

G1766WO_Sequence Listing
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

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<221> CDS

<222> (1)..(1446)

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

G1766WO_Sequence Listing

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Leu	Asp	Thr	Val 180	Ile	Asp	Trp	Val	Pro 185	Gly	Met	Glu	Gly	Ile 190	Arg	Leu	
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Lys	Asp	Phe 195	Pro	Leu	Asp	Trp	Ser 200	Thr	Asp	Leu	Asn	Asp 205	Lys	Val	Leu	
atg	ttc	act	aca	gaa	gct	cct	caa	agg	tca	cac	aag	gtt	tca	cat	cat	672
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Ile 225	Phe	His	Thr	Phe	Asp 230	Glu	Leu	Glu	Pro	Ser 235	Ile	Ile	Lys	Thr	Leu 240	
tca	ttg	agg	tat	aat	cac	att	tac	acc	atc	ggc	cca	ctg	caa	tta	ctt	768
Ser	Leu	Arg	Tyr	Asn 245	His	Ile	Tyr	Thr	Ile 250	Gly	Pro	Leu	Gln	Leu 255	Leu	
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Leu	Asp	Gln 260	Ile	Pro	Glu	Glu	Lys	Lys 265	Gln	Thr	Gly	Ile	Thr 270	Ser	Leu	
cat	gga	tac	agt	tta	gta	aaa	gaa	gaa	cca	gag	tgt	ttc	cag	tgg	ctt	864
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Gln 290	Ser	Lys	Glu	Pro	Asn	Ser 295	Val	Val	Tyr	Val	Asn 300	Phe	Gly	Ser	Thr	
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Arg	Gly 355	Phe	Ile	Ala	Ser	Trp	Cys 360	Ser	Gln	Glu	Lys	Val 365	Leu	Lys	His	
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Pro 370	Ser	Val	Gly	Gly	Phe	Leu 375	Thr	His	Cys	Gly	Trp 380	Gly	Ser	Thr	Ile	
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Glu 385	Ser	Leu	Ser	Ala	Gly 390	Val	Pro	Met	Ile	Cys 395	Trp	Pro	Tyr	Ser	Trp 400	
gac	cag	ctg	acc	aac	tgt	agg	tat	ata	tgc	aaa	gaa	tgg	gag	gtt	ggg	1248
Asp	Gln	Leu	Thr	Asn 405	Cys	Arg	Tyr	Ile	Cys 410	Lys	Glu	Trp	Glu	Val 415	Gly	
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G1766WO_Sequence Listing

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Asn																	

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G1766WO_Sequence Listing

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Ser Leu Arg Tyr Asn His Ile Tyr Thr Ile Gly Pro Leu Gln Leu Leu
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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
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Gln Ser Lys Glu Pro Asn Ser Val Val Tyr Val Asn Phe Gly Ser Thr
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Thr Val Met Ser Leu Glu Asp Met Thr Glu Phe Gly Trp Gly Leu Ala
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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
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Glu Ser Leu Ser Ala Gly Val Pro Met Ile Cys Trp Pro Tyr Ser Trp
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Asp Gln Leu Thr Asn Cys Arg Tyr Ile Cys Lys Glu Trp Glu Val Gly
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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
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Asp Trp Lys Glu Lys Ala Arg Ile Ala Ile Ala Pro Asn Gly Ser Ser
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G1766WO_Sequence Listing

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Asn

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 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
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 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
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 Glu Phe Gly Ile Asp Gly Gly Ser Phe Phe Thr Gln Ala Cys Val Val
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 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
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G1766WO_Sequence Listing

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Phe	Thr	Asn	Ser	Phe	Tyr	Lys	Leu	Glu	Glu	Glu	Val	Ile	Glu	Trp	Thr					
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Tyr	Lys	Ala	Asn	His	His	Glu	Cys	Met	Asn	Trp	Leu	Asp	Asp	Lys	Pro					
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aag	gaa	tca	gtt	gtt	tac	gta	gca	ttt	ggg	agc	ctg	gtg	aaa	cat	gga					864
Lys	Glu	Ser	Val	Val	Tyr	Val	Ala	Phe	Gly	Ser	Leu	Val	Lys	His	Gly					
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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									
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	305				310				315						320					
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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	ggg	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					
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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
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G1766WO_Sequence Listing

