

SEQUENCE LISTING

<110> SUNTORY HOLDINGS LIMITED

<120> Novel steviol glycoside and production method for same, and
sweetener composition containing same

<130> G1766WO

<150> JP2017-071457

<151> 2017-03-31

<160> 36

<170> PatentIn version 3.5

<210> 1

<211> 1446

<212> DNA

<213> Stevia rebaudiana

<220>

<221> CDS

<222> (1)..(1446)

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Met Asp Ala Met Ala Thr Thr Glu Lys Lys Pro His Val Ile Phe Ile

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cca ttt cca gca caa agc cac att aaa gcc atg ctc aaa cta gca caa 96

Pro Phe Pro Ala Gln Ser His Ile Lys Ala Met Leu Lys Leu Ala Gln

20 25 30

ctt ctc cac cac aaa gga ctc cag ata acc ttc gtc aac acc gac ttc 144

Leu Leu His His Lys Gly Leu Gln Ile Thr Phe Val Asn Thr Asp Phe

35 40 45

atc cac aac cag ttt ctt gaa tca tcg ggc cca cat tgt ttg gac ggt 192

Ile His Asn Gln Phe Leu Glu Ser Ser Gly Pro His Cys Leu Asp Gly

50 55 60

tca ccg ggt ttc cgg ttc gaa acc atc ccg gat ggt gtt tct cac agt 240

Ser Pro Gly Phe Arg Phe Glu Thr Ile Pro Asp Gly Val Ser His Ser

65 70 75 80

ccg gaa gcg agc atc cca atc aga gaa tca ctc ttg aga tcc att gaa 288

Pro Glu Ala Ser Ile Pro Ile Arg Glu Ser Leu Leu Arg Ser Ile Glu

85 90 95

acc aac ttc ttg gat cgt ttc att gat ctt gta acc aaa ctt ccg gat 336

Thr Asn Phe Leu Asp Arg Phe Ile Asp Leu Val Thr Lys Leu Pro Asp

100 105 110

cct ccg act tgt att atc tca gat ggg ttc ttg tcg gtt ttc aca att 384

Pro Pro Thr Cys Ile Ile Ser Asp Gly Phe Leu Ser Val Phe Thr Ile

115 120 125

gac gct gca aaa aag ctt gga att ccg gtc atg atg tat tgg aca ctt 432

Asp Ala Ala Lys Lys Leu Gly Ile Pro Val Met Met Tyr Trp Thr Leu

130 135 140

gct gcc tgt ggg ttc atg ggt ttt tac cat att cat tct ctc att gag 480

Ala Ala Cys Gly Phe Met Gly Phe Tyr His Ile His Ser Leu Ile Glu

145 150 155 160

aaa gga ttt gca cca ctt aaa gat gca agt tac ttg aca aat ggg tat 528

Lys Gly Phe Ala Pro Leu Lys Asp Ala Ser Tyr Leu Thr Asn Gly Tyr

165 170 175

ttg gac acc gtc att gat tgg gtt ccg gga atg gaa ggc atc cgt ctc 576

Leu Asp Thr Val Ile Asp Trp Val Pro Gly Met Glu Gly Ile Arg Leu

180 185 190

aag gat ttc ccg ctg gac tgg agc act gac ctc aat gac aaa gtt ttg 624

Lys Asp Phe Pro Leu Asp Trp Ser Thr Asp Leu Asn Asp Lys Val Leu

195 200 205

atg ttc act aca gaa gct cct caa agg tca cac aag gtt tca cat cat 672

Met Phe Thr Thr Glu Ala Pro Gln Arg Ser His Lys Val Ser His His

210	215	220	
att ttc cac acg ttc gat gag ttg gag cct agt att ata aaa act ttg 720			
Ile Phe His Thr Phe Asp Glu Leu Glu Pro Ser Ile Ile Lys Thr Leu			
225	230	235	240
tca ttg agg tat aat cac att tac acc atc ggc cca ctg caa tta ctt 768			
Ser Leu Arg Tyr Asn His Ile Tyr Thr Ile Gly Pro Leu Gln Leu Leu			
245	250	255	
ctt gat caa ata ccc gaa gag aaa aag caa act gga att acg agt ctc 816			
Leu Asp Gln Ile Pro Glu Glu Lys Lys Gln Thr Gly Ile Thr Ser Leu			
260	265	270	
cat gga tac agt tta gta aaa gaa gaa cca gag tgt ttc cag tgg ctt 864			
His Gly Tyr Ser Leu Val Lys Glu Glu Pro Glu Cys Phe Gln Trp Leu			
275	280	285	
cag tct aaa gaa cca aat tcc gtc gtt tat gta aat ttt gga agt act 912			
Gln Ser Lys Glu Pro Asn Ser Val Val Tyr Val Asn Phe Gly Ser Thr			
290	295	300	
aca gta atg tct tta gaa gac atg acg gaa ttt ggt tgg gga ctt gct 960			
Thr Val Met Ser Leu Glu Asp Met Thr Glu Phe Gly Trp Gly Leu Ala			
305	310	315	320
aat agc aac cat tat ttc ctt tgg atc atc cga tca aac ttg gtg ata 1008			

Asn Ser Asn His Tyr Phe Leu Trp Ile Ile Arg Ser Asn Leu Val Ile

325 330 335

ggg gaa aat gca gtt ttg ccc cct gaa ctt gag gaa cat ata aag aaa 1056

Gly Glu Asn Ala Val Leu Pro Pro Glu Leu Glu Glu His Ile Lys Lys

340 345 350

aga ggc ttt att gct agc tgg tgt tca caa gaa aag gtc ttg aag cac 1104

Arg Gly Phe Ile Ala Ser Trp Cys Ser Gln Glu Lys Val Leu Lys His

355 360 365

cct tcg gtt gga ggg ttc ttg act cat tgt ggg tgg gga tcg acc atc 1152

Pro Ser Val Gly Gly Phe Leu Thr His Cys Gly Trp Gly Ser Thr Ile

370 375 380

gag agc ttg tct gct ggg gtg cca atg ata tgc tgg cct tat tcg tgg 1200

Glu Ser Leu Ser Ala Gly Val Pro Met Ile Cys Trp Pro Tyr Ser Trp

385 390 395 400

gac cag ctg acc aac tgt agg tat ata tgc aaa gaa tgg gag gtt ggg 1248

Asp Gln Leu Thr Asn Cys Arg Tyr Ile Cys Lys Glu Trp Glu Val Gly

405 410 415

ctc gag atg gga acc aaa gtg aaa cga gat gaa gtc aag agg ctt gta 1296

Leu Glu Met Gly Thr Lys Val Lys Arg Asp Glu Val Lys Arg Leu Val

420 425 430

caa gag ttg atg gga gaa gga ggt cac aaa atg agg aac aag gct aaa 1344

Gln Glu Leu Met Gly Glu Gly Gly His Lys Met Arg Asn Lys Ala Lys

435 440 445

gat tgg aaa gaa aag gct cgc att gca ata gct cct aac ggt tca tct 1392

Asp Trp Lys Glu Lys Ala Arg Ile Ala Ile Ala Pro Asn Gly Ser Ser

450 455 460

tct ttg aac ata gac aaa atg gtc aag gaa atc acc gtg cta gca aga 1440

Ser Leu Asn Ile Asp Lys Met Val Lys Glu Ile Thr Val Leu Ala Arg

465 470 475 480

aac tag 1446

Asn

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<211> 481

<212> PRT

<213> Stevia rebaudiana

<400> 2

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Pro Phe Pro Ala Gln Ser His Ile Lys Ala Met Leu Lys Leu Ala Gln

