaaacgag aggaagcgca cggccaagc acaaaccttt gcgcggggccc	2400
gtgacttgtc tccggttggc tgagggcgcg cgacagagat gtatggcgcc gcggcgtgtc	2460
ttgtgtcttg tcttgccat acaccgtagt cagagactgt gtcaaagccg tccaacgaca	2520
atgagctagg aaacgggttg gagagctggg ttcttgccct gcctcctgtg atgtctttgc	2580
cttgcatagg gggcgagta ttagctttg cgttttactt cagccaaag gatactgctg	2640
atcgtgaatt attattatta tatatatatc gaatatcgat ttcgtcgctc tcgtgggggtt	2700
ttattttcca gactcaaact tttcaaaagg cctgtgtttt agttcttttc ttccaattga	2760
gtaggcaagg cgtgtgagt tgaccaacgc atgcatggat atcgtggtag actggtagag	2820
ctgtcgttac cagcgcgatg cttgtatatg tttgcagtat tttcaaatga atgtctcagc	2880
tagcgtacag ttgaccaagt cgacgtggag ggcgcacaac agacctctga cattattcac	2940
ttttttttta ccatgccgtg cacgtgcagt caatccccag gacggtcctc ctggacacga	3000
agacgggcag caacctgctc cagtggccgg tggtaggagt ggagaacctc cggatgagcg	3060

gcaagagctt cgacggcgtc ggcgtggacc gcggatccgt cgtgcccctc gacgtcggca 3120
 aggcgacgca ggtgacgccg cacgcagcct gctgcagcga acgaactcgc gcgttgccgg 3180
 cccgcggcca gctgacttag tttctctggc tgatcgaccg tgtgcctgcg tgcgtgcagt 3240
 tggacatcga ggctgtgttc gaggtggacg cgtcggacgc ggcgggcgtc acggaggccg 3300
 acgtgacgtt caactgcagc accagcgcag gcgcggcggg ccggggcctg ctcggcccgt 3360
 tcggccttct cgtgctggcg gacgacgact tgtccgagca gaccgccgtg tacttctacc 3420
 tgctcaaggg cacggacggc agcctccaaa ctttcttctg ccaagacgag ctcaggtatg 3480
 tatgttatga cttatgacca tgcattcatg cgcatttctt agctaggctg tgaagcttct 3540
 tgttgagttg tttcacagat gcttaccgtc tgctttgttt cgtatttcga ctaggcatcc 3600
 aaggcgaacg atctgggtta gagagtatac gggagcttgg tccctgtgct agatggggag 3660
 aatctctcgg tcagaatact ggtaagtttt tacagcgcca gccatgcatg tgttggccag 3720
 ccagctgctg gtactttgga cactcgttct tctcgactg ctcattattg cttctgatct 3780
 ggatgcacta caaattgaag gttgaccact ccatcgtgga gagctttgct caaggcggga 3840
 ggacgtgcat cacgtcgcga gtgtacccca cacgagccat ctacgactcc gcccgctct 3900
 tcctcttcaa caacgccaca catgctcacg tcaaagcaaa atccgtcaag atctggcagc 3960
 tcaactccgc ctacatccgg ccatatccgg caacgacgac ttctctatga ctaaattaag 4020
 tgacggacag ataggcgata ttgcatactt gcatcatgaa ctcatttgta caacagtgat 4080
 tgtttaattt atttgctgcc ttccttatcc ttcttgtaga actatatggt acacacatgt 4140
 atcattaggt ctagtagtgt tgttgcaaag acacttagac accagaggtt ccaggagtat 4200
 cagagataag gtataagagg gagcaggag cag 4233

<210> 65
 <211> 20
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador GAAD1-F

<400> 65
 tgttcggttc cctctaccaa 20

<210> 66
 <211> 22
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Cebador GAAD1-R

 <400> 66
 caacatccat caccttgact ga 22

 <210> 67
 <211> 24
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sonda GAAD1-P (FAM)

