

PhoenixTemp59752.tmp.txt
SEQUENCE LISTING

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<110>  BASF Plant Science GmbH
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<130>  PF 60403
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<151>  2007-12-17
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<170>  PatentIn version 3.4
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Gly Val Phe Arg Thr Asp His Leu Gly Glu Asn Arg Met Val Ser Arg
20                               25                               30

tca aac cgg cta ggt gat gga tca aac cgt ttc cct aga acc ggt aca      144
Ser Asn Arg Leu Gly Asp Gly Ser Asn Arg Phe Pro Arg Thr Gly Thr
35                               40                               45

atc cat tgc caa cgg tta agc ata gca aag acc ggt ttg cat cgt gag      192
Ile His Cys Gln Arg Leu Ser Ile Ala Lys Thr Gly Leu His Arg Glu
50                               55                               60

acg aag gct cga gcc ata ctt agc cct gtg tcc gat ccg gcc gct tcc      240
Thr Lys Ala Arg Ala Ile Leu Ser Pro Val Ser Asp Pro Ala Ala Ser
65                               70                               75                               80

ata gcc caa aag cga gta ttc acc ttt gga aaa gga aga agc gaa ggc      288
Ile Ala Gln Lys Arg Val Phe Thr Phe Gly Lys Gly Arg Ser Glu Gly
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aac aag ggc atg aag tcc ttg ttg gga ggg aaa gga gcc aac ctg gcg      336
Asn Lys Gly Met Lys Ser Leu Leu Gly Gly Lys Gly Ala Asn Leu Ala
100                              105                              110

gag atg gct agc ata ggc ttg tcg gtg ccg ccg ggg cta acc ata tcg      384
Glu Met Ala Ser Ile Gly Leu Ser Val Pro Pro Gly Leu Thr Ile Ser
115                              120                              125

acg gag gct tgt cag cag tat cag atc gcc ggc aaa aag ctt cca gaa      432
Thr Glu Ala Cys Gln Gln Tyr Gln Ile Ala Gly Lys Lys Leu Pro Glu
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Ile Gly Ala Ser Leu Ala Asp Pro Ser Lys Pro Leu Leu Leu Ser Val
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Gly	Glu	Arg	Phe	Ala	Tyr	Asp	Ser	Phe	Arg	Arg	Phe	Leu	Asp	Met	Phe	
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Glu	Arg	Met	Lys	Glu	Arg	Lys	Gly	Val	Lys	Asn	Asp	Thr	Asp	Leu	Ser	
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Ala	Ala	Asp	Leu	Lys	Glu	Leu	Val	Glu	Gln	Tyr	Lys	Ser	Val	Tyr	Leu	
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Glu	Ala	Lys	Gly	Gln	Glu	Phe	Pro	Ser	Asp	Pro	Lys	Lys	Gln	Leu	Glu	
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Asn	Ile	Gln	Cys	Met	Val	Phe	Gly	Asn	Met	Gly	Asp	Thr	Ser	Gly	Thr	
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Gly	Glu	Phe	Leu	Val	Asn	Ala	Gln	Gly	Glu	Asp	Val	Val	Ala	Gly	Ile	
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Asp	Met	Met	Asp	Ile	Glu	Phe	Thr	Val	Gln	Glu	Glu	Arg	Leu	Trp	Met	
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Leu	Gln	Cys	Arg	Ala	Gly	Lys	Arg	Thr	Gly	Lys	Gly	Ala	Val	Lys	Ile	
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Ala	Val	Asp	Met	Val	Gly	Glu	Gly	Leu	Val	Glu	Lys	Ser	Ser	Ala	Ile	
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cat His	gat Asp	cca Pro	tcg Ser	ggg Gly	tat Tyr	cgt Arg	gaa Glu	aaa Lys	gtg Val	gtg Val	gcc Ala	aaa Lys	ggc Gly	tta Leu	cct Pro	1440
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aca Thr	cct Pro	gaa Glu	gac Asp	gcc Ala	att Ile	gca Ala	gct Ala	agg Arg	aaa Lys	aac Asn	gga Gly	gct Ala	caa Gln	gga Gly	atc Ile	1920
ggg Gly	ctt Leu	tgt Cys	agg Arg	aca Thr	gag Glu	cat His	atg Met	ttc Phe	ttt Phe	gga Gly	gca Ala	gat Asp	agg Arg	att Ile	aaa Lys	1968
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ccg Pro	ctt Leu	cac His	gag Glu	ttt Phe	ctc Leu	ccg Pro	gaa Glu	ggc Gly	gac Asp	ttg Leu	gac Asp	aac Asn	att Ile	gta Val	cat His	2160
gag Glu	cta Leu	gct Ala	gaa Glu	gaa Glu	act Thr	ggt Gly	gtg Val	aaa Lys	gaa Glu	gat Asp	gaa Glu	gtc Val	ttg Leu	tca Ser	cgg Arg	2208

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His	Asp	Pro	Phe	Glu	Val	Leu	Asp	Gln	Gln	Gly	Val	Gly	Gln	Leu	Ile	
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gct	gaa	gca	gga	ctt	gac	tat	gtc	tct	tgt	tct	cct	ttc	agg	gtt	cca	2832
Ala	Glu	Ala	Gly	Leu	Asp	Tyr	Val	Ser	Cys	Ser	Pro	Phe	Arg	Val	Pro	
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 Thr Lys Ala Arg Ala Ile Leu Ser Pro Val Ser Asp Pro Ala Ala Ser
 65 70 75 80
 Ile Ala Gln Lys Arg Val Phe Thr Phe Gly Lys Gly Arg Ser Glu Gly
 85 90 95
 Asn Lys Gly Met Lys Ser Leu Leu Gly Gly Lys Gly Ala Asn Leu Ala
 100 105 110
 Glu Met Ala Ser Ile Gly Leu Ser Val Pro Pro Gly Leu Thr Ile Ser
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 Thr Glu Ala Cys Gln Gln Tyr Gln Ile Ala Gly Lys Lys Leu Pro Glu
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 Gly Leu Trp Glu Glu Ile Leu Glu Gly Leu Ser Phe Ile Glu Arg Asp
 145 150 155 160
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 Arg Ser Gly Ala Ala Ile Ser Met Pro Gly Met Met Asp Thr Val Leu
 180 185 190
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 195 200 205
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 210 215 220
 Gly Asp Val Val Met Gly Ile Pro His Ala Lys Phe Glu Glu Lys Leu
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 Glu Arg Met Lys Glu Arg Lys Gly Val Lys Asn Asp Thr Asp Leu Ser
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 Ala Ala Asp Leu Lys Glu Leu Val Glu Gln Tyr Lys Ser Val Tyr Leu
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 Lys Tyr Arg Ser Ile Asn Gln Ile Thr Gly Leu Lys Gly Thr Ala Val
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 Gly Val Leu Phe Thr Arg Asn Pro Ser Thr Gly Glu Lys Lys Leu Tyr
 340 345 350
 Gly Glu Phe Leu Val Asn Ala Gln Gly Glu Asp Val Val Ala Gly Ile
 355 360 365
 Arg Thr Pro Glu Asp Leu Asp Thr Met Lys Arg Phe Met Pro Glu Ala
 370 375 380
 Tyr Ala Glu Leu Val Glu Asn Cys Asn Ile Leu Glu Arg His Tyr Lys
 385 390 395 400
 Asp Met Met Asp Ile Glu Phe Thr Val Gln Glu Glu Arg Leu Trp Met
 405 410 415
 Leu Gln Cys Arg Ala Gly Lys Arg Thr Gly Lys Gly Ala Val Lys Ile
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 Lys Met Val Glu Pro Gln His Leu Asp Gln Leu Leu His Pro Gln Phe
 450 455 460
 His Asp Pro Ser Gly Tyr Arg Glu Lys Val Val Ala Lys Gly Leu Pro
 465 470 475 480
 Ala Ser Pro Gly Ala Ala Val Gly Gln Val Val Phe Thr Ala Glu Glu
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 Ala Glu Ala Trp His Ser Gln Gly Lys Thr Val Ile Leu Val Arg Thr
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 515 520 525
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 Gly Trp Gly Lys Cys Cys Ile Ala Gly Cys Ser Glu Ile Arg Val Asp
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 Glu Trp Ile Ser₅₈₀ Met Asn Gly Ser Thr₅₈₅ Gly Glu Val Ile Leu Gly Lys₅₉₀
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 Ser Trp₆₁₀ Ala Asp Ala Ile Arg₆₁₅ Arg Leu Lys Val Met₆₂₀ Ala Asn Ala Asp
 Thr₆₂₅ Pro Glu Asp Ala Ile₆₃₀ Ala Ala Arg Lys Asn₆₃₅ Gly Ala Gln Gly Ile₆₄₀
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 Ala Val Arg Lys₆₆₀ Met Ile Met Ala Val₆₆₅ Thr Thr Glu Gln Arg₆₇₀ Lys Ala
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 Ile Glu Lys Leu₇₄₀ Ser Glu Val Asn Pro₇₄₅ Met Leu Gly Phe Arg₇₅₀ Gly Cys
 Arg Leu Gly₇₅₅ Ile Ser Tyr Pro Glu₇₆₀ Leu Thr Glu Met Gln₇₆₅ Ala Arg Ala
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 Gln Val Asp Val Ile₈₀₅ Arg Lys Val Ala Lys₈₁₀ Lys Val Phe Ala Glu Lys₈₁₅
 Gly His Thr Val₈₂₀ Ser Tyr Lys Val Gly₈₂₅ Thr Met Ile Glu Ile₈₃₀ Pro Arg
 Ala Ala Leu Ile Ala Asp Glu Ile Ala Lys Glu Ala Glu Phe Phe Ser

835

840

845

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His Asp Pro Phe Glu Val Leu Asp Gln Gln Gly Val Gly Gln Leu Ile
 885 890 895