20 25 30

Leu Leu His His Lys Gly Leu Gln Ile Thr Phe Val Asn Thr Asp Phe

35 40 45

Ile His Asn Gln Phe Leu Glu Ser Ser Gly Pro His Cys Leu Asp Gly

50 55 60

Ser Pro Gly Phe Arg Phe Glu Thr Ile Pro Asp Gly Val Ser His Ser

65 70 75 80

Pro Glu Ala Ser Ile Pro Ile Arg Glu Ser Leu Leu Arg Ser Ile Glu

85 90 95

Thr Asn Phe Leu Asp Arg Phe Ile Asp Leu Val Thr Lys Leu Pro Asp

100 105 110

Pro Pro Thr Cys Ile Ile Ser Asp Gly Phe Leu Ser Val Phe Thr Ile

115 120 125

Asp Ala Ala Lys Lys Leu Gly Ile Pro Val Met Met Tyr Trp Thr Leu

130

135

140

Ala Ala Cys Gly Phe Met Gly Phe Tyr His Ile His Ser Leu Ile Glu

145

150

155

160

Lys Gly Phe Ala Pro Leu Lys Asp Ala Ser Tyr Leu Thr Asn Gly Tyr

165

170

175

Leu Asp Thr Val Ile Asp Trp Val Pro Gly Met Glu Gly Ile Arg Leu

180

185

190

Lys Asp Phe Pro Leu Asp Trp Ser Thr Asp Leu Asn Asp Lys Val Leu

195

200

205

Met Phe Thr Thr Glu Ala Pro Gln Arg Ser His Lys Val Ser His His

210

215

220

Ile Phe His Thr Phe Asp Glu Leu Glu Pro Ser Ile Ile Lys Thr Leu

225 230 235 240

Ser Leu Arg Tyr Asn His Ile Tyr Thr Ile Gly Pro Leu Gln Leu Leu

245 250 255

Leu Asp Gln Ile Pro Glu Glu Lys Lys Gln Thr Gly Ile Thr Ser Leu

260 265 270

His Gly Tyr Ser Leu Val Lys Glu Glu Pro Glu Cys Phe Gln Trp Leu

275 280 285

Gln Ser Lys Glu Pro Asn Ser Val Val Tyr Val Asn Phe Gly Ser Thr

290 295 300

Thr Val Met Ser Leu Glu Asp Met Thr Glu Phe Gly Trp Gly Leu Ala

305 310 315 320

Asn Ser Asn His Tyr Phe Leu Trp Ile Ile Arg Ser Asn Leu Val Ile

325 330 335

Gly Glu Asn Ala Val Leu Pro Pro Glu Leu Glu Glu His Ile Lys Lys

340 345 350

Arg Gly Phe Ile Ala Ser Trp Cys Ser Gln Glu Lys Val Leu Lys His

355 360 365

Pro Ser Val Gly Gly Phe Leu Thr His Cys Gly Trp Gly Ser Thr Ile

370 375 380

Glu Ser Leu Ser Ala Gly Val Pro Met Ile Cys Trp Pro Tyr Ser Trp

385 390 395 400

Asp Gln Leu Thr Asn Cys Arg Tyr Ile Cys Lys Glu Trp Glu Val Gly

405 410 415

Leu Glu Met Gly Thr Lys Val Lys Arg Asp Glu Val Lys Arg Leu Val

420 425 430

Gln Glu Leu Met Gly Glu Gly Gly His Lys Met Arg Asn Lys Ala Lys

435 440 445

Asp Trp Lys Glu Lys Ala Arg Ile Ala Ile Ala Pro Asn Gly Ser Ser

450

455

460

Ser Leu Asn Ile Asp Lys Met Val Lys Glu Ile Thr Val Leu Ala Arg

465

470

475

480

Asn

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<213> Stevia rebaudiana

<220>

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<222> (1)..(1383)

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Met Ala Glu Gln Gln Lys Ile Lys Lys Ser Pro His Val Leu Leu Ile

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5

10

15

cca ttc cct tta caa ggc cat ata aac cct ttc atc cag ttt ggc aaa 96

Pro Phe Pro Leu Gln Gly His Ile Asn Pro Phe Ile Gln Phe Gly Lys

20 25 30

cga tta atc tcc aaa ggt gtc aaa aca aca ctt gtt acc acc atc cac 144

Arg Leu Ile Ser Lys Gly Val Lys Thr Thr Leu Val Thr Thr Ile His

35 40 45

acc tta aac tca acc cta aac cac agt aac acc acc acc acc tcc atc 192

Thr Leu Asn Ser Thr Leu Asn His Ser Asn Thr Thr Thr Thr Ser Ile

50 55 60

gaa atc caa gca att tcc gat ggt tgt gat gaa ggc ggt ttt atg agt 240

Glu Ile Gln Ala Ile Ser Asp Gly Cys Asp Glu Gly Gly Phe Met Ser

65 70 75 80

gca gga gaa tca tat ttg gaa aca ttc aaa caa gtt ggg tct aaa tca 288

Ala Gly Glu Ser Tyr Leu Glu Thr Phe Lys Gln Val Gly Ser Lys Ser

85 90 95

cta gct gac tta atc aag aag ctt caa agt gaa gga acc aca att gat 336

Leu Ala Asp Leu Ile Lys Lys Leu Gln Ser Glu Gly Thr Thr Ile Asp

100 105 110

gca atc att tat gat tct atg act gaa tgg gtt tta gat gtt gca att 384

Ala Ile Ile Tyr Asp Ser Met Thr Glu Trp Val Leu Asp Val Ala Ile

115	120	125	
gag ttt gga atc gat ggt ggt tcg ttt ttc act caa gct tgt gtt gta			432
Glu Phe Gly Ile Asp Gly Gly Ser Phe Phe Thr Gln Ala Cys Val Val			
130	135	140	
aac agc tta tat tat cat gtt cat aag ggt ttg att tct ttg cca ttg			480
Asn Ser Leu Tyr Tyr His Val His Lys Gly Leu Ile Ser Leu Pro Leu			
145	150	155	160
ggt gaa act gtt tcg gtt cct gga ttt cca gag ctt caa cgg tgg gag			528
Gly Glu Thr Val Ser Val Pro Gly Phe Pro Glu Leu Gln Arg Trp Glu			
165	170	175	
aca ccg tta att ttg cag aat cat gag caa ata cag agc cct tgg tct			576
Thr Pro Leu Ile Leu Gln Asn His Glu Gln Ile Gln Ser Pro Trp Ser			
180	185	190	
cag atg ttg ttt ggt cag ttt gct aat att gat caa gca cgt tgg gtc			624
Gln Met Leu Phe Gly Gln Phe Ala Asn Ile Asp Gln Ala Arg Trp Val			
195	200	205	
ttc aca aat agt ttt tac aag ctc gag gaa gag gta ata gag tgg acg			672
Phe Thr Asn Ser Phe Tyr Lys Leu Glu Glu Glu Val Ile Glu Trp Thr			
210	215	220	
aga aag ata tgg aac ttg aag gta atc ggg cca aca ctt cca tcc atg			720