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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
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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
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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

G1766W0_Sequence Listing

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 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
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 385 390 395 400
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35																	
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100																	
ggt ctt caa ccg gag gtc acc cgg ttt cta gaa caa cac tct ccg gac Gly Leu Gln Pro Glu Val Thr Arg Phe Leu Glu Gln His Ser Pro Asp																	384
115																	
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130																	
agc ctc ggt atc tca cga gcc cac ttc tcc gtc acc act cca tgg gcc Ser Leu Gly Ile Ser Arg Ala His Phe Ser Val Thr Thr Pro Trp Ala																	480
145																	
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165																	
ggt cga acc acg gtt gag gat ctc acg aca ccg ccc aag tgg ttt ccc Gly Arg Thr Thr Val Glu Asp Leu Thr Thr Pro Pro Lys Trp Phe Pro																	576
180																	
ttt ccg acc aaa gta tgc tgg cgg aag cat gat ctt gcc cga ctg gtg Phe Pro Thr Lys Val Cys Trp Arg Lys His Asp Leu Ala Arg Leu Val																	624
195																	
cct tac aaa gct ccg ggg ata tct gat gga tac cgt atg ggg ctg gtt Pro Tyr Lys Ala Pro Gly Ile Ser Asp Gly Tyr Arg Met Gly Leu Val																	672
210																	
ctt aag gga tct gat tgt ttg ctt tcc aaa tgt tac cat gag ttt gga Leu Lys Gly Ser Asp Cys Leu Leu Ser Lys Cys Tyr His Glu Phe Gly																	720
225																	
act caa tgg cta cct ctt ttg gag aca cta cac caa gta ccg gtg gtt Thr Gln Trp Leu Pro Leu Leu Glu Thr Leu His Gln Val Pro Val Val																	768
245																	
ccg gtg gga tta ctg cca ccg gaa ata ccc gga gac gag aaa gat gaa Pro Val Gly Leu Leu Pro Pro Glu Ile Pro Gly Asp Glu Lys Asp Glu																	816
260																	

G1766W0_Sequence Listing

aca tgg gtg tca atc aag aaa tgg ctc gat ggt aaa caa aaa ggc agt Thr Trp Val Ser Ile Lys Lys Trp Leu Asp Gly Lys Gln Lys Gly Ser 275 280 285	864
gtg gtg tac gtt gca tta gga agc gag gtt ttg gtg agc caa acc gag Val Val Tyr Val Ala Leu Gly Ser Glu Val Leu Val Ser Gln Thr Glu 290 295 300	912
gtt gtt gag tta gca ttg ggt ctc gag ctt tct ggg ttg cca ttt gtt Val Val Glu Leu Ala Leu Gly Leu Glu Leu Ser Gly Leu Pro Phe Val 305 310 315 320	960
tgg gct tat aga aaa cca aaa ggt ccc gcg aag tca gac tcg gtg gag Trp Ala Tyr Arg Lys Pro Lys Gly Pro Ala Lys Ser Asp Ser Val Glu 325 330 335	1008
ttg cca gac ggg ttc gtg gaa cga act cgt gac cgt ggg ttg gtc ttg Leu Pro Asp Gly Phe Val Glu Arg Thr Arg Asp Arg Gly Leu Val Trp 340 345 350	1056
acg agt tgg gca cct cag tta cga ata ctg agc cat gag tcg gtt tgt Thr Ser Trp Ala Pro Gln Leu Arg Ile Leu Ser His Glu Ser Val Cys 355 360 365	1104
ggt ttc ttg act cat tgt ggt tct gga tca att gtg gaa ggg cta atg Gly Phe Leu Thr His Cys Gly Ser Gly Ser Ile Val Glu Gly Leu Met 370 375 380	1152
ttt ggt cac cct cta atc atg cta ccg att ttt ggg gac caa cct ctg Phe Gly His Pro Leu Ile Met Leu Pro Ile Phe Gly Asp Gln Pro Leu 385 390 395 400	1200
aat gct cga tta ctg gag gac aaa cag gtg gga atc gag ata cca aga Asn Ala Arg Leu Leu Glu Asp Lys Gln Val Gly Ile Glu Ile Pro Arg 405 410 415	1248
aat gag gaa gat ggt tgc ttg acc aag gag tcg gtt gct aga tca ctg Asn Glu Glu Asp Gly Cys Leu Thr Lys Glu Ser Val Ala Arg Ser Leu 420 425 430	1296
agg tcc gtt gtt gtg gaa aaa gaa ggg gag atc tac aag gcg aac gcg Arg Ser Val Val Val Glu Lys Glu Gly Glu Ile Tyr Lys Ala Asn Ala 435 440 445	1344
agg gag ctg agt aaa atc tat aac gac act aag gtt gaa aaa gaa tat Arg Glu Leu Ser Lys Ile Tyr Asn Asp Thr Lys Val Glu Lys Glu Tyr 450 455 460	1392
gta agc caa ttc gta gac tat ttg gaa aag aat gcg cgt gcg gtt gcc Val Ser Gln Phe Val Asp Tyr Leu Glu Lys Asn Ala Arg Ala Val Ala 465 470 475 480	1440
atc gat cat gag agt taa Ile Asp His Glu Ser 485	1458