Lys Met Ala Thr Glu Lys Gly Arg Ala Ala Arg Pro Ser Leu Lys Val
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 Gly Val His Arg Thr Asp Leu Leu Gly Lys Asn Arg Leu Val Ser Arg
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 Ser Tyr Arg Leu Gly Asn Gly Ser Ser Arg Phe Ala Lys Ile Gly Thr
 35 40 45
 atc cat tgt caa cag ttt agc gta gga aaa acc ggt tgc cat cgt gag 192
 Ile His Cys Gln Gln Phe Ser Val Gly Lys Thr Gly Ser His Arg Glu
 50 55 60
 gta aag act cga gcc atc ctt agc ccc gtg tcc gag ccg gcc cct acc 240
 Val Lys Thr Arg Ala Ile Leu Ser Pro Val Ser Glu Pro Ala Pro Thr
 65 70 75 80
 caa acc aaa aag cga gtg ttc acc ttt gga aag gga aga agc gaa ggc 288
 Gln Thr Lys Lys Arg Val Phe Thr Phe Gly Lys Gly Arg Ser Glu Gly
 85 90 95
 aac aag ggc atg aag tcc ttg ttg gga ggt aaa gga gcg aac ctg gcg 336
 Asn Lys Gly Met Lys Ser Leu Leu Gly Gly Lys Gly Ala Asn Leu Ala
 100 105 110
 gag atg gcg agc ata ggc ttg tgc gtg ccg ccg gga cta acc ata tca 384
 Glu Met Ala Ser Ile Gly Leu Ser Val Pro Pro Gly Leu Thr Ile Ser
 115 120 125
 acg gag gct tgt cag caa tac cag gtc gcc ggc aag aaa cta cca gaa 432
 Thr Glu Ala Cys Gln Gln Tyr Gln Val Ala Gly Lys Lys Leu Pro Glu
 130 135 140
 ggt tta tgg gaa gag att cta gaa ggt ctt agc ttc atc gaa cgt gac 480
 Gly Leu Trp Glu Glu Ile Leu Glu Gly Leu Ser Phe Ile Glu Arg Asp
 145 150 155 160

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att Ile	gga Gly	gct Ala	tcc Ser	ctc Leu 165	gcc Ala	gac Asp	ccc Pro	tcc Ser	aag Lys 170	cca Pro	ctc Leu	ctc Leu	ctc Leu	tcc Ser 175	gtc Val	528
cgc Arg	tcc Ser	ggc Gly	gca Ala 180	gcc Ala	atc Ile	tca Ser	atg Met	ccc Pro 185	ggg Gly	atg Met	atg Met	gac Asp	act Thr 190	gta Val	ctc Leu	576
aac Asn	cta Leu	ggc Gly 195	tta Leu	aac Asn	gac Asp	caa Gln	gtc Val 200	gtg Val	gtc Val	ggg Gly	ctg Leu	gca Ala 205	gcc Ala	aaa Lys	agc Ser	624
gga Gly	gag Glu 210	cgt Arg	ttc Phe	gct Ala	tac Tyr	gac Asp 215	tct Ser	ttc Phe	cgg Arg	cgg Arg	ttt Phe 220	ctt Leu	gac Asp	atg Met	ttc Phe	672
ggg Gly 225	gac Asp	gtc Val	gtg Val	tta Leu	ggg Gly 230	atc Ile	cca Pro	cac His	gcc Ala	aag Lys 235	ttt Phe	gaa Glu	gag Glu	aag Lys	cta Leu 240	720
gag Glu	agc Ser	atg Met	aag Lys	gag Glu 245	agc Ser	aaa Lys	gga Gly	gtc Val	aaa Lys 250	aac Asn	gac Asp	act Thr	gag Glu	tta Leu 255	agc Ser	768
gct Ala	gac Asp	gat Asp	ctc Leu 260	aaa Lys	gaa Glu	ttg Leu	gtt Val	gag Glu 265	cag Gln	tac Tyr	aag Lys	agt Ser	gtt Val 270	tac Tyr	ttg Leu	816
gag Glu	gtc Val	aag Lys 275	ggg Gly	caa Gln	gag Glu	ttt Phe	cct Pro 280	tca Ser	gaa Glu	ccg Pro	aag Lys	aag Lys 285	caa Gln	ctg Leu	gag Glu	864
cta Leu	gcg Ala 290	att Ile	gaa Glu	gcc Ala	gta Val	ttc Phe 295	gac Asp	tct Ser	tgg Trp	gat Asp	agc Ser 300	cct Pro	aga Arg	gcc Ala	atc Ile	912
aag Lys 305	tac Tyr	aga Arg	agc Ser	att Ile	aac Asn 310	cag Gln	ata Ile	agt Ser	gga Gly	ctg Leu 315	aaa Lys	gga Gly	acc Thr	gca Ala	gtg Val 320	960
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ggg Gly	gtt Val	ctc Leu	ttc Phe 340	acc Thr	agg Arg	aac Asn	cct Pro	agc Ser 345	acc Thr	gga Gly	gag Glu	aag Lys	aag Lys 350	ctc Leu	tat Tyr	1056
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aga Arg	aca Thr 370	cca Pro	gaa Glu	gat Asp	ttg Leu	gac Asp 375	aca Thr	atg Met	aaa Lys	aga Arg	tta Leu 380	atg Met	cca Pro	caa Gln	gct Ala	1152
tac Tyr 385	gca Ala	gaa Glu	ctt Leu	gta Val	gag Glu 390	aac Asn	tgt Cys	gac Asp	atc Ile	cta Leu 395	cag Gln	gca Ala	cat His	tac Tyr	aaa Lys 400	1200
gac Asp	atg Met	atg Met	gat Asp	atc Ile 405	gag Glu	ttc Phe	acg Thr	gtc Val	caa Gln 410	gag Glu	gag Glu	agg Arg	ttg Leu	tgg Trp 415	atg Met	1248
ctg Leu	caa Gln	tgc Cys	aga Arg 420	gct Ala	ggg Gly	aag Lys	aga Arg	acg Thr 425	ggg Gly	aaa Lys	ggg Gly	gag Ala	gtg Val 430	aag Lys	ata Ile	1296
gca Gly	gtt Val	gat Asp	atg Ser	gta Val	agt Ser	gaa Glu	ggg Gly	ctt Leu	gta Val	gat Asp	aaa Lys	tct Leu	act Thr	gca Ala	atc Ile	1344

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Ala	Val	Asp	Met	Val	Ser	Glu	Gly	Leu	Val	Asp	Lys	Ser	Thr	Ala	Ile		
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aaa	atg	gtg	gag	cct	caa	cat	ctt	gat	caa	ctt	ctt	cac	cca	cag	ttt	1392	
Lys	Met	Val	Glu	Pro	Gln	His	Leu	Asp	Gln	Leu	Leu	His	Pro	Gln	Phe		
		450				455					460						
cat	gat	ccg	tcg	ggg	tac	cgt	gaa	aaa	gtg	gtg	gcc	aaa	ggc	tta	cca	1440	
His	Asp	Pro	Ser	Gly	Tyr	Arg	Glu	Lys	Val	Val	Ala	Lys	Gly	Leu	Pro		
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gcg	tct	cca	gga	gcg	gcg	gtt	gga	caa	gtt	gtg	ttc	acg	gcg	gag	gaa	1488	
Ala	Ser	Pro	Gly	Ala	Ala	Val	Gly	Gln	Val	Val	Phe	Thr	Ala	Glu	Glu		
				485					490					495			
gcc	gaa	gct	tgg	cat	gct	cag	ggc	aaa	aac	gtg	atc	ctg	gtt	cga	acg	1536	
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Glu	Thr	Ser	Pro	Glu	Asp	Val	Gly	Gly	Met	His	Ala	Ala	Glu	Gly	Ile		
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cta	aca	gcg	aga	gga	gga	atg	acg	tca	cac	gcg	gcg	gtt	gtt	gct	cgc	1632	
Leu	Thr	Ala	Arg	Gly	Gly	Met	Thr	Ser	His	Ala	Ala	Val	Val	Ala	Arg		
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Gly	Trp	Gly	Lys	Cys	Cys	Ile	Ala	Gly	Cys	Ser	Glu	Ile	Arg	Val	Asp		
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gag	aac	cat	aag	gtt	ctt	ttg	att	gga	gat	ttg	acg	ata	aat	gaa	ggt	1728	
Glu	Asn	His	Lys	Val	Leu	Leu	Ile	Gly	Asp	Leu	Thr	Ile	Asn	Glu	Gly		
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gaa	tgg	atc	tcg	atg	aac	gga	aca	aca	ggt	gaa	gtt	ata	tta	ggg	aaa	1776	
Glu	Trp	Ile	Ser	Met	Asn	Gly	Thr	Thr	Gly	Glu	Val	Ile	Leu	Gly	Lys		
			580					585					590				
caa	gca	ttg	gct	cct	cca	gct	tta	agt	gca	gat	ctt	gag	act	ttc	atg	1824	
Gln	Ala	Leu	Ala	Pro	Pro	Ala	Leu	Ser	Ala	Asp	Leu	Glu	Thr	Phe	Met		
		595					600					605					
tct	tgg	gct	gat	gca	gtc	aga	cgt	ctc	aag	gtt	atg	gcg	aat	gcg	gat	1872	
Ser	Trp	Ala	Asp	Ala	Val	Arg	Arg	Leu	Lys	Val	Met	Ala	Asn	Ala	Asp		
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aca	cct	gaa	gac	gcc	act	gca	gct	agg	aaa	aac	gga	gct	gaa	ggg	atc	1920	
Thr	Pro	Glu	Asp	Ala	Thr	Ala	Ala	Arg	Lys	Asn	Gly	Ala	Glu	Gly	Ile		
		625			630					635					640		
ggt	ctt	tgc	aga	aca	gag	cat	atg	ttc	ttt	gga	gca	gat	agg	atc	aaa	1968	
Gly	Leu	Cys	Arg	Thr	Glu	His	Met	Phe	Phe	Gly	Ala	Asp	Arg	Ile	Lys		
				645					650					655			
gca	gtg	aga	aag	atg	ata	atg	gcg	gtg	aca	aca	gaa	caa	agg	aaa	gct	2016	
Ala	Val	Arg	Lys	Met	Ile	Met	Ala	Val	Thr	Thr	Glu	Gln	Arg	Lys	Ala		
			660					665					670				
tct	cta	gac	gtc	ttg	ctt	cct	tac	caa	cgt	tct	gat	ttt	gaa	ggc	atc	2064	
Ser	Leu	Asp	Val	Leu	Leu	Pro	Tyr	Gln	Arg	Ser	Asp	Phe	Glu	Gly	Ile		
		675					680					685					
ttc	cgt	gca	atg	gat	ggt	tta	cca	gta	aca	atc	cgt	ttg	tta	gac	cct	2112	
Phe	Arg	Ala	Met	Asp	Gly	Leu	Pro	Val	Thr	Ile	Arg	Leu	Leu	Asp	Pro		
		690				695					700						
ccc	ctt	cac	gag	ttt	ctc	cct	gaa	ggt	gat	ttg	gac	atc	ata	gta	caa	2160	
Pro	Leu	His	Glu	Phe	Leu	Pro	Glu	Gly	Asp	Leu	Asp	Ile	Ile	Val	Gln		