 <400> 67
 cacagaaccg tcgcttcagc aaca 24

 <210> 68
 <211> 18
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador IVR1-F

 <400> 68
 tggcggacga cgacttgt 18

 <210> 69
 <211> 19
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador IVR1-R

 <400> 69
 aaagtttgga ggctgccgt 19

 <210> 70
 <211> 26
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sonda IVR1-P (HEX)

 <400> 70
 cgagcagacc gccgtgtact tctacc 26

 <210> 71

<211> 19
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador SPC1A

 <400> 71
 cttagctgga taacgccac 19

 <210> 72
 <211> 19
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador SPC1S

 <400> 72
 gaccgtaagg cttgatgaa 19

 <210> 73
 <211> 21
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sonda TQSPEC (CY5)

 <400> 73
 cgagattctc cgcgctgtag a 21

 <210> 74
 <211> 25
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador ST-LS1 F

 <400> 74
 gtatgtttct gcttctacct ttgat 25

 <210> 75
 <211> 29
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador ST-LS1 R

 <400> 75
 ccatgttttg gtcatatatt agaaaagtt 29

<210> 76
 <211> 34
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sonda ST-LS1 P

 <400> 76
 agtaatatag tatttcaagt atttttttca aaat 34

 <210> 77
 <211> 20
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Loop_F

 <400> 77
 ggaacgagct gcttgcttat 20

 <210> 78
 <211> 20
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Cebador Loop_R

 <400> 78
 cacggtgcag ctgattgatg 20

 <210> 79
 <211> 18
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Sonda Loop_FAM

 <400> 79
 tcccttcgt agtcagag 18

 <210> 80
 <211> 153
 <212> ADN
 <213> Secuencia artificial

 <220>
 <223> Polinucleótido enlazador de bucle

<400> 80
 agtcatcacg ctggagcgca catataggcc ctccatcaga aagtcattgt gtatatctct 60
 catagggAAC gagctgcttg cgtatttccc ttccgtagtc agagtcatca atcagctgca 120
 ccgtgtcgta aagcgggacg ttcgcaagct cgt 153

<210> 81
 <211> 5948
 <212> ARN
 <213> *Diabrotica virgifera*

<400> 81
 gucacuuguc aaugucaac cuggaaaacg acuugucgaa gucgcauagu uuuuauaagu 60
 uuaaaauaac uaaauuaau auaaaauacu cgagaaugca auaauuaua uucuuuaacu 120
 agaccacag cuuauuaau agcagaagua guagcagacu uauacuaacu agcauaagga 180
 gaaacauau aacauaacau ggcagacuuc auagauucug aagcagaaga aaguagugag 240
 gaggaggaau uagaucauag ggaucguaaa aaagcccaa aagccaaagu uguagauagu 300
 ucagaugaag augaugaaga ugaugacgaa agacugagag aggaauuaa ggauuugauu 360
 gaugauaau cuauugaaga aagugaugcu gagucugaug cuucaggaag ggaaaaacgu 420
 aagaaucug acgacgagga uuuggaugau cgacuggaag augaagaua uguuugcuu 480
 gaagaaaau uggguguuaa aguugaaaga aggaauuca agcgacugcg gcguuuugaa 540
 gaugaagaaa gugaaggaga agaagaacau gauccugaac aagauaggga acaauugcu 600
 auggauauu uuucagauga ugacgauga agacgaucag aacgaaguca cagaccugcc 660
 gucgaacaag aaacuuaug uguaggcgag gaagaagagg aaggggagua cucggaugcc 720
 gaugauuuu uaguugacga ugacgguaga ccgauagcug aaaagaaga gaagaaaaa 780
 ccaauuuu cugaugccgc ucuccaagag gcucaagaaa ccuucggugu cgauuuugau 840
 uaugaugaau uuaguuuaa cgaugaagau gauuacgaag augaagagga ggaggauagc 900
 gaauacgagg aagaugaug agagaaaagg aaacggccua aaaagacuuc aaagaaaaa 960
 ccgacgaaga aauccauuu ugaaguguau gaaccuagug aacuuaaaag aggguuuuu 1020
 accgaucug auaugaaau ccgaaacacu gauauucccg aaagaugca acuucgugau 1080
 guuccaaua ccgcuguucc ggaugacuca acugaacuug augaugaagc agauggauu 1140
 uacaggcaag cguuuuguaa cagaacugu uccaaugugg auucucauu aucaucagag 1200
 gcaagagaga aaauaaaga gacucaucau gccaucggaa aaucagaaa agcauugau 1260