Arg Lys Ile Trp Asn Leu Lys Val Ile Gly Pro Thr Leu Pro Ser Met

225 230 235 240

tac ctt gac aaa cga ctt gat gat gat aaa gat aac gga ttt aat ctc 768

Tyr Leu Asp Lys Arg Leu Asp Asp Asp Lys Asp Asn Gly Phe Asn Leu

245 250 255

tac aaa gca aac cat cat gag tgc atg aac tgg tta gac gat aag cca 816

Tyr Lys Ala Asn His His Glu Cys Met Asn Trp Leu Asp Asp Lys Pro

260 265 270

aag gaa tca gtt gtt tac gta gca ttt ggt agc ctg gtg aaa cat gga 864

Lys Glu Ser Val Val Tyr Val Ala Phe Gly Ser Leu Val Lys His Gly

275 280 285

ccc gaa caa gtg gaa gaa atc aca cgg gct tta ata gat agt gat gtc 912

Pro Glu Gln Val Glu Glu Ile Thr Arg Ala Leu Ile Asp Ser Asp Val

290 295 300

aac ttc ttg tgg gtt atc aaa cat aaa gaa gag gga aag ctc cca gaa 960

Asn Phe Leu Trp Val Ile Lys His Lys Glu Glu Gly Lys Leu Pro Glu

305 310 315 320

aat ctt tcg gaa gta ata aaa acc gga aag ggt ttg att gta gca tgg 1008

Asn Leu Ser Glu Val Ile Lys Thr Gly Lys Gly Leu Ile Val Ala Trp

325 330 335

tgc aaa caa ttg gat gtg tta gca cac gaa tca gta gga tgc ttt gtt 1056

Cys Lys Gln Leu Asp Val Leu Ala His Glu Ser Val Gly Cys Phe Val

340 345 350

aca cat tgt ggg ttc aac tca act ctt gaa gca ata agt ctt gga gtc 1104

Thr His Cys Gly Phe Asn Ser Thr Leu Glu Ala Ile Ser Leu Gly Val

355 360 365

ccc gtt gtt gca atg cct caa ttt tcg gat caa act aca aat gcc aag 1152

Pro Val Val Ala Met Pro Gln Phe Ser Asp Gln Thr Thr Asn Ala Lys

370 375 380

ctt cta gat gaa att ttg ggt gtt gga gtt aga gtt aag gct gat gag 1200

Leu Leu Asp Glu Ile Leu Gly Val Gly Val Arg Val Lys Ala Asp Glu

385 390 395 400

aat ggg ata gtg aga aga gga aat ctt gcg tca tgt att aag atg att 1248

Asn Gly Ile Val Arg Arg Gly Asn Leu Ala Ser Cys Ile Lys Met Ile

405 410 415

atg gag gag gaa aga gga gta ata atc cga aag aat gcg gta aaa tgg 1296

Met Glu Glu Glu Arg Gly Val Ile Ile Arg Lys Asn Ala Val Lys Trp

420 425 430

aag gat ttg gct aaa gta gcc gtt cat gaa ggt ggt agc tca gac aat 1344

Lys Asp Leu Ala Lys Val Ala Val His Glu Gly Gly Ser Ser Asp Asn

435 440 445

gat att gtc gaa ttt gta agt gag cta att aag gct taa 1383

Asp Ile Val Glu Phe Val Ser Glu Leu Ile Lys Ala

450 455 460

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<211> 460

<212> PRT

<213> Stevia rebaudiana

<400> 4

Met Ala Glu Gln Gln Lys Ile Lys Lys Ser Pro His Val Leu Leu Ile

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Pro Phe Pro Leu Gln Gly His Ile Asn Pro Phe Ile Gln Phe Gly Lys

20 25 30

Arg Leu Ile Ser Lys Gly Val Lys Thr Thr Leu Val Thr Thr Ile His

35 40 45

Thr Leu Asn Ser Thr Leu Asn His Ser Asn Thr Thr Thr Thr Ser Ile

50 55 60

Glu Ile Gln Ala Ile Ser Asp Gly Cys Asp Glu Gly Gly Phe Met Ser

65 70 75 80

Ala Gly Glu Ser Tyr Leu Glu Thr Phe Lys Gln Val Gly Ser Lys Ser

85 90 95

Leu Ala Asp Leu Ile Lys Lys Leu Gln Ser Glu Gly Thr Thr Ile Asp

100 105 110

Ala Ile Ile Tyr Asp Ser Met Thr Glu Trp Val Leu Asp Val Ala Ile

115 120 125

Glu Phe Gly Ile Asp Gly Gly Ser Phe Phe Thr Gln Ala Cys Val Val

130 135 140

Asn Ser Leu Tyr Tyr His Val His Lys Gly Leu Ile Ser Leu Pro Leu

145 150 155 160

Gly Glu Thr Val Ser Val Pro Gly Phe Pro Glu Leu Gln Arg Trp Glu

165 170 175

Thr Pro Leu Ile Leu Gln Asn His Glu Gln Ile Gln Ser Pro Trp Ser

180 185 190

Gln Met Leu Phe Gly Gln Phe Ala Asn Ile Asp Gln Ala Arg Trp Val

195 200 205

Phe Thr Asn Ser Phe Tyr Lys Leu Glu Glu Glu Val Ile Glu Trp Thr

210 215 220

Arg Lys Ile Trp Asn Leu Lys Val Ile Gly Pro Thr Leu Pro Ser Met

225 230 235 240

Tyr Leu Asp Lys Arg Leu Asp Asp Asp Lys Asp Asn Gly Phe Asn Leu

245 250 255

Tyr Lys Ala Asn His His Glu Cys Met Asn Trp Leu Asp Asp Lys Pro

260 265 270

Lys Glu Ser Val Val Tyr Val Ala Phe Gly Ser Leu Val Lys His Gly

275 280 285

Pro Glu Gln Val Glu Glu Ile Thr Arg Ala Leu Ile Asp Ser Asp Val

290 295 300

Asn Phe Leu Trp Val Ile Lys His Lys Glu Glu Gly Lys Leu Pro Glu

305 310 315 320

Asn Leu Ser Glu Val Ile Lys Thr Gly Lys Gly Leu Ile Val Ala Trp

325 330 335

Cys Lys Gln Leu Asp Val Leu Ala His Glu Ser Val Gly Cys Phe Val

340 345 350

Thr His Cys Gly Phe Asn Ser Thr Leu Glu Ala Ile Ser Leu Gly Val

355 360 365

Pro Val Val Ala Met Pro Gln Phe Ser Asp Gln Thr Thr Asn Ala Lys

370 375 380

Leu Leu Asp Glu Ile Leu Gly Val Gly Val Arg Val Lys Ala Asp Glu

385 390 395 400

Asn Gly Ile Val Arg Arg Gly Asn Leu Ala Ser Cys Ile Lys Met Ile

405 410 415

Met Glu Glu Glu Arg Gly Val Ile Ile Arg Lys Asn Ala Val Lys Trp

420 425 430

Lys Asp Leu Ala Lys Val Ala Val His Glu Gly Gly Ser Ser Asp Asn

435 440 445

Asp Ile Val Glu Phe Val Ser Glu Leu Ile Lys Ala

450 455 460

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<211> 1458

<212> DNA

<213> Stevia rebaudiana

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<221> CDS

<222> (1)..(1458)

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gac tcc ata gtt gac gac cgt aag cag ctt cat gtt gcg acg ttc cca 96