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705											710											715											720	
gag Glu	cta Leu	gct Ala	gca Ala	gag Glu 725	aca Thr	ggc Gly	atg Met	aaa Lys	gaa Glu 730	gat Asp	gtc Val	atc Ile	ttg Leu	tca Ser 735	caa Gln		2208																	
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agg Arg	ctt Leu	gga Gly 755	ata Ile	tca Ser	tat Tyr	cca Pro	gag Glu 760	cta Leu	acg Thr	gaa Glu	atg Met	caa Gln 765	gcg Ala	cgt Arg	gca Ala		2304																	
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cct Pro 785	gag Glu	att Ile	atg Met	gtt Val	cca Pro 790	ctt Leu	gta Val	gga Gly	act Thr	cct Pro 795	cag Gln	gaa Glu	ctg Leu	ggg Gly	cac His 800		2400																	
caa Gln	gtt Val	gat Asp	gta Val	atc Ile 805	agg Arg	aaa Lys	gtt Val	gca Ala	aag Lys 810	aaa Lys	gtg Val	ttt Phe	gtt Val	gag Glu 815	aag Lys		2448																	
ggg Gly	cat His	acc Thr	gtg Val 820	acc Thr	tac Tyr	aag Lys	gtt Val	ggg Gly 825	aca Thr	atg Met	att Ile	gag Glu	atc Ile 830	cct Pro	cga Arg		2496																	
gct Ala	gcg Ala	ctc Leu 835	att Ile	gca Ala	gat Asp	gag Glu	att Ile 840	gcg Ala	gaa Glu	caa Gln	gca Ala	gag Glu 845	ttt Phe	ttc Phe	tcg Ser		2544																	
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cac His	gac Asp	cct Pro	ttt Phe	gag Glu 885	gtt Val	ctt Leu	gat Asp	cag Gln	aag Lys 890	ggg Gly	gta Val	gga Gly	caa Gln	ttg Leu 895	gtc Val		2688																	
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<400> 6

PhoenixTemp59752.tmp.txt

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

Ser Tyr Arg Leu Gly Asn Gly Ser Ser Arg Phe Ala Lys Ile Gly Thr
35 40 45

Ile His Cys Gln Gln Phe Ser Val Gly Lys Thr Gly Ser His Arg Glu
50 55 60

Val Lys Thr Arg Ala Ile Leu Ser Pro Val Ser Glu Pro Ala Pro Thr
65 70 75 80

Gln Thr Lys Lys Arg Val Phe Thr Phe Gly Lys Gly Arg Ser Glu Gly
85 90 95

Asn Lys Gly Met Lys Ser Leu Leu Gly Gly Lys Gly Ala Asn Leu Ala
100 105 110

Glu Met Ala Ser Ile Gly Leu Ser Val Pro Pro Gly Leu Thr Ile Ser
115 120 125

Thr Glu Ala Cys Gln Gln Tyr Gln Val Ala Gly Lys Lys Leu Pro Glu
130 135 140

Gly Leu Trp Glu Glu Ile Leu Glu Gly Leu Ser Phe Ile Glu Arg Asp
145 150 155 160

Ile Gly Ala Ser Leu Ala Asp Pro Ser Lys Pro Leu Leu Leu Ser Val
165 170 175

Arg Ser Gly Ala Ala Ile Ser Met Pro Gly Met Met Asp Thr Val Leu
180 185 190

Asn Leu Gly Leu Asn Asp Gln Val Val Val Gly Leu Ala Ala Lys Ser
195 200 205

Gly Glu Arg Phe Ala Tyr Asp Ser Phe Arg Arg Phe Leu Asp Met Phe
210 215 220

Gly Asp Val Val Leu Gly Ile Pro His Ala Lys Phe Glu Glu Lys Leu
225 230 235 240

Glu Ser Met Lys Glu Ser Lys Gly Val Lys Asn Asp Thr Glu Leu Ser
245 250 255

Ala Asp Asp Leu Lys Glu Leu Val Glu Gln Tyr Lys Ser Val Tyr Leu
260 265 270

Glu Val Lys Gly Gln Glu Phe Pro Ser Glu Pro Lys Lys Gln Leu Glu
 275 280 285
 Leu Ala Ile Glu Ala Val Phe Asp Ser Trp Asp Ser Pro Arg Ala Ile
 290 295 300
 Lys Tyr Arg Ser Ile Asn Gln Ile Ser Gly Leu Lys Gly Thr Ala Val
 305 310 315 320
 Asn Ile Gln Cys Met Val Phe Gly Asn Met Gly Asp Thr Ser Gly Thr
 325 330 335
 Gly Val Leu Phe Thr Arg Asn Pro Ser Thr Gly Glu Lys Lys Leu Tyr
 340 345 350
 Gly Glu Phe Leu Val Asn Ala Gln Gly Glu Asp Val Val Ala Gly Ile
 355 360 365
 Arg Thr Pro Glu Asp Leu Asp Thr Met Lys Arg Leu Met Pro Gln Ala
 370 375 380
 Tyr Ala Glu Leu Val Glu Asn Cys Asp Ile Leu Gln Ala His Tyr Lys
 385 390 395 400
 Asp Met Met Asp Ile Glu Phe Thr Val Gln Glu Glu Arg Leu Trp Met
 405 410 415
 Leu Gln Cys Arg Ala Gly Lys Arg Thr Gly Lys Gly Ala Val Lys Ile
 420 425 430
 Ala Val Asp Met Val Ser Glu Gly Leu Val Asp Lys Ser Thr Ala Ile
 435 440 445
 Lys Met Val Glu Pro Gln His Leu Asp Gln Leu Leu His Pro Gln Phe
 450 455 460
 His Asp Pro Ser Gly Tyr Arg Glu Lys Val Val Ala Lys Gly Leu Pro
 465 470 475 480
 Ala Ser Pro Gly Ala Ala Val Gly Gln Val Val Phe Thr Ala Glu Glu
 485 490 495
 Ala Glu Ala Trp His Ala Gln Gly Lys Asn Val Ile Leu Val Arg Thr
 500 505 510
 Glu Thr Ser Pro Glu Asp Val Gly Gly Met His Ala Ala Glu Gly Ile
 515 520 525
 Leu Thr Ala Arg Gly Gly Met Thr Ser His Ala Ala Val Val Ala Arg
 530 535 540
 Gly Trp Gly Lys Cys Cys Ile Ala Gly Cys Ser Glu Ile Arg Val Asp

545 550 555 560
 Glu Asn His Lys Val₅₆₅ Leu Leu Ile Gly Asp₅₇₀ Leu Thr Ile Asn Glu₅₇₅ Gly
 Glu Trp Ile Ser₅₈₀ Met Asn Gly Thr Thr₅₈₅ Gly Glu Val Ile Leu₅₉₀ Gly Lys
 Gln Ala Leu₅₉₅ Ala Pro Pro Ala Leu₆₀₀ Ser Ala Asp Leu Glu₆₀₅ Thr Phe Met
 Ser Trp₆₁₀ Ala Asp Ala Val Arg₆₁₅ Arg Leu Lys Val Met₆₂₀ Ala Asn Ala Asp
 Thr₆₂₅ Pro Glu Asp Ala Thr₆₃₀ Ala Ala Arg Lys Asn₆₃₅ Gly Ala Glu Gly Ile₆₄₀
 Gly Leu Cys Arg Thr₆₄₅ Glu His Met Phe Phe₆₅₀ Gly Ala Asp Arg Ile₆₅₅ Lys
 Ala Val Arg Lys₆₆₀ Met Ile Met Ala Val₆₆₅ Thr Thr Glu Gln Arg₆₇₀ Lys Ala
 Ser Leu Asp₆₇₅ Val Leu Leu Pro Tyr₆₈₀ Gln Arg Ser Asp Phe₆₈₅ Glu Gly Ile
 Phe Arg₆₉₀ Ala Met Asp Gly Leu₆₉₅ Pro Val Thr Ile Arg₇₀₀ Leu Leu Asp Pro
 Pro₇₀₅ Leu His Glu Phe Leu₇₁₀ Pro Glu Gly Asp Leu₇₁₅ Asp Ile Ile Val Gln₇₂₀
 Glu Leu Ala Ala Glu₇₂₅ Thr Gly Met Lys Glu₇₃₀ Asp Val Ile Leu Ser₇₃₅ Gln
 Val Glu Lys Leu₇₄₀ Ser Glu Val Asn Pro₇₄₅ Met Leu Gly Phe Arg₇₅₀ Gly Cys
 Arg Leu Gly₇₅₅ Ile Ser Tyr Pro Glu₇₆₀ Leu Thr Glu Met Gln₇₆₅ Ala Arg Ala
 Ile Phe₇₇₀ Glu Ala Ala Ala Ser₇₇₅ Met Gln Asp Gln Gly₇₈₀ Val Thr Val Leu
 Pro Glu Ile Met Val Pro₇₉₀ Leu Val Gly Thr Pro₇₉₅ Gln Glu Leu Gly His₈₀₀
 Gln Val Asp Val Ile₈₀₅ Arg Lys Val Ala Lys₈₁₀ Lys Val Phe Val Glu₈₁₅ Lys
 Gly His Thr Val₈₂₀ Thr Tyr Lys Val Gly₈₂₅ Thr Met Ile Glu Ile₈₃₀ Pro Arg