uuuauaagaa	aucaacaauu	agaaguaccg	uuuauugcuu	uuuauagaaa	ggaguauguu	1320
caaccggaac	uuauauuaa	cgauuugugg	aaaguauuaa	aaucggaugc	aaaguggugc	1380
caauugaaaa	cacgcaaaga	aaaccucuug	aagcuuuuug	aaaaaagag	gucauaucaa	1440
acugaccaca	uaaugaaaga	uccagaugca	ccaauuccag	acaaccuucg	uauuaugacu	1500
gaguccgaca	uugagcgauu	gaaaaauguu	caaaccgccg	aagaguuaaa	ugacguucac	1560
aaucuuuua	uuuuauaua	ugcugcagau	uugccagcca	ugcaugccgc	guggagaguc	1620
aaagaaagag	aaaggagaag	acaggaaaga	aaggaggcua	gacuaagcu	caucgcugaa	1680
agugaagaag	gugcugaaau	uccugaagag	ccugaggaaa	uugacgauga	ugaaccagaa	1740
gcugaaaccu	uaaaauacgc	caauagauca	ggcagcuau	cacuauguaa	uaaaggaggu	1800
uuggguccuc	uagcgaagaa	auuugguuuu	acgccugaag	aaauugccga	aaaccugaga	1860
gauaauuau	agaggcacga	aguagaucaa	gaacauauag	aaccuguaga	agucgcuaaa	1920
gaauucguau	cgccgaaauu	uccuacagug	gaagaagugu	ugcaagcuac	uaaacacaug	1980
guagcuuuac	aaauagcaag	agaaccauua	guaaggaaa	gcguaagaga	aauuuucuuu	2040
gaacgagcua	gauuaaacgu	uuauccaacc	aaaaagggug	ugaaaguauu	agaugaagcu	2100
cauaauugcu	auaguaugaa	guauguaaaa	aauaaaccag	uaagagaucu	ugcaggcgac	2160
caauuuuuua	aaauauguuu	agccgaagag	gagaaccucc	uuacuauuac	caucaaugac	2220
cauauucaag	gaaacacuac	uaacaauuac	auugaugaag	ucaaacauu	auauauaaag	2280
gaugaauuca	gcaaacacgu	ucaggauugg	aaugcgcuua	gaauggaau	gguagaaagg	2340
gcuuaaacga	aaagugucuu	accagauuuu	agaucugaau	uaaaacgaac	guugcucaca	2400
gaggcuaaa	aaucguauu	aaaagcuugc	uguagaaaau	uaauaaaau	gauaaaagau	2460
gcuccauacg	cauaacuuiu	ucccgauгаа	gacgaagaug	auugggauac	auccaaaggu	2520
guuagaacua	uggguguagc	auacguacca	gagcacacag	uauagcuuu	uaccuguauu	2580
ucagcaccag	acggagauau	aacugauuuu	cucagauuac	caaauauucu	aaaaagaaaa	2640
aaugacuuuc	gaacugaaga	aaaacuuaug	aaggaagcug	aucuuaagc	acugaaaaau	2700
uucauauucc	uuaaaaagcc	ucaugugaua	gcaguagggg	gugaguccag	agaagccuua	2760
augaucgcug	augauaucag	aggaguuaau	agugaacuaa	uagaauccga	ccaauuccca	2820
cagauuaggg	uugaaaauu	ugauaaugaa	uuagccaaag	uguacgcaaa	uuccauuaaa	2880
gguucaacug	auuucagaga	uuauccagag	uuguuagggc	aagcuauuuc	auuagcucga	2940
agaaugcaag	auccuuuggu	ugaauuuucc	cauuuaugua	auagcgauga	ggaaaauuug	3000