Asp Ser Ile Val Asp Asp Arg Lys Gln Leu His Val Ala Thr Phe Pro

20 25 30

tgg ctt gct ttc ggt cac atc ctc cct tac ctt cag ctt tcg aaa ttg 144

Trp Leu Ala Phe Gly His Ile Leu Pro Tyr Leu Gln Leu Ser Lys Leu

35 40 45

ata gct gaa aag ggt cac aaa gtc tcg ttt ctt tct acc acc aga aac 192

Ile Ala Glu Lys Gly His Lys Val Ser Phe Leu Ser Thr Thr Arg Asn

50 55 60

att caa cgt ctc tct tct cat atc tcg cca ctc ata aat gtt gtt caa 240

Ile Gln Arg Leu Ser Ser His Ile Ser Pro Leu Ile Asn Val Val Gln

65 70 75 80

ctc aca ctt cca cgt gtc caa gag ctg ccg gag gat gca gag gcg acc 288

Leu Thr Leu Pro Arg Val Gln Glu Leu Pro Glu Asp Ala Glu Ala Thr

85 90 95

act gac gtc cac cct gaa gat att cca tat ctc aag aag gct tct gat 336

Thr Asp Val His Pro Glu Asp Ile Pro Tyr Leu Lys Lys Ala Ser Asp

100 105 110

ggc ctt caa ccg gag gtc acc cgg ttt cta gaa caa cac tct ccg gac 384

Gly Leu Gln Pro Glu Val Thr Arg Phe Leu Glu Gln His Ser Pro Asp

115 120 125

tgg att att tat gat tat act cac tac tgg ttg cca tcc atc gcg gct 432

Trp Ile Ile Tyr Asp Tyr Thr His Tyr Trp Leu Pro Ser Ile Ala Ala

130 135 140

agc ctc ggt atc tca cga gcc cac ttc tcc gtc acc act cca tgg gcc 480

Ser Leu Gly Ile Ser Arg Ala His Phe Ser Val Thr Thr Pro Trp Ala

145 150 155 160

att gct tat atg gga ccc tca gct gac gcc atg ata aat ggt tca gat 528

Ile Ala Tyr Met Gly Pro Ser Ala Asp Ala Met Ile Asn Gly Ser Asp

165 170 175

ggc cga acc acg gtt gag gat ctc acg aca ccg ccc aag tgg ttt ccc 576

Gly Arg Thr Thr Val Glu Asp Leu Thr Thr Pro Pro Lys Trp Phe Pro

180 185 190

ttt ccg acc aaa gta tgc tgg cgg aag cat gat ctt gcc cga ctg gtg 624

Phe Pro Thr Lys Val Cys Trp Arg Lys His Asp Leu Ala Arg Leu Val

195 200 205

cct tac aaa gct ccg ggg ata tct gat gga tac cgt atg ggg ctg gtt 672

Pro Tyr Lys Ala Pro Gly Ile Ser Asp Gly Tyr Arg Met Gly Leu Val

210 215 220

ctt aag gga tct gat tgt ttg ctt tcc aaa tgt tac cat gag ttt gga 720

Leu Lys Gly Ser Asp Cys Leu Leu Ser Lys Cys Tyr His Glu Phe Gly

225 230 235 240

act caa tgg cta cct ctt ttg gag aca cta cac caa gta ccg gtg gtt 768

Thr Gln Trp Leu Pro Leu Leu Glu Thr Leu His Gln Val Pro Val Val

245 250 255

ccg gtg gga tta ctg cca ccg gaa ata ccc gga gac gag aaa gat gaa 816

Pro Val Gly Leu Leu Pro Pro Glu Ile Pro Gly Asp Glu Lys Asp Glu

260 265 270

aca tgg gtg tca atc aag aaa tgg ctc gat ggt aaa caa aaa ggc agt 864

Thr Trp Val Ser Ile Lys Lys Trp Leu Asp Gly Lys Gln Lys Gly Ser

275 280 285

gtg gtg tac gtt gca tta gga agc gag gtt ttg gtg agc caa acc gag 912

Val Val Tyr Val Ala Leu Gly Ser Glu Val Leu Val Ser Gln Thr Glu

290 295 300

ggt gtt gag tta gca ttg ggt ctc gag ctt tct ggg ttg cca ttt gtt 960

Val Val Glu Leu Ala Leu Gly Leu Glu Leu Ser Gly Leu Pro Phe Val

305 310 315 320

tgg gct tat aga aaa cca aaa ggt ccc gcg aag tca gac tcg gtg gag 1008

Trp Ala Tyr Arg Lys Pro Lys Gly Pro Ala Lys Ser Asp Ser Val Glu

325 330 335

ttg cca gac ggg ttc gtg gaa cga act cgt gac cgt ggg ttg gtc tgg 1056

Leu Pro Asp Gly Phe Val Glu Arg Thr Arg Asp Arg Gly Leu Val Trp

340 345 350

acg agt tgg gca cct cag tta cga ata ctg agc cat gag tcg gtt tgt 1104

Thr Ser Trp Ala Pro Gln Leu Arg Ile Leu Ser His Glu Ser Val Cys

355 360 365

ggt ttc ttg act cat tgt ggt tct gga tca att gtg gaa ggg cta atg 1152

Gly Phe Leu Thr His Cys Gly Ser Gly Ser Ile Val Glu Gly Leu Met

370 375 380

ttt ggt cac cct cta atc atg cta ccg att ttt ggg gac caa cct ctg 1200

Phe Gly His Pro Leu Ile Met Leu Pro Ile Phe Gly Asp Gln Pro Leu

385 390 395 400

aat gct cga tta ctg gag gac aaa cag gtg gga atc gag ata cca aga 1248

Asn Ala Arg Leu Leu Glu Asp Lys Gln Val Gly Ile Glu Ile Pro Arg

405 410 415

aat gag gaa gat ggt tgc ttg acc aag gag tcg gtt gct aga tca ctg 1296

Asn Glu Glu Asp Gly Cys Leu Thr Lys Glu Ser Val Ala Arg Ser Leu

420 425 430

agg tcc gtt gtt gtg gaa aaa gaa ggg gag atc tac aag gcg aac gcg 1344

Arg Ser Val Val Val Glu Lys Glu Gly Glu Ile Tyr Lys Ala Asn Ala

435 440 445

agg gag ctg agt aaa atc tat aac gac act aag gtt gaa aaa gaa tat 1392

Arg Glu Leu Ser Lys Ile Tyr Asn Asp Thr Lys Val Glu Lys Glu Tyr

450 455 460

gta agc caa ttc gta gac tat ttg gaa aag aat gcg cgt gcg gtt gcc 1440

Val Ser Gln Phe Val Asp Tyr Leu Glu Lys Asn Ala Arg Ala Val Ala

465 470 475 480

atc gat cat gag agt taa 1458

Ile Asp His Glu Ser

485

<210> 6

<211> 485

<212> PRT

<213> Stevia rebaudiana

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Met Tyr Asn Val Thr Tyr His Gln Asn Ser Lys Ala Met Ala Thr Ser

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Asp Ser Ile Val Asp Asp Arg Lys Gln Leu His Val Ala Thr Phe Pro