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Phe Gly Thr Asn Asp Leu Thr Gln Met Thr Phe Gly Tyr Ser Arg Asp
850 855 860

Asp Val Ala Lys Phe Leu Pro Met Tyr Leu Ala Lys Gly Ile Leu Gln
865 870 875 880

His Asp Pro Phe Glu Val Leu Asp Gln Lys Gly Val Gly Gln Leu Val
885 890 895

Lys Met Ala Thr Glu Arg Gly Arg Ala Ala Arg Pro Asn Leu Lys Val
900 905 910

Gly Val Cys Gly Glu His Gly Gly Glu Pro Ser Ser Val Ala Phe Phe
915 920 925

Ala Glu Ala Gly Leu Asp Met Phe Leu Val Leu Leu Phe Arg Val Pro
930 935 940

Ile Ala Arg Leu Ala Ala Ala Gln Val Val Ala
945 950 955

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tgc aac aat agc atc ctt ttg aat cgg aag aac aag caa agc gaa att 96
Cys Asn Asn Ser Ile Leu Leu Asn Arg Lys Asn Lys Gln Ser Glu Ile
20 25 30

gta ggg aga aga agc aca aga gtg cag tgg cag ttg cat ctt aga tca 144
Val Gly Arg Arg Ser Thr Arg Val Gln Trp Gln Leu His Leu Arg Ser
35 40 45

aaa tca aac aca tgg aag aga ggt agt agg aga tca tat cag cct cca 192
Lys Ser Asn Thr Trp Lys Arg Gly Ser Arg Arg Ser Tyr Gln Pro Pro
50 55 60

ata cgt ggc caa gcc atc ctt acc cca gca aca cca cca acc acc aaa 240
Ile Arg Gly Gln Ala Ile Leu Thr Pro Ala Thr Pro Pro Thr Thr Lys
65 70 75 80

aag cag gta ttc act ttt ggc aaa ggt aga agt gaa gga aac aag gcc 288
Lys Gln Val Phe Thr Phe Gly Lys Gly Arg Ser Glu Gly Asn Lys Ala
85 90 95

PhoenixTemp59752.tmp.txt

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acc Thr	att Ile	ggc Gly 115	tta Leu	act Thr	agc Ser	cct Pro	cct Pro 120	cga Arg	cta Leu	act Thr	ata Ile	gca Ala 125	aca Thr	caa Gln	gca Ala	384
tgc Cys	caa Gln 130	gag Glu	tat Tyr	caa Gln	caa Gln	aat Asn 135	gga Gly	aag Lys	aag Lys	cta Leu	cca Pro 140	gat Asp	ggc Gly	ttg Leu	tgg Trp	432
gag Glu 145	gag Glu	gta Val	ctt Leu	gaa Glu	ggc Gly 150	ttg Leu	caa Gln	ttt Phe	gta Val	gag Glu 155	aat Asn	gaa Glu	atg Met	gga Gly	gcc Ala 160	480
act Thr	ctt Leu	ggg Gly	aat Asn	cct Pro 165	tca Ser	aaa Lys	ccc Pro	ctt Leu	ctc Leu 170	ctc Leu	tct Ser	gtg Val	cgc Arg	tct Ser 175	ggt Gly	528
gct Ala	gcg Ala	att Ile	tcc Ser 180	atg Met	cct Pro	ggg Gly	atg Met	atg Met 185	gac Asp	aca Thr	gtt Val	ctc Leu	aac Asn 190	tta Leu	gga Gly	576
ttg Leu	aat Asn	gat Asp 195	gaa Glu	gtg Val	gtt Val	gct Ala	ggg Gly 200	ttg Leu	gca Ala	gca Ala	aaa Lys	agc Ser 205	gga Gly	gag Glu	cgg Arg	624
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ctc Leu	aaa Lys	gat Asp	cta Leu 260	gtt Val	gag Glu	cag Gln	tac Tyr	aag Lys 265	aat Asn	gtc Val	tac Tyr	ctt Leu	gac Asp 270	acg Thr	aga Arg	816
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aaa Lys 290	gca Ala	tct Ser	ttc Phe	aag Lys	ctg Leu	att Ile 295	gag Glu	gtc Val	aca Thr	aga Arg	tct Ser 300	gtt Val	tat Tyr	att Ile	gag Glu	912
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tct Ser	tgt Cys	gta Val	att Ile	ctt Leu 325	tcg Ser	atg Met	gtt Val	agt Ser	ccc Pro 330	tcc Ser	agt Ser	gct Ala	gga Gly	ttt Phe 335	ttt Phe	1008
tgc Cys	aca Thr	aga Arg	aaa Lys 340	aat Asn	gca Ala	gat Asp	cag Gln	agg Arg 345	ttt Phe	gct Ala	gct Ala	ttc Phe	tta Leu 350	gcc Ala	cct Pro	1056
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tgt Cys	cat His	aat Asn	cac His	cgt Arg 405	ctg Leu	ata Ile	aca Thr	tta Leu	ctt Leu 410	gcg Ala	gag Glu	gta Val	tat Tyr	gtg Val 415	tcg Ser	1248
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gtt Val	cat His	gag Glu 435	ggg Gly	ctt Leu	gtt Val	gat Asp	att Ile 440	cgt Arg	tct Ser	gca Ala	atc Ile	aag Lys 445	atg Met	gta Val	gag Glu	1344
cca Pro 450	ctg Leu	cat His	ctt Leu	gat Asp	caa Gln	ctt Leu 455	ctc Leu	cac His	cca Pro	cag Gln	ttt Phe 460	gag Glu	gat Asp	cca Pro	tct Ser	1392
act Thr 465	tac Tyr	aag Lys	gat Asp	aaa Lys	gtg Val 470	atc Ile	gcc Ala	gtt Val	ggg Gly	ttg Leu 475	cgt Arg	gca Ala	tcc Ser	cct Pro	gga Gly 480	1440
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gct Ala	ccg Pro	gct Ala 595	cta Leu	agt Ser	gat Asp	gat Asp	ttg Leu 600	gaa Glu	att Ile	ttc Phe	atg Met	tct Ser 605	tgg Trp	gct Ala	gat Asp	1824
gaa Glu 610	ata Ile	agg Arg	cat His	ctg Leu	aag Lys	gtt Val 615	atg Met	gcg Ala	aat Asn	gct Ala	gac Asp 620	aca Thr	cct Pro	gaa Glu	gat Asp	1872
gca Ala 625	gta Val	aca Thr	gct Ala	aga Arg	caa Gln 630	aat Asn	ggg Gly	gcc Ala	caa Gln	gga Gly 635	att Ile	gga Gly	ctt Leu	tgc Cys	agg Arg 640	1920
aca Thr	gaa Glu	cat His	atg Met	ttt Phe	ttt Phe	gct Ala	tca Ser	gac Asp	gag Glu	agg Arg	ata Ile	aag Lys	gcc Ala	gtt Val	aga Arg	1968

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Met	Asp	Gly	Leu	Pro	Val	Thr	Ile	Arg	Leu	Leu	Asp	Pro	Pro	Leu	His				
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gaa	ttt	ctt	cca	gag	ggt	gac	ctg	gaa	cac	att	gtc	agt	gaa	cta	act	2160			
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Ala	Ala	Val	Ser	Val	Ser	Asn	His	Gly	Ile	Thr	Val	Leu	Pro	Glu	Ile				
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Val	Gly	Lys	Ser	Leu	Pro	Ile	Tyr	Leu	Ser	Gly	Gly	Ile	Leu	Gln	His				
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gat	cca	ttc	gag	gca	ctt	gac	caa	aaa	ggt	gtg	ggt	caa	ctc	atc	aag	2688			
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gct agg ctt gca gca gct caa gtt gca gtt taa 2865
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Val Gly Arg Arg Ser Thr Arg Val Gln Trp Gln Leu His Leu Arg Ser
35 40 45

Lys Ser Asn Thr Trp Lys Arg Gly Ser Arg Arg Ser Tyr Gln Pro Pro
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Ile Arg Gly Gln Ala Ile Leu Thr Pro Ala Thr Pro Pro Thr Thr Lys
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Lys Gln Val Phe Thr Phe Gly Lys Gly Arg Ser Glu Gly Asn Lys Ala
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Met Lys Ser Leu Val Gly Gly Lys Gly Ala Asn Leu Ala Glu Met Thr
100 105 110

Thr Ile Gly Leu Thr Ser Pro Pro Arg Leu Thr Ile Ala Thr Gln Ala
115 120 125

Cys Gln Glu Tyr Gln Gln Asn Gly Lys Lys Leu Pro Asp Gly Leu Trp
130 135 140

Glu Glu Val Leu Glu Gly Leu Gln Phe Val Glu Asn Glu Met Gly Ala
145 150 155 160

Thr Leu Gly Asn Pro Ser Lys Pro Leu Leu Leu Ser Val Arg Ser Gly
165 170 175

Ala Ala Ile Ser Met Pro Gly Met Met Asp Thr Val Leu Asn Leu Gly
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Leu Asn Asp Glu Val Val Ala Gly Leu Ala Ala Lys Ser Gly Glu Arg
195 200 205