<210> 6
 <211> 485
 <212> PRT
 <213> Stevia rebaudiana
 <400> 6

Met Tyr Asn Val Thr Tyr His Gln Asn Ser Lys Ala Met Ala Thr Ser 1 5 10 15
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G1766WO_Sequence Listing

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			

G1766W0_Sequence Listing

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
<212> DNA
<213> Stevia rebaudiana

<220>
<221> CDS
<222> (1)..(1377)

<400> 7
atg gaa aat aaa acg gag acc acc gtt cgc cgg cgc cgg aga ata ata
Met Glu Asn Lys Thr Glu Thr Thr Val Arg Arg Arg Arg Arg Ile Ile
1 5 10 15

G1766WO_Sequence Listing

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	ggc	ccg	ctc	gct	ggc	atg	cgc	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	ggc	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	ggc	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				

G1766wO_Sequence Listing

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				
ggt	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

<400> 8

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

G1766WO_Sequence Listing

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 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

G1766WO_Sequence Listing

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

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<211> 2004
<212> DNA
<213> Arabidopsis thaliana

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<221> CDS
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Met Asp Asp Thr Thr Tyr Lys Pro Lys Asn Ile Leu Ile Thr Gly Ala	
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

G1766WO_Sequence Listing

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	ggg	gct	gag	atg	ctt	gtg	atg	gct	tat	ggg	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	
					230					235					240	
ctt	cac	aaa	gga	gaa	atc	ggg	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	
						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	
					310					315					320	
tac	act	cag	aat	cct	gag	tgg	tgg	ggg	gat	gtt	tct	gga	gct	ttg	ctt	1008
Tyr	Thr	Gln	Asn	Pro	Glu	Trp	Trp	Gly	Asp	Val	Ser	Gly	Ala	Leu	Leu	
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cct	cat	ccg	aga	atg	ctt	atg	atg	ccc	ggg	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	
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G1766W0_Sequence Listing