agucugaggu	uucaucccuu	gcaggaacaa	guccagaaaag	aagaacuacu	agaagcucuc	3060
uguuuagaau	uugucaacag	aacaaaugaa	guagguguag	auauaaaucu	ugccguucag	3120
cagauucaua	aaaguaguuu	aguucaauuc	auaugcgguc	uaggaccgcg	uaaaggucua	3180
gcguuacuua	aaguucugaa	acaaacuaau	cagaggcuug	aaaacagAAC	ccaauugguu	3240
acauuuuguc	auaugggucc	aaaaguuuuu	auuaauuguu	cuggauucau	aaagauugau	3300
accaauaguu	uaggagacag	uacugaggca	uauugugaaa	uauuggaugg	cucucgaguu	3360
caucccgaaa	cuuaugaaug	ggcacgaaaa	auggcugugg	augcuuuaga	auaugacgau	3420
gaugagggag	cuaauccggc	gggagcuuuu	gaggaaauuc	ucgaggcgcc	agagagguua	3480
aaagaucuu	acuuggaugc	auuugcggag	gaauuggaaa	gacaaggauu	ugguaacaag	3540
aguauaaca	uguaugacau	uagagcagaa	cugaacucgc	gauauaaaga	uuugagacaa	3600
ccuuuucguu	cugcaaaucc	ugaagaacua	uucgauaugc	uuacuaaaga	aacucccgaa	3660
acauuuuaua	uuggaaaaau	gguuacauuc	accguguuug	gcauugcaag	gagaaaacca	3720
aagucagacc	agcucgauca	agcuaauccg	guccguaaug	acgaaacugg	uuuguggcag	3780
ugcccccucu	guuugaaaaa	ugauuuuccu	gaauuauucg	auguauggaa	ucauuuugau	3840
gcaggagcau	guccugguca	agcuacugga	guuaaacuaa	gacuggauaa	ugguauauua	3900
gguuauauuu	auauaaaaaa	uauaagcgac	aaaccaguug	cuaauccgga	agaaagagua	3960
ggcauaggac	auuaauuua	cuguagaaua	auaaaaauug	acguagagaa	guuuaguguu	4020
gauuguacau	cgaaaucua	cgaucuugcu	gauaaaaauc	augaauaggag	accucaacga	4080
gauccucauu	augaucaaga	acgugaagac	aaagacaauc	gauuagaagc	cgagaagaag	4140
aaagagaaac	agcguaugac	guacaucaag	aggguuauucg	uucauccggc	guuccauaac	4200
auauccuaug	ccgaagccga	aaaauguaug	guuaauaugg	accaggguga	aguuaucuu	4260
aggccuucga	guaagggugc	ggaucuuuug	accuuuacuu	ggaagguuac	ggauggaauc	4320
uaucaacaca	uugauauuaa	ggaacaaggg	aaaguuaacg	cuuuuucuuu	aggaaaauca	4380
uuauuggauug	gaaauagaaga	auuugaagau	cuugaugaaa	uaauagcuag	gcacguuaca	4440
ccaauggcgg	cgcaugcuag	agaauuacug	uuuuuuaggu	auuacaaaga	uuuccaaggu	4500
ggucauaaaag	auaaggcuga	ggaauaucua	aaagaugaaa	aaaagaaaaa	ugcuucuaaa	4560
auucauuau	uaguauugc	ugcuaagaau	auaccuggua	aaauucuuuc	uucguaccuu	4620
ccacgcaaca	aaguuaagaca	cgaauaugua	acaguuauc	cagaaggcuu	ucgguuuaga	4680