Phe Ala Tyr Asp Ser Tyr Arg Arg Phe Leu Asp Met Phe Gly Asp Val
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 Val Met Asp Ile Pro His Ser Leu Phe Glu Glu Lys Leu Glu Lys Leu
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 Lys His Thr Lys Gly Val Lys Leu Asp Thr Asp Leu Thr Thr Tyr Asp
 245 250 255
 Leu Lys Asp Leu Val Glu Gln Tyr Lys Asn Val Tyr Leu Asp Thr Arg
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 Gly Val Asn Phe Phe Ser Lys Ser Glu Lys Gln Leu Glu Ile Asp Val
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 Lys Ala Ser Phe Lys Leu Ile Glu Val Thr Arg Ser Val Tyr Ile Glu
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 Ile Ile Met Asp Ile Thr Gly Leu Met Val Cys Ala Tyr Asn Glu Arg
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 Ser Cys Val Ile Leu Ser Met Val Ser Pro Ser Ser Ala Gly Phe Phe
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 Cys Thr Arg Lys Asn Ala Asp Gln Arg Phe Ala Ala Phe Leu Ala Pro
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 Lys Ile Ser Leu Ala Ile Ala Ile Gly Cys Ala Leu Thr Trp Gln Ala
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 Phe Ser Ile Thr Pro Asn Gly Pro Glu Val Phe Leu Leu Asp Tyr Ala
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 Cys His Asn His Arg Leu Ile Thr Leu Leu Ala Glu Val Tyr Val Ser
 405 410 415
 Asn Leu Lys His Ile Gly Lys Gly Ala Phe Lys Ile Ala Val Asp Met
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 Val His Glu Gly Leu Val Asp Ile Arg Ser Ala Ile Lys Met Val Glu
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 Pro Leu His Leu Asp Gln Leu Leu His Pro Gln Phe Glu Asp Pro Ser
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 Thr Tyr Lys Asp Lys Val Ile Ala Val Gly Leu Arg Ala Ser Pro Gly
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485

490

495

His Ala Gln Gly Lys Gly Val Ile Leu Val Arg Asn His Thr Arg Pro
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Asp Asn Val Arg Gly Met His Val Asn Thr Gly Ile Leu Thr Ala Arg
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Gly Gly Leu Thr Ser His Ala Ala Val Val Ala Arg Gly Trp Gly Lys
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Cys Cys Val Ser Gly Cys Ser Asp Ile Leu Val Asn Asp Ala Glu Lys
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Val Phe Val Val Gly Asp Lys Val Ile Gly Glu Gly Glu Trp Ile Ser
 565 570 575

Leu Ser Gly Ser Thr Ser Glu Val Ile Leu Gly Lys Gln Pro Leu Ser
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Ala Pro Ala Leu Ser Asp Asp Leu Glu Ile Phe Met Ser Trp Ala Asp
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Glu Ile Arg His Leu Lys Val Met Ala Asn Ala Asp Thr Pro Glu Asp
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Ala Val Thr Ala Arg Gln Asn Gly Ala Gln Gly Ile Gly Leu Cys Arg
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Met Met Ile Met Ala Val Thr Pro Glu Gln Arg Lys Ala Ala Leu Asp
 660 665 670

Leu Leu Leu Pro Tyr Gln Arg Ser Asp Phe Glu Gly Ile Phe Arg Ala
 675 680 685

Met Asp Gly Leu Pro Val Thr Ile Arg Leu Leu Asp Pro Pro Leu His
 690 695 700

Glu Phe Leu Pro Glu Gly Asp Leu Glu His Ile Val Ser Glu Leu Thr
 705 710 715 720

Ser Glu Thr Gly Met Lys Glu Glu Glu Ile Phe Ser Arg Ile Glu Lys
 725 730 735

Leu Ser Glu Val Asn Pro Met Leu Gly Phe Arg Gly Cys Arg Leu Gly
 740 745 750

Ile Ser Tyr Pro Glu Leu Thr Glu Met Gln Ala Arg Ala Ile Phe Gln
 755 760 765

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Met Val Pro Leu Ile Gly Thr Pro Gln Glu Leu Arg His Gln Val Asn
785 790 795 800

Leu Ile Arg Asn Val Ala Asp Lys Val Leu Ser Glu Met Gly Ser Ser
805 810 815

Leu Ser Tyr Lys Val Gly Thr Met Ile Glu Val Pro Arg Ala Ala Leu
820 825 830

Val Ala Asp Glu Ile Ala Lys Glu Ala Glu Phe Leu Ala Leu Glu Thr
835 840 845

Lys Arg Leu Asn Ser Ser Lys Trp Asn Gln Ala Tyr Ser Arg Asp Asp
850 855 860

Val Gly Lys Ser Leu Pro Ile Tyr Leu Ser Gly Gly Ile Leu Gln His
865 870 875 880

Asp Pro Phe Glu Ala Leu Asp Gln Lys Gly Val Gly Gln Leu Ile Lys
885 890 895

Ile Cys Thr Asp Lys Gly Arg Ala Ala Lys Pro Asn Leu Lys Ala Gly
900 905 910

Ile Cys Gly Glu His Gly Gly Glu Pro Ser Ser Ala Ala Phe Phe Ala
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Arg Ala Gln Asn Ala Pro Gly Thr Ala Lys Arg Pro Pro Phe Asp Arg
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Ile	Arg	Ser	Asp	Ser	Gly	Ala	Gly	Arg	Arg	Gln	His	Cys	Ser	Pro	Leu	
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Arg	Ala	Val	Val	Asp	Ala	Ala	Pro	Ile	Gln	Thr	Thr	Ser	Gln	Arg	Val	
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Tyr	Gln	Asp	Ala	Gly	Arg	Ala	Leu	Pro	Pro	Gly	Leu	Trp	Ala	Glu	Val	
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Phe	Asn	Ser	Trp	Glu	Ser	Pro	Arg	Ala	Lys	Lys	Tyr	Arg	Ser	Ile	Asn	
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PhoenixTemp59752.tmp.txt

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ata Ile 770	gca Ala	atg Met	acc Thr	aac Asn	cag Gln	ggt Gly 775	gtt Val	caa Gln	gtg Val	ttc Phe	cca Pro 780	gag Glu	ata Ile	atg Met	gtt Val	2352
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gat Asp	gag Glu	ata Ile 835	gcg Ala	gag Glu	cag Gln	gct Ala	gaa Glu 840	ttc Phe	ttc Phe	tcc Ser	ttc Phe	gga Gly 845	acg Thr	aac Asn	gac Asp	2544
ctg Leu 850	acg Thr	cag Gln	atg Met	acc Thr	ttt Phe	ggg Gly 855	tac Tyr	agc Ser	agg Arg	gat Asp 860	gat Asp	gtg Val	gga Gly	aag Lys	ttc Phe	2592

PhoenixTemp59752.tmp.txt

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cac ggt gga gag cct tcc tct gtg gcc ttc ttc gcg aag gct ggg ctg	2784
His Gly Gly Glu Pro Ser Ser Val Ala Phe Phe Ala Lys Ala Gly Leu	
	915 920 925
gat tac gtt tct tgc tcc cct ttc agg gtt ccg att gct agg cta gct	2832
Asp Tyr Val Ser Cys Ser Pro Phe Arg Val Pro Ile Ala Arg Leu Ala	
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Phe His Phe Gly Lys Gly Lys Ser Glu Gly Asn Lys Thr Met Lys Glu	
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Tyr Gln Asp Ala Gly Arg Ala Leu Pro Pro Gly Leu Trp Ala Glu Val	
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 Ser Met Pro Gly Met Met Asp Thr Val Leu Asn Leu Gly Leu Asn Asp
 180 185 190
 Gln Val Ala Ala Gly Leu Ala Ala Lys Ser Gly Asp Arg Phe Ala Tyr
 195 200 205
 Asp Ser Phe Arg Arg Phe Leu Asp Met Phe Gly Asn Val Val Met Asp
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 Ile Pro His Ser Leu Phe Glu Glu Lys Leu Glu His Met Lys Glu Ser
 225 230 235 240
 Lys Gly Leu Lys Asn Asp Thr Asp Leu Thr Ala Ser Asp Leu Lys Glu
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 Leu Val Gly Gln Tyr Lys Glu Val Tyr Leu Ser Ala Lys Gly Glu Pro
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 Phe Pro Ser Asp Pro Lys Lys Gln Leu Glu Leu Ala Val Leu Ala Val
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 Asn Pro Asn Thr Gly Glu Lys Lys Leu Tyr Gly Glu Phe Leu Val Asn
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 Asp Ala Met Lys Asn Leu Met Pro Gln Ala Tyr Asp Glu Leu Val Glu
 370 375 380
 Asn Cys Asn Ile Leu Glu Ser His Tyr Lys Glu Met Gln Asp Ile Glu
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 Phe Thr Val Gln Glu Asn Arg Leu Trp Met Leu Gln Cys Arg Thr Gly
 405 410 415
 Lys Arg Thr Gly Lys Ser Ala Val Lys Ile Ala Val Asp Met Val Asn