20 25 30

Trp Leu Ala Phe Gly His Ile Leu Pro Tyr Leu Gln Leu Ser Lys Leu

35 40 45

Ile Ala Glu Lys Gly His Lys Val Ser Phe Leu Ser Thr Thr Arg Asn

50 55 60

Ile Gln Arg Leu Ser Ser His Ile Ser Pro Leu Ile Asn Val Val Gln

65 70 75 80

Leu Thr Leu Pro Arg Val Gln Glu Leu Pro Glu Asp Ala Glu Ala Thr

85 90 95

Thr Asp Val His Pro Glu Asp Ile Pro Tyr Leu Lys Lys Ala Ser Asp

100 105 110

Gly Leu Gln Pro Glu Val Thr Arg Phe Leu Glu Gln His Ser Pro Asp

115 120 125

Trp Ile Ile Tyr Asp Tyr Thr His Tyr Trp Leu Pro Ser Ile Ala Ala

130 135 140

Ser Leu Gly Ile Ser Arg Ala His Phe Ser Val Thr Thr Pro Trp Ala

145 150 155 160

Ile Ala Tyr Met Gly Pro Ser Ala Asp Ala Met Ile Asn Gly Ser Asp

165 170 175

Gly Arg Thr Thr Val Glu Asp Leu Thr Thr Pro Pro Lys Trp Phe Pro

180 185 190

Phe Pro Thr Lys Val Cys Trp Arg Lys His Asp Leu Ala Arg Leu Val

195 200 205

Pro Tyr Lys Ala Pro Gly Ile Ser Asp Gly Tyr Arg Met Gly Leu Val

210 215 220

Leu Lys Gly Ser Asp Cys Leu Leu Ser Lys Cys Tyr His Glu Phe Gly

225 230 235 240

Thr Gln Trp Leu Pro Leu Leu Glu Thr Leu His Gln Val Pro Val Val

245 250 255

Pro Val Gly Leu Leu Pro Pro Glu Ile Pro Gly Asp Glu Lys Asp Glu

260 265 270

Thr Trp Val Ser Ile Lys Lys Trp Leu Asp Gly Lys Gln Lys Gly Ser

275 280 285

Val Val Tyr Val Ala Leu Gly Ser Glu Val Leu Val Ser Gln Thr Glu

290 295 300

Val Val Glu Leu Ala Leu Gly Leu Glu Leu Ser Gly Leu Pro Phe Val

305 310 315 320

Trp Ala Tyr Arg Lys Pro Lys Gly Pro Ala Lys Ser Asp Ser Val Glu

325

330

335

Leu Pro Asp Gly Phe Val Glu Arg Thr Arg Asp Arg Gly Leu Val Trp

340

345

350

Thr Ser Trp Ala Pro Gln Leu Arg Ile Leu Ser His Glu Ser Val Cys

355

360

365

Gly Phe Leu Thr His Cys Gly Ser Gly Ser Ile Val Glu Gly Leu Met

370

375

380

Phe Gly His Pro Leu Ile Met Leu Pro Ile Phe Gly Asp Gln Pro Leu

385

390

395

400

Asn Ala Arg Leu Leu Glu Asp Lys Gln Val Gly Ile Glu Ile Pro Arg

405

410

415

Asn Glu Glu Asp Gly Cys Leu Thr Lys Glu Ser Val Ala Arg Ser Leu

420

425

430

Arg Ser Val Val Val Glu Lys Glu Gly Glu Ile Tyr Lys Ala Asn Ala

435

440

445

Arg Glu Leu Ser Lys Ile Tyr Asn Asp Thr Lys Val Glu Lys Glu Tyr

450

455

460

Val Ser Gln Phe Val Asp Tyr Leu Glu Lys Asn Ala Arg Ala Val Ala

465

470

475

480

Ile Asp His Glu Ser

485

<210> 7

<211> 1377

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<213> Stevia rebaudiana

<220>

<221> CDS

<222> (1)..(1377)

<400> 7

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Met Glu Asn Lys Thr Glu Thr Thr Val Arg Arg Arg Arg Arg Ile Ile