Val 370	Val 370	Thr	Pro	Lys	Asn	Gly 375	Asp	Ser	Gly	Asp	Lys 380	Ala	Ser	Leu	Lys	
ttt Phe 385	ttg Leu	atc Ile	tat Tyr	ggg Gly	aag Lys 390	act Thr	ggg Gly	tgg Trp	ctt Leu	ggg Gly 395	ggg Gly	ctt Leu	cta Leu	ggg Gly	aaa Lys 400	1200
cta Leu	tgt Cys	gag Glu	aag Lys	caa Gln 405	ggg Gly	att Ile	aca Thr	tat Tyr	gag Glu 410	tat Tyr	ggg Gly	aaa Lys	gga Gly	cgt Arg 415	ctg Leu	1248
gag Glu	gat Asp	aga Arg	gct Ala 420	tct Ser	ctt Leu	gtg Val	gcg Ala	gat Asp 425	att Ile	cgt Arg	agc Ser	atc Ile	aaa Lys 430	cct Pro	act Thr	1296
cat His	gtg Val	ttt Phe 435	aat Asn	gct Ala	gct Ala	ggg Gly	tta Leu 440	act Thr	ggc Gly	aga Arg	ccc Pro	aac Asn 445	gtt Val	gac Asp	tgg Trp	1344
tgt Cys	gaa Glu 450	tct Ser	cac His	aaa Lys	cca Pro	gag Glu 455	acc Thr	att Ile	cgt Arg	gta Val	aat Asn 460	gtc Val	gca Ala	ggg Gly	act Thr	1392
ttg Leu 465	act Thr	cta Leu	gct Ala	gat Asp	gtt Val 470	tgc Cys	aga Arg	gag Glu	aat Asn 475	gat Asp	ctc Leu	ttg Leu	atg Met	atg Met	aac Asn 480	1440
ttc Phe	gcc Ala	acc Thr	ggg Gly	tgc Cys 485	atc Ile	ttt Phe	gag Glu	tat Tyr	gac Asp 490	gct Ala	aca Thr	cat His	cct Pro	gag Glu 495	ggg Gly	1488
tcg Ser	ggg Gly	ata Ile	ggg Gly 500	ttc Phe	aag Lys	gaa Glu	gaa Glu	gac Asp 505	aag Lys	cca Pro	aat Asn	ttc Phe	ttt Phe 510	ggg Gly	tct Ser	1536
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gac Asp	aat Asn 530	gta Val	tgt Cys	acc Thr	ttg Leu	aga Arg 535	gtc Val	cgg Arg	atg Met	cca Pro	atc Ile 540	tcc Ser	tca Ser	gac Asp	cta Leu	1632
aac Asn 545	aac Asn	ccg Pro	aga Arg	aac Asn	ttc Phe 550	atc Ile	acg Thr	aag Lys	atc Ile	tcg Ser 555	cgc Arg	tac Tyr	aac Asn	aaa Lys	gtg Val 560	1680
gtg Val	gac Asp	atc Ile	ccg Pro	aac Asn 565	agc Ser	atg Met	acc Thr	gta Val	cta Leu 570	gac Asp	gag Glu	ctt Leu	ctc Leu	cca Pro 575	atc Ile	1728
tct Ser	atc Ile	gag Glu	atg Met 580	gcg Ala	aag Lys	aga Arg	aac Asn	cta Leu 585	aga Arg	ggc Gly	ata Ile	tgg Trp	aat Asn 590	ttc Phe	acc Thr	1776
aac Asn	cca Pro	ggg Gly 595	gtg Val	gtg Val	agc Ser	cac His	aac Asn 600	gag Glu	ata Ile	ttg Leu	gag Glu	atg Met 605	tac Tyr	aag Lys	aat Asn	1824
tac Tyr	atc Ile 610	gag Glu	cca Pro	ggg Gly	ttt Phe	aaa Lys 615	tgg Trp	tcc Ser	aac Asn	ttc Phe	aca Thr 620	gtg Val	gaa Glu	gaa Glu	caa Gln	1872
gca Ala 625	aag Lys	gtc Val	att Ile	gtt Val	gct Ala 630	gct Ala	cga Arg	agc Ser	aac Asn	aac Asn 635	gaa Glu	atg Met	gat Asp	gga Gly	tct Ser 640	1920
aaa	cta	agc	aag	gag	ttc	cca	gag	atg	ctc	tcc	atc	aaa	gag	tca	ctg	1968

G1766WO_Sequence Listing

Lys Leu Ser Lys Glu Phe Pro Glu Met Leu Ser Ile Lys Glu Ser Leu
645 650 655

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660 665

2004

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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
Page 19

G1766WO_Sequence Listing

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
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Ser Ser Glu Lys Lys Asp Val Ser Ser Asn Thr Val Gln Thr Phe Thr
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Val Val Thr Pro Lys Asn Gly Asp Ser Gly Asp Lys Ala Ser Leu Lys
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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
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His Val Phe Asn Ala Ala Gly Leu Thr Gly Arg Pro Asn Val Asp Trp
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Cys Glu Ser His Lys Pro Glu Thr Ile Arg Val Asn Val Ala Gly Thr
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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
 Page 20

G1766WO_Sequence Listing

485

490

495

Ser Gly Ile Gly Phe Lys Glu Glu Asp Lys Pro Asn Phe Phe Gly Ser
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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
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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
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Ala Lys Val Ile Val Ala Ala Arg Ser Asn Asn Glu Met Asp Gly Ser
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G1766WO_Sequence Listing

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G1766WO_Sequence Listing

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