420

425

430

Glu Gly Leu Val Glu Pro Arg Ser Ala Ile Lys Met Val Glu Pro Gly
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His Leu Asp Gln Leu Leu His Pro Gln Phe Glu Asn Pro Ser Ala Tyr
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Lys Asp Gln Val Ile Ala Thr Gly Leu Pro Ala Ser Pro Gly Ala Ala
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Val Gly Gln Val Val Phe Thr Ala Glu Asp Ala Glu Ala Trp His Ser
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Gln Gly Lys Ala Ala Ile Leu Val Arg Ala Glu Thr Ser Pro Glu Asp
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Gly Ser Thr Gly Glu Val Ile Leu Gly Lys Gln Pro Leu Ser Pro Pro
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Arg Lys Leu Lys Val Leu Ala Asn Ala Asp Thr Pro Asp Asp Ala Leu
 610 615 620

Thr Ala Arg Asn Asn Gly Ala Gln Gly Ile Gly Leu Cys Arg Thr Glu
 625 630 635 640

His Met Phe Phe Ala Ser Asp Glu Arg Ile Lys Ala Val Arg Gln Met
 645 650 655

Ile Met Ala Pro Thr Leu Glu Leu Arg Gln Gln Ala Leu Asp Arg Leu
 660 665 670

Leu Pro Tyr Gln Arg Ser Asp Phe Glu Gly Ile Phe Arg Ala Met Asp
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Gly Leu Pro Val Thr Ile Arg Leu Leu Asp Pro Pro Leu His Glu Phe
 690 695 700

PhoenixTemp59752.tmp.txt

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 725 730 735
 Glu Val Asn Pro Met Leu Gly Phe Arg Gly Cys Arg Leu Gly Ile Ser
 740 745 750
 Tyr Pro Glu Leu Thr Glu Met Gln Ala Arg Ala Ile Phe Glu Ala Ala
 755 760 765
 Ile Ala Met Thr Asn Gln Gly Val Gln Val Phe Pro Glu Ile Met Val
 770 775 780
 Pro Leu Val Gly Thr Pro Gln Glu Leu Gly His Gln Val Thr Leu Ile
 785 790 795 800
 Arg Gln Val Ala Glu Lys Val Phe Ala Asn Val Gly Lys Thr Ile Gly
 805 810 815
 Tyr Lys Val Gly Thr Met Ile Glu Ile Pro Arg Ala Ala Leu Val Ala
 820 825 830
 Asp Glu Ile Ala Glu Gln Ala Glu Phe Phe Ser Phe Gly Thr Asn Asp
 835 840 845
 Leu Thr Gln Met Thr Phe Gly Tyr Ser Arg Asp Asp Val Gly Lys Phe
 850 855 860
 Ile Pro Val Tyr Leu Ala Gln Gly Ile Leu Gln His Asp Pro Phe Glu
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 Val Leu Asp Gln Arg Gly Val Gly Glu Leu Val Lys Leu Ala Thr Glu
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 900 905 910
 His Gly Gly Glu Pro Ser Ser Val Ala Phe Phe Ala Lys Ala Gly Leu
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Ala Ala Pro Arg Pro Pro His Ala Lys Ala Arg Arg Arg His Pro Leu	
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Val Asp Ala Ala Pro Ile Gln Thr Thr Lys Lys Arg Val Phe His Phe	
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gac Asp	ccc Pro	aag Lys 275	aag Lys	cag Gln	ctg Leu	gag Glu	ctg Leu 280	gca Ala	gtg Val	ctg Leu	gct Ala	gtg Val 285	ttc Phe	aac Asn	tcg Ser	864
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aca Thr 785	cca Pro	cag Gln	gaa Glu	ctg Leu	ggg Gly 790	cat His	caa Gln	gtg Val	act Thr 795	ctt Leu	atc Ile	cgc Arg	caa Gln	gtt Val	gct Ala 800	2400

PhoenixTemp59752.tmp.txt

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Gly Lys Gly Lys Ser₈₅ Glu Gly Asn Lys Thr₉₀ Met Lys Glu Leu₉₅ Gly
 Gly Lys Gly Ala₁₀₀ Asn Leu Ala Glu Met₁₀₅ Ala Ser Ile Gly₁₁₀ Leu Ser Val
 Pro Pro Gly₁₁₅ Phe Thr Val Ser Thr₁₂₀ Glu Ala Cys Gln₁₂₅ Gln Tyr Gln Asp
 Ala Gly₁₃₀ Cys Ala Leu Pro Ala₁₃₅ Gly Leu Trp Ala Glu₁₄₀ Ile Val Asp Gly
 Leu₁₄₅ Gln Trp Val Glu Glu₁₅₀ Tyr Met Gly Ala Thr₁₅₅ Leu Gly Asp Pro Gln₁₆₀
 Arg Pro Leu Leu Leu₁₆₅ Ser Val Arg Ser Gly₁₇₀ Ala Ala Val Ser Met₁₇₅ Pro
 Gly Met Met Asp₁₈₀ Thr Val Leu Asn Leu₁₈₅ Gly Leu Asn Asp Glu₁₉₀ Val Ala
 Ala Gly Leu₁₉₅ Ala Ala Lys Ser Gly₂₀₀ Glu Arg Phe Ala Tyr₂₀₅ Asp Ser Phe
 Arg Arg₂₁₀ Phe Leu Asp Met Phe₂₁₅ Gly Asn Val Val Met₂₂₀ Asp Ile Pro Arg
 Ser₂₂₅ Leu Phe Glu Glu Lys₂₃₀ Leu Glu His Met Lys₂₃₅ Glu Ser Lys Gly Leu₂₄₀
 Lys Asn Asp Thr Asp₂₄₅ Leu Thr Ala Ser Asp₂₅₀ Leu Lys Glu Leu Val₂₅₅ Gly
 Gln Tyr Lys Glu₂₆₀ Val Tyr Leu Ser Ala₂₆₅ Lys Gly Glu Pro Phe₂₇₀ Pro Ser
 Asp Pro Lys₂₇₅ Lys Gln Leu Glu Leu₂₈₀ Ala Val Leu Ala Val₂₈₅ Phe Asn Ser
 Trp Glu₂₉₀ Ser Pro Arg Ala Lys₂₉₅ Lys Tyr Arg Ser Ile₃₀₀ Asn Gln Ile Thr
 Gly₃₀₅ Leu Arg Gly Thr Ala₃₁₀ Val Asn Val Gln Cys₃₁₅ Met Val Phe Gly Asn₃₂₀
 Met Gly Asn Thr Ser₃₂₅ Gly Thr Gly Val Leu₃₃₀ Phe Thr Arg Asn Pro₃₃₅ Asn
 Thr Gly Glu Lys₃₄₀ Lys Leu Tyr Gly Glu₃₄₅ Phe Leu Val Asn Ala₃₅₀ Gln Gly
 Glu Asp Val Val Ala Gly Ile Arg Thr Pro Glu Asp Leu Asp Ala Met

355

360

365

Lys Asn Leu Met Pro Gln Ala Tyr Asp Glu Leu Val Glu Asn Cys Asn
 370 375 380

Ile Leu Glu Ser His Tyr Lys Glu Met Gln Asp Ile Glu Phe Thr Val
 385 390 395 400

Gln Glu Asn Arg Leu Trp Met Leu Gln Cys Arg Thr Gly Lys Arg Thr
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Gly Lys Ser Ala Val Lys Ile Ala Val Asp Met Val Asn Glu Gly Leu
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Val Glu Pro Arg Ser Ala Ile Lys Met Val Glu Pro Gly His Leu Asp
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Gln Leu Leu His Pro Gln Phe Glu Asn Pro Ser Ala Tyr Lys Asp Gln
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Val Ile Ala Thr Gly Leu Pro Ala Ser Pro Gly Ala Ala Val Gly Gln
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Val Val Phe Thr Ala Glu Asp Ala Glu Ala Trp His Ser Gln Gly Lys
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Met His Ala Ala Val Gly Ile Leu Thr Glu Pro Gly Cys Arg Phe Pro
 515 520 525

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Ser Gly Ile Arg Val Asn Asp Ala Glu Lys Leu Val Thr Ile Gly Gly
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His Val Leu Arg Glu Gly Glu Trp Leu Ser Leu Asn Gly Ser Thr Gly
 565 570 575

Glu Val Ile Leu Gly Lys Gln Pro Leu Ser Pro Pro Ala Leu Ser Gly
 580 585 590

Asp Leu Gly Thr Phe Met Ala Trp Val Asp Asp Val Arg Lys Leu Lys
 595 600 605

Val Leu Ala Asn Ala Asp Thr Pro Asp Asp Ala Leu Thr Ala Arg Asn
 610 615 620

Asn Gly Ala Gln Gly Ile Gly Leu Cys Arg Thr Glu His Met Phe Phe
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Ala Ser Asp Glu Arg Ile Lys Ala Val Arg Gln Met Ile Met Ala Pro
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Thr Leu Glu Leu Arg Gln Gln Ala Leu Asp Arg Leu Leu Pro Tyr Gln
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Arg Ser Asp Phe Glu Gly Ile Phe Arg Ala Met Asp Gly Leu Pro Val
675 680 685