1 5 10 15

tta ttc ccg gta cca ttt caa ggc cac att aac cca att ctt cag cta 96

Leu Phe Pro Val Pro Phe Gln Gly His Ile Asn Pro Ile Leu Gln Leu

20 25 30

gcc aat gtg ttg tac tct aaa gga ttc agt atc acc atc ttt cac acc 144

Ala Asn Val Leu Tyr Ser Lys Gly Phe Ser Ile Thr Ile Phe His Thr

35 40 45

aac ttc aac aaa ccc aaa aca tct aat tac cct cac ttc act ttc aga 192

Asn Phe Asn Lys Pro Lys Thr Ser Asn Tyr Pro His Phe Thr Phe Arg

50 55 60

ttc atc ctc gac aac gac cca caa gac gaa cgc att tcc aat cta ccg 240

Phe Ile Leu Asp Asn Asp Pro Gln Asp Glu Arg Ile Ser Asn Leu Pro

65 70 75 80

act cat ggt ccg ctc gct ggt atg cgg att ccg att atc aac gaa cac 288

Thr His Gly Pro Leu Ala Gly Met Arg Ile Pro Ile Ile Asn Glu His

85 90 95

gga gct gac gaa tta cga cgc gaa ctg gaa ctg ttg atg tta gct tct 336

Gly Ala Asp Glu Leu Arg Arg Glu Leu Glu Leu Leu Met Leu Ala Ser

100 105 110

gaa gaa gat gaa gag gta tcg tgt tta atc acg gat gct ctt tgg tac 384

Glu Glu Asp Glu Glu Val Ser Cys Leu Ile Thr Asp Ala Leu Trp Tyr

115 120 125

ttc gcg caa tct gtt gct gac agt ctt aac ctc cga ccg ctt gtt ttg 432

Phe Ala Gln Ser Val Ala Asp Ser Leu Asn Leu Arg Pro Leu Val Leu

130 135 140

atg aca agc agc ttg ttt aat ttt cat gca cat gtt tca ctt cct cag 480

Met Thr Ser Ser Leu Phe Asn Phe His Ala His Val Ser Leu Pro Gln

145 150 155 160

ttt gat gag ctt ggt tac ctc gat cct gat gac aaa acc cgt ttg gaa 528

Phe Asp Glu Leu Gly Tyr Leu Asp Pro Asp Asp Lys Thr Arg Leu Glu

165 170 175

gaa caa gcg agt ggg ttt cct atg cta aaa gtg aaa gac atc aag tct 576

Glu Gln Ala Ser Gly Phe Pro Met Leu Lys Val Lys Asp Ile Lys Ser

180 185 190

gcg tat tcg aac tgg caa ata ctc aaa gag ata tta ggg aag atg ata 624

Ala Tyr Ser Asn Trp Gln Ile Leu Lys Glu Ile Leu Gly Lys Met Ile

195 200 205

aaa caa aca aaa gca tct tca gga gtc atc tgg aac tca ttt aag gaa 672

Lys Gln Thr Lys Ala Ser Ser Gly Val Ile Trp Asn Ser Phe Lys Glu

210 215 220

ctc gaa gag tct gag ctc gaa act gtt atc cgt gag atc ccg gct cca 720

Leu Glu Glu Ser Glu Leu Glu Thr Val Ile Arg Glu Ile Pro Ala Pro

225 230 235 240

agt ttc ttg ata cca ctc ccc aag cat ttg aca gcc tct tcc agc agc 768

Ser Phe Leu Ile Pro Leu Pro Lys His Leu Thr Ala Ser Ser Ser Ser

245 250 255

tta cta gac cac gat cga acc gtt ttt caa tgg tta gac caa caa ccg 816

Leu Leu Asp His Asp Arg Thr Val Phe Gln Trp Leu Asp Gln Gln Pro

260 265 270

cca agt tcg gta ctg tat gtt agt ttt ggt agt act agt gaa gtg gat 864

Pro Ser Ser Val Leu Tyr Val Ser Phe Gly Ser Thr Ser Glu Val Asp

275 280 285

gag aaa gat ttc ttg gaa ata gct cgt ggg ttg gtt gat agc aag cag 912

Glu Lys Asp Phe Leu Glu Ile Ala Arg Gly Leu Val Asp Ser Lys Gln

290 295 300

tcg ttt tta tgg gtg gtt cga cct ggg ttt gtc aag ggt tcg acg tgg 960

Ser Phe Leu Trp Val Val Arg Pro Gly Phe Val Lys Gly Ser Thr Trp

305 310 315 320

gtc gaa ccg ttg cca gat ggg ttc ttg ggt gaa aga gga cgt att gtg 1008

Val Glu Pro Leu Pro Asp Gly Phe Leu Gly Glu Arg Gly Arg Ile Val

325 330 335

aaa tgg gtt cca cag caa gaa gtg cta gct cat gga gca ata ggc gca 1056

Lys Trp Val Pro Gln Gln Glu Val Leu Ala His Gly Ala Ile Gly Ala

340 345 350

ttc tgg act cat agc gga tgg aac tct acg ttg gaa agc gtt tgt gaa 1104

Phe Trp Thr His Ser Gly Trp Asn Ser Thr Leu Glu Ser Val Cys Glu

355 360 365

ggg gtt cct atg att ttc tcg gat ttt ggg ctc gat caa ccg ttg aat 1152

Gly Val Pro Met Ile Phe Ser Asp Phe Gly Leu Asp Gln Pro Leu Asn

370 375 380

gct aga tac atg agt gat gtt ttg aag gta ggg gtg tat ttg gaa aat 1200

Ala Arg Tyr Met Ser Asp Val Leu Lys Val Gly Val Tyr Leu Glu Asn

385 390 395 400

ggg tgg gaa aga gga gag ata gca aat gca ata aga aga gtt atg gtg 1248

Gly Trp Glu Arg Gly Glu Ile Ala Asn Ala Ile Arg Arg Val Met Val

405 410 415

gat gaa gaa gga gaa tac att aga cag aat gca aga gtt ttg aaa caa 1296

Asp Glu Glu Gly Glu Tyr Ile Arg Gln Asn Ala Arg Val Leu Lys Gln

420 425 430

aag gca gat gtt tct ttg atg aag ggt ggt tcg tct tac gaa tca tta 1344

Lys Ala Asp Val Ser Leu Met Lys Gly Gly Ser Ser Tyr Glu Ser Leu

435 440 445

gag tct cta gtt tct tac att tca tcg ttg taa 1377

Glu Ser Leu Val Ser Tyr Ile Ser Ser Leu

450 455

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<213> Stevia rebaudiana

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Leu Phe Pro Val Pro Phe Gln Gly His Ile Asn Pro Ile Leu Gln Leu

20 25 30

Ala Asn Val Leu Tyr Ser Lys Gly Phe Ser Ile Thr Ile Phe His Thr

35 40 45

Asn Phe Asn Lys Pro Lys Thr Ser Asn Tyr Pro His Phe Thr Phe Arg

50 55 60

Phe Ile Leu Asp Asn Asp Pro Gln Asp Glu Arg Ile Ser Asn Leu Pro

65 70 75 80

Thr His Gly Pro Leu Ala Gly Met Arg Ile Pro Ile Ile Asn Glu His

85 90 95

Gly Ala Asp Glu Leu Arg Arg Glu Leu Glu Leu Leu Met Leu Ala Ser

100 105 110

Glu Glu Asp Glu Glu Val Ser Cys Leu Ile Thr Asp Ala Leu Trp Tyr

115 120 125

Phe Ala Gln Ser Val Ala Asp Ser Leu Asn Leu Arg Pro Leu Val Leu

130 135 140

Met Thr Ser Ser Leu Phe Asn Phe His Ala His Val Ser Leu Pro Gln

145 150 155 160

Phe Asp Glu Leu Gly Tyr Leu Asp Pro Asp Asp Lys Thr Arg Leu Glu

165 170 175

Glu Gln Ala Ser Gly Phe Pro Met Leu Lys Val Lys Asp Ile Lys Ser

180 185 190

Ala Tyr Ser Asn Trp Gln Ile Leu Lys Glu Ile Leu Gly Lys Met Ile

195 200 205

Lys Gln Thr Lys Ala Ser Ser Gly Val Ile Trp Asn Ser Phe Lys Glu

210 215 220

Leu Glu Glu Ser Glu Leu Glu Thr Val Ile Arg Glu Ile Pro Ala Pro

225 230 235 240

Ser Phe Leu Ile Pro Leu Pro Lys His Leu Thr Ala Ser Ser Ser Ser

245 250 255

Leu Leu Asp His Asp Arg Thr Val Phe Gln Trp Leu Asp Gln Gln Pro

260 265 270

Pro Ser Ser Val Leu Tyr Val Ser Phe Gly Ser Thr Ser Glu Val Asp

275 280 285

Glu Lys Asp Phe Leu Glu Ile Ala Arg Gly Leu Val Asp Ser Lys Gln

290 295 300

Ser Phe Leu Trp Val Val Arg Pro Gly Phe Val Lys Gly Ser Thr Trp

305 310 315 320

Val Glu Pro Leu Pro Asp Gly Phe Leu Gly Glu Arg Gly Arg Ile Val

325 330 335

Lys Trp Val Pro Gln Gln Glu Val Leu Ala His Gly Ala Ile Gly Ala

340 345 350

Phe Trp Thr His Ser Gly Trp Asn Ser Thr Leu Glu Ser Val Cys Glu

355 360 365

Gly Val Pro Met Ile Phe Ser Asp Phe Gly Leu Asp Gln Pro Leu Asn

370

375

380

Ala Arg Tyr Met Ser Asp Val Leu Lys Val Gly Val Tyr Leu Glu Asn

385

390

395

400

Gly Trp Glu Arg Gly Glu Ile Ala Asn Ala Ile Arg Arg Val Met Val

405

410

415

Asp Glu Glu Gly Glu Tyr Ile Arg Gln Asn Ala Arg Val Leu Lys Gln

420

425

430

Lys Ala Asp Val Ser Leu Met Lys Gly Gly Ser Ser Tyr Glu Ser Leu

435

440

445

Glu Ser Leu Val Ser Tyr Ile Ser Ser Leu

450

455

<210> 9

<211> 2004

<212> DNA

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<222> (1)..(2004)