caacaaaugu uugauuccgu uucuucguua uuuaaauggu ucaaagaaca uuuccgggag 4740
 ccuccaccag gcggugcaac accagguagc acgccaagga uggcuucaag cagaacugga 4800
 uauggaagug ccacaccgc guauaguaug aaauaugaag cuauucaaag aguugcucaa 4860
 aaauuaccaa gucauguagu ucaagcguua ucugcugcca ccaaccaaac uccacauuau 4920
 cccacacccc cugguuaugg aggcauuuau auuaauacgc cuuacacucc aaguggucaa 4980
 acuccauaca ugacuccgua cgcuaacccc cauacgcagc aaacuccccg cuauggucaa 5040
 caaacaccuu cccaacacau ggcgagcuca gcaccacaag gucucaacaa uccuuuuua 5100
 cauccuggcg cggugacucc cucccaacga acuccuauuu aucgcaacca uccugcacia 5160
 ucuccaguaa ugcuuccuac aagcccugua ccaaguccag guucccagag uucauacagu 5220
 agucauuuaa gucauaauca gcgaagugga aguuauugcug aauccuuaag auuccaaccu 5280
 cccgaauccg cgagaagcuc agugaguaau agaagcuuuc aaacugauag auacggcggu 5340
 gauagguaug guaaaggagg aagucauaga uaugguggaa gcucacacga agauagauau 5400
 gguaagggag gaggaggaaa ugaauuacg gauuggcaga aagcugcaga agcaugggcu 5460
 cgaucuagau cuacuccgag aagugauggc cguauuacuc caagaucugu aggucaacga 5520
 acuccuagau acgacaacga cgccgaacgu ucuagaauga aacaccucag caagagcccg 5580
 aggucuguaa ggucuaacucc ucgaaccaau acauccuccac auucuauguc ccuaggugau 5640
 gcuaccccuc uguaugacga aaguaucuaa auuacuuugu auuugguuau auaguagggu 5700
 aacaguguaa uuguaaaugc uaaaaucaac aaucacagauu cgcgauauua agucacaaug 5760
 acgaccucuc guggaguucg gugaaacuaa cuuugagggc guuuucacug ucaaacgucc 5820
 agcgcacau caccugaaac aaguaggcaa uauucauuau uuauuuuuac agguuuuuua 5880
 uacaaauuu auuuacaaca uagacuucua cuuuuacuga aaggugaagc uucauauua 5940
 auauuuuu 5948

<210> 82

<211> 499

<212> ARN

<213> *Diabrotica virgifera*

<400> 82

cgccuuacac uccaaguggu caaacuccau acaugacucc guacgcuaca ccccauacgc 60

agcaaaccucc ccgcuauugu caucaaacac cuucccaaca cauggcgagc ucagcaccac 120

aaggucuaa caauccuuu uuacauccug gcgcggugac ucccuccaa cgaacuccua 180

uuuauCGcaa ccauccugca caaucuccag uaaugcuucc uacaagcccu guaccaaguc 240
cagguuccca gaguucacac agugaucauu uaagucacaa ucagcgaagu ggaaguuaug 300
cugaaucuu aagauuccaa ccucccgaaU cgccgagaag cucagugagu aaugaagcu 360
uucaaacuga uagauacggc ggugauaggu augguaaagg aggaagucac agauauggug 420
gaagcucaaa cgaagauaga uauagguaagg gagggaggagg aaugaaaaU acggauuggc 480
agaaagcugc agaagcaug 499

<210> 83
<211> 145
<212> ARN
<213> *Diabrotica virgifera*

<400> 83
gacuccguac gcuacacccc auacgcagca aacuccccgc uauaggucac aaacaccuuc 60
ccaacacaug gcgagcucag caccacaagg ucucaacaau ccuuuuuac auccuggcgc 120
ggugacuccc uccaacgaa cuccu 145

<210> 84
<211> 108
<212> ARN
<213> *Diabrotica virgifera*

<400> 84
agaguucac caguagucac uuaagucac aucagcgaag uggaaguuaU gcugaaucU 60
uaagauucca accucccgaa ucgccgagaa gcucagugag uauagaa 108