Thr Ile Arg Leu Leu Asp Pro Pro Leu His Glu Phe Leu Pro Glu Gly
690 695 700

Asn Ile Glu Asp Ile Val Ser Glu Leu Cys Ala Glu Thr Gly Ala Asn
705 710 715 720

Gln Glu Asp Ala Leu Ala Arg Ile Glu Lys Leu Ser Glu Val Asn Pro
725 730 735

Met Leu Gly Phe Arg Gly Cys Arg Leu Gly Ile Ser Tyr Pro Glu Leu
740 745 750

Thr Glu Met Gln Ala Arg Ala Ile Phe Glu Ala Ala Ile Ala Met Thr
755 760 765

Asn Gln Gly Val Gln Val Phe Pro Glu Ile Met Val Pro Leu Val Gly
770 775 780

Thr Pro Gln Glu Leu Gly His Gln Val Thr Leu Ile Arg Gln Val Ala
785 790 795 800

Glu Lys Val Phe Ala Asn Val Gly Lys Thr Ile Gly Tyr Lys Val Gly
805 810 815

Thr Met Ile Glu Ile Pro Arg Ala Ala Leu Val Ala Asp Glu Ile Ala
820 825 830

Glu Gln Ala Glu Phe Phe Ser Phe Gly Thr Asn Asp Leu Thr Gln Met
835 840 845

Thr Phe Gly Tyr Ser Arg Asp Asp Val Gly Lys Phe Ile Pro Val Tyr
850 855 860

Leu Ala Gln Gly Ile Leu Gln His Asp Pro Phe Glu Val Leu Asp Gln
865 870 875 880

Arg Gly Val Gly Glu Leu Val Lys Phe Ala Thr Glu Arg Gly Arg Lys
885 890 895

Ala Arg Pro Asn Leu Lys Val Gly Ile Cys Gly Glu His Gly Gly Glu
900 905 910

PhoenixTemp59752.tmp.txt

Pro Ser Ser Val Ala Phe Phe Ala Lys Ala Gly Leu Asp Tyr Val Ser
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Cys Ser Pro Phe Arg Val Pro Ile Ala Arg Leu Ala Ala Ala Gln Val
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Leu Val
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Lys Cys Thr Arg Asp Arg Glu Ala Thr Ser Phe Ala Arg Arg Ser Val	
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gca gcg ccg agg ccc ccg cac gcc aaa gcc cgc cgg cgt cat ccg ctc	144
Ala Ala Pro Arg Pro Pro His Ala Lys Ala Arg Arg Arg His Pro Leu	
35 40 45	
cga ctc cgg cgc ggg acg ggg cca cat tgc tcg ccg ctg agg gcc gtc	192
Arg Leu Arg Arg Gly Thr Gly Pro His Cys Ser Pro Leu Arg Ala Val	
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gtt gac gcc gcg ccg ata cag acg acc aaa aag agg gtg ttc cac ttc	240
Val Asp Ala Ala Pro Ile Gln Thr Thr Lys Lys Arg Val Phe His Phe	
65 70 75 80	
ggc aag ggc aag agc gag ggc aac aag acc atg aag gaa ctg ctg ggc	288
Gly Lys Gly Lys Ser Glu Gly Asn Lys Thr Met Lys Glu Leu Gly	
85 90 95	
ggc aag ggc gcg aac ctg gcg gag atg gcg agc atc ggg ctg tcg gtg	336
Gly Lys Gly Ala Asn Leu Ala Glu Met Ala Ser Ile Gly Leu Ser Val	
100 105 110	
ccg cca ggg ttc acg gtg tcg acg gag gcg tgc cag cag tac cag gac	384
Pro Pro Gly Phe Thr Val Ser Thr Glu Ala Cys Gln Gln Tyr Gln Asp	
115 120 125	
gcc ggg tgc gcc ctc ccc gcg ggg ctc tgg gcc gag atc gtc gac ggc	432
Ala Gly Cys Ala Leu Pro Ala Gly Leu Trp Ala Glu Ile Val Asp Gly	
130 135 140	
ctg cag tgg gtg gag gag tac atg ggc gcc acc ctg ggc gat ccg cag	480
Leu Gln Trp Val Glu Glu Tyr Met Gly Ala Thr Leu Gly Asp Pro Gln	
145 150 155 160	
cgc ccg ctc ctg ctc tcc gtc cgc tcc ggc gcc gcc gtg tcc atg ccc	528
Arg Pro Leu Leu Leu Ser Val Arg Ser Gly Ala Ala Val Ser Met Pro	
165 170 175	
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cgc Arg	cgc Arg 210	ttc Phe	ctc Leu	gac Asp	atg Met	ttc Phe 215	ggc Gly	aac Asn	gtc Val	gtc Val	atg Met 220	gac Asp	atc Ile	ccc Pro	cgc Arg	672
tca Ser 225	ctg Leu	ttc Phe	gaa Glu	gag Glu	aag Lys 230	ctt Leu	gag Glu	cac His	atg Met	aag Lys 235	gaa Glu	tcc Ser	aag Lys	ggg Gly	ctg Leu 240	720
aag Lys	aac Asn	gac Asp	acc Thr	gac Asp 245	ctc Leu	acg Thr	gcc Ala	tct Ser	gac Asp 250	ctc Leu	aaa Lys	gag Glu	ctc Leu	gtg Val 255	ggt Gly	768
cag Gln	tac Tyr	aag Lys	gag Glu 260	gtc Val	tac Tyr	ctc Leu	tca Ser	gcc Ala 265	aag Lys	gga Gly	gag Glu	cca Pro	ttc Phe 270	ccc Pro	tca Ser	816
gac Asp	ccc Pro	aag Lys 275	aag Lys	cag Gln	ctg Leu	gag Glu	ctg Leu 280	gca Ala	gtg Val	ctg Leu	gct Ala	gtg Val 285	ttc Phe	aac Asn	tcg Ser	864
tgg Trp	gag Glu 290	agc Ser	ccc Pro	agg Arg	gcc Ala	aag Lys 295	aag Lys	tac Tyr	agg Arg	agc Ser	atc Ile 300	aac Asn	cag Gln	atc Ile	act Thr	912
ggc Gly 305	ctc Leu	agg Arg	ggc Gly	acc Thr	gcc Ala 310	gtg Val	aac Asn	gtg Val	cag Gln	tgc Cys 315	atg Met	gtg Val	ttc Phe	ggc Gly	aac Asn 320	960
atg Met	ggg Gly	aac Asn	act Thr	tct Ser 325	ggc Gly	acc Thr	ggc Gly	gtg Val	ctc Leu 330	ttc Phe	acc Thr	agg Arg	aac Asn	ccc Pro 335	aac Asn	1008
acc Thr	gga Gly	gag Glu	aag Lys 340	aag Lys	ctg Leu	tat Tyr	ggc Gly	gag Glu 345	ttc Phe	ctg Leu	gtg Val	aac Asn	gct Ala 350	cag Gln	ggt Gly	1056
gag Glu	gat Asp	gtg Val 355	gtt Val	gcc Ala	gga Gly	ata Ile	aga Arg 360	acc Thr	cca Pro	gag Glu	gac Asp	ctt Leu 365	gac Asp	gcc Ala	atg Met	1104
aag Lys	aac Asn 370	ctc Leu	atg Met	cca Pro	cag Gln	gcc Ala 375	tac Tyr	gac Asp	gag Glu	ctt Leu	gtt Val 380	gag Glu	aac Asn	tgc Cys	aac Asn	1152
atc Ile 385	ctg Leu	gag Glu	agc Ser	cac His	tat Tyr 390	aag Lys	gaa Glu	atg Met	cag Gln	gat Asp 395	atc Ile	gag Glu	ttc Phe	act Thr	gtc Val 400	1200
cag Gln	gaa Glu	aac Asn	agg Arg	ctg Leu 405	tgg Trp	atg Met	ttg Leu	cag Gln	tgc Cys 410	agg Arg	aca Thr	ggg Gly	aaa Lys	cgt Arg 415	acg Thr	1248
ggc Gly	aaa Lys	agt Ser	gcc Ala 420	gtg Val	aag Lys	atc Ile	gcc Ala	gtg Val 425	gac Asp	atg Met	gtt Val	aac Asn	gag Glu 430	ggc Gly	ctt Leu	1296
gtt Val	gag Glu	ccc Pro 435	cgc Arg	tca Ser	gcg Ala	atc Ile	aag Lys 440	atg Met	gta Val	gag Glu	cca Pro	ggc Gly 445	cac His	ctg Leu	gac Asp	1344
cag Gln	ctt Leu	ctc Leu	cat His	cct Pro	cag Gln	ttt Phe	gag Glu	aac Asn	ccg Pro	tcg Ser	gcg Ala	tac Tyr	aag Lys	gat Asp	caa Gln	1392

PhoenixTemp59752.tmp.txt

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gct gct att ctg gta agg gcg gag acc agc cct gag gac gtt ggt ggc Ala Ala Ile Leu Val Arg Ala Glu Thr 505 Ser Pro Glu Asp Val Gly Gly 500 510			1536
atg cac gct gct gtg ggg att ctt aca gag ccg ggc tgc agg ttc ccc Met His Ala Ala Val Gly Ile Leu Thr Glu Pro Gly Cys Arg Phe Pro 515 520 525			1584
gct gct gtg gtc gca cgt ggg tgg ggg aaa tgc tgc gtc tcg gga tgc Ala Ala Val Val Ala Arg Gly Trp Gly Lys Cys Cys Val Ser Gly Cys 530 535 540			1632
tca ggc att cgc gta aac gat gcg gag aag ctc gtg acg atc gga ggc Ser Gly Ile Arg Val Asn Asp Ala Glu Lys Leu Val Thr Ile Gly Gly 545 550 555 560			1680
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gag gtg atc ctt ggg aag cag ccg ctt tcc cca cca gcc ctt agt ggt Glu Val Ile Leu Gly Lys Gln Pro Leu Ser Pro Pro Ala Leu Ser Gly 580 585 590			1776
gat ctg gga act ttc atg gcc tgg gtg gat gat gtt aga aag ctc aag Asp Leu Gly Thr Phe Met Ala Trp Val Asp Asp Val Arg Lys Leu Lys 595 600 605			1824
gtc ctg gct aac gcc gat acc cct gat gat gca ttg act gcg cga aac Val Leu Ala Asn Ala Asp Thr 615 Pro Asp Asp Ala Leu Thr Ala Arg Asn 610 620			1872
aat ggg gca caa gga att gga tta tgc cgg aca gag cac atg ttc ttt Asn Gly Ala Gln Gly Ile Gly Leu Cys Arg Thr 635 Glu His Met Phe Phe 625 630 640			1920
gct tca gac gag agg att aag gct gtc agg cag atg att atg gct ccc Ala Ser Asp Glu Arg Ile Lys Ala Val Arg Gln Met Ile Met Ala Pro 645 650 655			1968
acg ctt gag ctg agg cag cag gcg ctc gac cgt ctc ttg ccg tat cag Thr Leu Glu Leu Arg Gln Gln Ala Leu Asp Arg Leu Leu Pro Tyr Gln 660 665 670			2016
agg tct gac ttc gaa ggc att ttc cgt gct atg gat gga ctc ccg gtg Arg Ser Asp Phe Glu Gly Ile Phe 680 Arg Ala Met Asp Gly Leu Pro Val 675 685			2064
acc atc cga ctc ctg gac cct ccc ctc cac gag ttc ctt cca gaa ggg Thr Ile Arg Leu Leu Asp Pro Pro Leu His Glu Phe 700 Leu Pro Glu Gly 690 695 700			2112
aac atc gag gac att gta agt gaa tta tgt gct gag acg gga gcc aac Asn Ile Glu Asp Ile Val Ser Glu Leu Cys Ala Glu Thr Gly Ala Asn 705 710 715 720			2160
cag gag gat gcc ctc gcg cga att gaa aag ctt tca gaa gta aac ccg Gln Glu Asp Ala Leu Ala Arg Ile Glu Lys Leu Ser Glu Val Asn Pro 725 730 735			2208