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1 5 10 15

gct gga ttt att gct tct cat gtt gcc aac aga tta atc cgt aac tat 96

Ala Gly Phe Ile Ala Ser His Val Ala Asn Arg Leu Ile Arg Asn Tyr

20 25 30

cct gat tac aag atc gtt gtt ctt gac aag ctt gat tac tgt tca gat 144

Pro Asp Tyr Lys Ile Val Val Leu Asp Lys Leu Asp Tyr Cys Ser Asp

35 40 45

ctg aag aat ctt gat cct tct ttt tct tca cca aat ttc aag ttt gtc 192

Leu Lys Asn Leu Asp Pro Ser Phe Ser Ser Pro Asn Phe Lys Phe Val

50 55 60

aaa gga gat atc gcg agt gat gat ctc gtt aac tac ctt ctc atc act 240

Lys Gly Asp Ile Ala Ser Asp Asp Leu Val Asn Tyr Leu Leu Ile Thr

65 70 75 80

gaa aac att gat acg ata atg cat ttt gct gct caa act cat gtt gat 288

Glu Asn Ile Asp Thr Ile Met His Phe Ala Ala Gln Thr His Val Asp

85 90 95

aac tct ttt ggt aat agc ttt gag ttt acc aag aac aat att tat ggt 336

Asn Ser Phe Gly Asn Ser Phe Glu Phe Thr Lys Asn Asn Ile Tyr Gly

100 105 110

act cat gtt ctt ttg gaa gcc tgt aaa gtt aca gga cag atc agg agg 384

Thr His Val Leu Leu Glu Ala Cys Lys Val Thr Gly Gln Ile Arg Arg

115 120 125

ttt atc cat gtg agt acc gat gaa gtc tat gga gaa acc gat gag gat 432

Phe Ile His Val Ser Thr Asp Glu Val Tyr Gly Glu Thr Asp Glu Asp

130 135 140

gct gct gta gga aac cat gaa gct tct cag ctg tta ccg acg aat cct 480

Ala Ala Val Gly Asn His Glu Ala Ser Gln Leu Leu Pro Thr Asn Pro

145 150 155 160

tac tct gca act aag gct ggt gct gag atg ctt gtg atg gct tat ggt 528

Tyr Ser Ala Thr Lys Ala Gly Ala Glu Met Leu Val Met Ala Tyr Gly

165 170 175

aga tca tat gga ttg cct gtt att acg act cgc ggg aac aat gtt tat 576

Arg Ser Tyr Gly Leu Pro Val Ile Thr Thr Arg Gly Asn Asn Val Tyr

180 185 190

ggg cct aac cag ttt cct gaa aaa atg att cct aag ttc atc ttg ttg 624

Gly Pro Asn Gln Phe Pro Glu Lys Met Ile Pro Lys Phe Ile Leu Leu

195 200 205

gct atg agt ggg aag ccg ctt ccc atc cat gga gat gga tct aat gtc 672

Ala Met Ser Gly Lys Pro Leu Pro Ile His Gly Asp Gly Ser Asn Val

210 215 220

cgg agt tac ttg tac tgc gaa gac gtt gct gag gct ttt gag gtt gtt 720

Arg Ser Tyr Leu Tyr Cys Glu Asp Val Ala Glu Ala Phe Glu Val Val

225 230 235 240

ctt cac aaa gga gaa atc ggt cat gtc tac aat gtc ggc aca aaa aga 768

Leu His Lys Gly Glu Ile Gly His Val Tyr Asn Val Gly Thr Lys Arg

245 250 255

gaa agg aga gtg atc gat gtg gct aga gac atc tgc aaa ctt ttc ggg 816

Glu Arg Arg Val Ile Asp Val Ala Arg Asp Ile Cys Lys Leu Phe Gly

260 265 270

aaa gac cct gag tca agc att cag ttt gtg gag aac cgg ccc ttt aat 864

Lys Asp Pro Glu Ser Ser Ile Gln Phe Val Glu Asn Arg Pro Phe Asn

275 280 285

gat caa agg tac ttc ctt gat gat cag aag ctg aag aaa ttg ggg tgg 912

Asp Gln Arg Tyr Phe Leu Asp Asp Gln Lys Leu Lys Lys Leu Gly Trp

290 295 300

caa gag cga aca aat tgg gaa gat gga ttg aag aag aca atg gac tgg 960

Gln Glu Arg Thr Asn Trp Glu Asp Gly Leu Lys Lys Thr Met Asp Trp

305 310 315 320

tac act cag aat cct gag tgg tgg ggt gat gtt tct gga gct ttg ctt 1008

Tyr Thr Gln Asn Pro Glu Trp Trp Gly Asp Val Ser Gly Ala Leu Leu

325 330 335

cct cat ccg aga atg ctt atg atg ccc ggt gga aga ctt tct gat gga 1056

Pro His Pro Arg Met Leu Met Met Pro Gly Gly Arg Leu Ser Asp Gly

340 345 350

tct agt gag aag aaa gac gtt tca agc aac acg gtc cag aca ttt acg 1104

Ser Ser Glu Lys Lys Asp Val Ser Ser Asn Thr Val Gln Thr Phe Thr

355 360 365

gtt gta aca cct aag aat ggt gat tct ggt gac aaa gct tcg ttg aag 1152

Val Val Thr Pro Lys Asn Gly Asp Ser Gly Asp Lys Ala Ser Leu Lys

370 375 380

ttt ttg atc tat ggt aag act ggt tgg ctt ggt ggt ctt cta ggg aaa 1200

Phe Leu Ile Tyr Gly Lys Thr Gly Trp Leu Gly Gly Leu Leu Gly Lys

385	390	395	400	
cta tgt gag aag caa ggg att aca tat gag tat ggg aaa gga cgt ctg				1248
Leu Cys Glu Lys Gln Gly Ile Thr Tyr Glu Tyr Gly Lys Gly Arg Leu				
405	410	415		
gag gat aga gct tct ctt gtg gcg gat att cgt agc atc aaa cct act				1296
Glu Asp Arg Ala Ser Leu Val Ala Asp Ile Arg Ser Ile Lys Pro Thr				
420	425	430		
cat gtg ttt aat gct gct ggt tta act ggc aga ccc aac gtt gac tgg				1344
His Val Phe Asn Ala Ala Gly Leu Thr Gly Arg Pro Asn Val Asp Trp				
435	440	445		
tgt gaa tct cac aaa cca gag acc att cgt gta aat gtc gca ggt act				1392
Cys Glu Ser His Lys Pro Glu Thr Ile Arg Val Asn Val Ala Gly Thr				
450	455	460		
ttg act cta gct gat gtt tgc aga gag aat gat ctc ttg atg atg aac				1440
Leu Thr Leu Ala Asp Val Cys Arg Glu Asn Asp Leu Leu Met Met Asn				
465	470	475	480	
ttc gcc acc ggt tgc atc ttt gag tat gac gct aca cat cct gag ggt				1488
Phe Ala Thr Gly Cys Ile Phe Glu Tyr Asp Ala Thr His Pro Glu Gly				
485	490	495		
tcg ggt ata ggt ttc aag gaa gaa gac aag cca aat ttc ttt ggt tct				1536

Ser Gly Ile Gly Phe Lys Glu Glu Asp Lys Pro Asn Phe Phe Gly Ser

500 505 510

ttc tac tcg aaa acc aaa gcc atg gtt gag gag ctc ttg aga gaa ttt 1584

Phe Tyr Ser Lys Thr Lys Ala Met Val Glu Glu Leu Leu Arg Glu Phe

515 520 525

gac aat gta tgt acc ttg aga gtc cgg atg cca atc tcc tca gac cta 1632

Asp Asn Val Cys Thr Leu Arg Val Arg Met Pro Ile Ser Ser Asp Leu

530 535 540

aac aac ccg aga aac ttc atc acg aag atc tcg cgc tac aac aaa gtg 1680

Asn Asn Pro Arg Asn Phe Ile Thr Lys Ile Ser Arg Tyr Asn Lys Val

545 550 555 560

gtg gac atc ccg aac agc atg acc gta cta gac gag ctt ctc cca atc 1728

Val Asp Ile Pro Asn Ser Met Thr Val Leu Asp Glu Leu Leu Pro Ile

565 570 575

tct atc gag atg gcg aag aga aac cta aga ggc ata tgg aat ttc acc 1776

Ser Ile Glu Met Ala Lys Arg Asn Leu Arg Gly Ile Trp Asn Phe Thr

580 585 590

aac cca ggg gtg gtg agc cac aac gag ata ttg gag atg tac aag aat 1824

Asn Pro Gly Val Val Ser His Asn Glu Ile Leu Glu Met Tyr Lys Asn

595 600 605

tac atc gag cca ggt ttt aaa tgg tcc aac ttc aca gtg gaa gaa caa 1872

Tyr Ile Glu Pro Gly Phe Lys Trp Ser Asn Phe Thr Val Glu Glu Gln

610 615 620

gca aag gtc att gtt gct gct cga agc aac aac gaa atg gat gga tct 1920

Ala Lys Val Ile Val Ala Ala Arg Ser Asn Asn Glu Met Asp Gly Ser

625 630 635 640

aaa cta agc aag gag ttc cca gag atg ctc tcc atc aaa gag tca ctg 1968

Lys Leu Ser Lys Glu Phe Pro Glu Met Leu Ser Ile Lys Glu Ser Leu

645 650 655

ctc aaa tac gtc ttt gaa cca aac aag aga acc taa 2004

Leu Lys Tyr Val Phe Glu Pro Asn Lys Arg Thr

660 665

<210> 10

<211> 667

<212> PRT

<213> Arabidopsis thaliana

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Ala Gly Phe Ile Ala Ser His Val Ala Asn Arg Leu Ile Arg Asn Tyr

20 25 30

Pro Asp Tyr Lys Ile Val Val Leu Asp Lys Leu Asp Tyr Cys Ser Asp

35 40 45

Leu Lys Asn Leu Asp Pro Ser Phe Ser Ser Pro Asn Phe Lys Phe Val

50 55 60

Lys Gly Asp Ile Ala Ser Asp Asp Leu Val Asn Tyr Leu Leu Ile Thr

65 70 75 80

Glu Asn Ile Asp Thr Ile Met His Phe Ala Ala Gln Thr His Val Asp

85 90 95

Asn Ser Phe Gly Asn Ser Phe Glu Phe Thr Lys Asn Asn Ile Tyr Gly

100 105 110

Thr His Val Leu Leu Glu Ala Cys Lys Val Thr Gly Gln Ile Arg Arg

115 120 125

Phe Ile His Val Ser Thr Asp Glu Val Tyr Gly Glu Thr Asp Glu Asp

130 135 140

Ala Ala Val Gly Asn His Glu Ala Ser Gln Leu Leu Pro Thr Asn Pro

145 150 155 160

Tyr Ser Ala Thr Lys Ala Gly Ala Glu Met Leu Val Met Ala Tyr Gly

165 170 175

Arg Ser Tyr Gly Leu Pro Val Ile Thr Thr Arg Gly Asn Asn Val Tyr

180 185 190

Gly Pro Asn Gln Phe Pro Glu Lys Met Ile Pro Lys Phe Ile Leu Leu

195 200 205

Ala Met Ser Gly Lys Pro Leu Pro Ile His Gly Asp Gly Ser Asn Val

210 215 220

Arg Ser Tyr Leu Tyr Cys Glu Asp Val Ala Glu Ala Phe Glu Val Val

225 230 235 240

Leu His Lys Gly Glu Ile Gly His Val Tyr Asn Val Gly Thr Lys Arg

245 250 255

Glu Arg Arg Val Ile Asp Val Ala Arg Asp Ile Cys Lys Leu Phe Gly

260 265 270

Lys Asp Pro Glu Ser Ser Ile Gln Phe Val Glu Asn Arg Pro Phe Asn

275 280 285

Asp Gln Arg Tyr Phe Leu Asp Asp Gln Lys Leu Lys Lys Leu Gly Trp

290 295 300

Gln Glu Arg Thr Asn Trp Glu Asp Gly Leu Lys Lys Thr Met Asp Trp

305 310 315 320

Tyr Thr Gln Asn Pro Glu Trp Trp Gly Asp Val Ser Gly Ala Leu Leu

325 330 335

Pro His Pro Arg Met Leu Met Met Pro Gly Gly Arg Leu Ser Asp Gly

340 345 350

Ser Ser Glu Lys Lys Asp Val Ser Ser Asn Thr Val Gln Thr Phe Thr

355 360 365

Val Val Thr Pro Lys Asn Gly Asp Ser Gly Asp Lys Ala Ser Leu Lys

370 375 380

Phe Leu Ile Tyr Gly Lys Thr Gly Trp Leu Gly Gly Leu Leu Gly Lys

385 390 395 400

Leu Cys Glu Lys Gln Gly Ile Thr Tyr Glu Tyr Gly Lys Gly Arg Leu

405 410 415

Glu Asp Arg Ala Ser Leu Val Ala Asp Ile Arg Ser Ile Lys Pro Thr

420 425 430

His Val Phe Asn Ala Ala Gly Leu Thr Gly Arg Pro Asn Val Asp Trp

435 440 445

Cys Glu Ser His Lys Pro Glu Thr Ile Arg Val Asn Val Ala Gly Thr

450 455 460

Leu Thr Leu Ala Asp Val Cys Arg Glu Asn Asp Leu Leu Met Met Asn

465 470 475 480

Phe Ala Thr Gly Cys Ile Phe Glu Tyr Asp Ala Thr His Pro Glu Gly

485 490 495

Ser Gly Ile Gly Phe Lys Glu Glu Asp Lys Pro Asn Phe Phe Gly Ser

500 505 510

Phe Tyr Ser Lys Thr Lys Ala Met Val Glu Glu Leu Leu Arg Glu Phe

515 520 525

Asp Asn Val Cys Thr Leu Arg Val Arg Met Pro Ile Ser Ser Asp Leu

530 535 540

Asn Asn Pro Arg Asn Phe Ile Thr Lys Ile Ser Arg Tyr Asn Lys Val

545 550 555 560

Val Asp Ile Pro Asn Ser Met Thr Val Leu Asp Glu Leu Leu Pro Ile

565

570

575

Ser Ile Glu Met Ala Lys Arg Asn Leu Arg Gly Ile Trp Asn Phe Thr

580

585

590

Asn Pro Gly Val Val Ser His Asn Glu Ile Leu Glu Met Tyr Lys Asn

595

600

605

Tyr Ile Glu Pro Gly Phe Lys Trp Ser Asn Phe Thr Val Glu Glu Gln

610

615

620

Ala Lys Val Ile Val Ala Ala Arg Ser Asn Asn Glu Met Asp Gly Ser

625

630

635

640

Lys Leu Ser Lys Glu Phe Pro Glu Met Leu Ser Ile Lys Glu Ser Leu

645

650

655

Leu Lys Tyr Val Phe Glu Pro Asn Lys Arg Thr

660

665

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<211> 60

<212> DNA

<213> Stevia rebaudiana

<400> 11

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<210> 12

<211> 33

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 12

cacccatatg gatgcaatgg ctacaactga gaa 33

<210> 13

<211> 32

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 13

agatctctag tttcttgcta gcacggtgat tt 32

<210> 14

<211> 35

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 14

cacccatatg gcggaacaac aaaagatcaa gaaat 35

<210> 15

<211> 35

<212> DNA

<213> Artificial

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<223> Artificial nucleic acid

<400> 15

ggatccttaa gcctaatta gtcacttac aaatt

35

<210> 16

<211> 29

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 16

cacccatatg gaaaataaaa cggagacca

29

<210> 17

<211> 32

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 17

ggatccttac aacgatgaaa tgtaagaaac ta

32

<210> 18

<211> 33

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 18

acagatctat ggatgcaatg gctacaactg aga

33

<210> 19

<211> 34

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 19

tagtcgacta gtttcttgct agcacggtga tttc

34

<210> 20

<211> 42

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 20

aagcgccgc atgtacaacg ttacttatca tcaaaattca aa 42

<210> 21

<211> 31

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 21

cgtaaattaa ctctcatgat cgatggcaac c 31

<210> 22

<211> 34

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 22

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34

<210> 23

<211> 37

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 23

cgtaattaa gcctaatta gctcacttac aaattcg

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<210> 24

<211> 33

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 24

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33

<210> 25

<211> 44

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 25

gcgtcgactt acaacgatga aatgtaagaa actagagact ctaa

44

<210> 26

<211> 33

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 26

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33

<210> 27

<211> 32

<212> DNA

<213> Artificial

<220>

<223> Artificial nucleic acid

<400> 27

ctcgagtttag gttctctgt ttggtcaaa ga

32

<210> 28

<211> 22

<212> DNA

<213> Artificial

<220>

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