PhoenixTemp59752.tmp.txt

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aca	gag	atg	caa	gcc	cgg	gcc	att	ttt	gaa	gct	gct	ata	gca	atg	acc	2304
Thr	Glu	Met	Gln	Ala	Arg	Ala	Ile	Phe	Glu	Ala	Ala	Ile	Ala	Met	Thr	
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aac	cag	ggt	gtt	caa	gtg	ttc	cca	gag	ata	atg	ggt	cct	ctt	gtt	gga	2352
Asn	Gln	Gly	Val	Gln	Val	Phe	Pro	Glu	Ile	Met	Val	Pro	Leu	Val	Gly	
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aca	cca	cag	gaa	ctg	ggg	cat	caa	gtg	act	ctt	atc	cgc	caa	gtt	gct	2400
Thr	Pro	Gln	Glu	Leu	Gly	His	Gln	Val	Thr	Leu	Ile	Arg	Gln	Val	Ala	
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gag	aaa	gtg	ttc	gcc	aat	gtg	ggc	aag	act	atc	ggg	tac	aaa	gtt	gga	2448
Glu	Lys	Val	Phe	Ala	Asn	Val	Gly	Lys	Thr	Ile	Gly	Tyr	Lys	Val	Gly	
				805					810					815		
aca	atg	att	gag	atc	ccc	agg	gca	gct	ctg	gtg	gct	gat	gag	ata	gcg	2496
Thr	Met	Ile	Glu	Ile	Pro	Arg	Ala	Ala	Leu	Val	Ala	Asp	Glu	Ile	Ala	
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gag	cag	gct	gaa	ttc	ttc	tcc	ttc	gga	acg	aac	gac	ctg	acg	cag	atg	2544
Glu	Gln	Ala	Glu	Phe	Phe	Ser	Phe	Gly	Thr	Asn	Asp	Leu	Thr	Gln	Met	
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acc	ttt	ggg	tac	agc	agg	gat	gat	gtg	gga	aag	ttc	att	ccc	gtc	tat	2592
Thr	Phe	Gly	Tyr	Ser	Arg	Asp	Asp	Val	Gly	Lys	Phe	Ile	Pro	Val	Tyr	
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ctt	gct	cag	ggc	atc	ctc	caa	cat	gac	ccc	ttc	gag	gtc	ctg	gac	cag	2640
Leu	Ala	Gln	Gly	Ile	Leu	Gln	His	Asp	Pro	Phe	Glu	Val	Leu	Asp	Gln	
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agg	gga	gtg	ggc	gag	ctg	gtg	aag	ttt	gct	aca	gag	agg	ggc	cgc	aaa	2688
Arg	Gly	Val	Gly	Glu	Leu	Val	Lys	Phe	Ala	Thr	Glu	Arg	Gly	Arg	Lys	
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gct	agg	cct	aac	ttg	aag	gtg	ggc	att	tgt	gga	gaa	cac	ggt	gga	gag	2736
Ala	Arg	Pro	Asn	Leu	Lys	Val	Gly	Ile	Cys	Gly	Glu	His	Gly	Gly	Glu	
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cct	tcg	tct	gtg	gcc	ttc	ttc	gcg	aag	gct	ggg	ctg	gat	tac	gtt	tct	2784
Pro	Ser	Ser	Val	Ala	Phe	Phe	Ala	Lys	Ala	Gly	Leu	Asp	Tyr	Val	Ser	
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tgc	tcc	cct	ttc	agg	gtt	ccg	att	gct	agg	cta	gct	gca	gct	cag	gtg	2832
Cys	Ser	Pro	Phe	Arg	Val	Pro	Ile	Ala	Arg	Leu	Ala	Ala	Ala	Gln	Val	
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ctt	gtc	tga														2841
Leu	Val															
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 Arg Leu₅₀ Arg Arg Gly Thr Gly₅₅ Pro His Cys Ser Pro₆₀ Leu Arg Ala Val
 Val₆₅ Asp Ala Ala Pro Ile₇₀ Gln Thr Thr Lys Lys₇₅ Arg Val Phe His Phe₈₀
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 Arg Pro Leu Leu Leu₁₆₅ Ser Val Arg Ser Gly₁₇₀ Ala Ala Val Ser Met₁₇₅ Pro
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 Arg Arg₂₁₀ Phe Leu Asp Met Phe₂₁₅ Gly Asn Val Val Met₂₂₀ Asp Ile Pro Arg
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 Lys Asn Asp Thr Asp₂₄₅ Leu Thr Ala Ser Asp₂₅₀ Leu Lys Glu Leu Val₂₅₅ Gly
 Gln Tyr Lys Glu₂₆₀ Val Tyr Leu Ser Ala₂₆₅ Lys Gly Glu Pro Phe₂₇₀ Pro Ser
 Asp Pro Lys₂₇₅ Lys Gln Leu Glu Leu₂₈₀ Ala Val Leu Ala Val₂₈₅ Phe Asn Ser
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290

295

300

Gly Leu Arg Gly Thr Ala Val Asn Val Gln Cys Met Val Phe Gly Asn
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Met Gly Asn Thr Ser Gly Thr Gly Val Leu Phe Thr Arg Asn Pro Asn
 325 330 335

Thr Gly Glu Lys Lys Leu Tyr Gly Glu Phe Leu Val Asn Ala Gln Gly
 340 345 350

Glu Asp Val Val Ala Gly Ile Arg Thr Pro Glu Asp Leu Asp Ala Met
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Lys Asn Leu Met Pro Gln Ala Tyr Asp Glu Leu Val Glu Asn Cys Asn
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Ile Leu Glu Ser His Tyr Lys Glu Met Gln Asp Ile Glu Phe Thr Val
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Gln Glu Asn Arg Leu Trp Met Leu Gln Cys Arg Thr Gly Lys Arg Thr
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Gly Lys Ser Ala Val Lys Ile Ala Val Asp Met Val Asn Glu Gly Leu
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Val Glu Pro Arg Ser Ala Ile Lys Met Val Glu Pro Gly His Leu Asp
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Gln Leu Leu His Pro Gln Phe Glu Asn Pro Ser Ala Tyr Lys Asp Gln
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Val Ile Ala Thr Gly Leu Pro Ala Ser Pro Gly Ala Ala Val Gly Gln
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Val Val Phe Thr Ala Glu Asp Ala Glu Ala Trp His Ser Gln Gly Lys
 485 490 495

Ala Ala Ile Leu Val Arg Ala Glu Thr Ser Pro Glu Asp Val Gly Gly
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Met His Ala Ala Val Gly Ile Leu Thr Glu Pro Gly Cys Arg Phe Pro
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Ala Ala Val Val Ala Arg Gly Trp Gly Lys Cys Cys Val Ser Gly Cys
 530 535 540

Ser Gly Ile Arg Val Asn Asp Ala Glu Lys Leu Val Thr Ile Gly Gly
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His Val Leu Arg Glu Gly Glu Trp Leu Ser Leu Asn Gly Ser Thr Gly
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 610 615 620
 Asn Gly Ala Gln Gly Ile Gly Leu Cys Arg Thr Glu His Met Phe Phe
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 Ala Ser Asp Glu Arg Ile Lys Ala Val Arg Gln Met Ile Met Ala Pro
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 Thr Leu Glu Leu Arg Gln Gln Ala Leu Asp Arg Leu Leu Pro Tyr Gln
 660 665 670
 Arg Ser Asp Phe Glu Gly Ile Phe Arg Ala Met Asp Gly Leu Pro Val
 675 680 685
 Thr Ile Arg Leu Leu Asp Pro Pro Leu His Glu Phe Leu Pro Glu Gly
 690 695 700
 Asn Ile Glu Asp Ile Val Ser Glu Leu Cys Ala Glu Thr Gly Ala Asn
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 Gln Glu Asp Ala Leu Ala Arg Ile Glu Lys Leu Ser Glu Val Asn Pro
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 Met Leu Gly Phe Arg Gly Cys Arg Leu Gly Ile Ser Tyr Pro Glu Leu
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 Thr Glu Met Gln Ala Arg Ala Ile Phe Glu Ala Ala Ile Ala Met Thr
 755 760 765
 Asn Gln Gly Val Gln Val Phe Pro Glu Ile Met Val Pro Leu Val Gly
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 Thr Pro Gln Glu Leu Gly His Gln Val Thr Leu Ile Arg Gln Val Ala
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 Glu Lys Val Phe Ala Asn Val Gly Lys Thr Ile Gly Tyr Lys Val Gly
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 Glu Gln Ala Glu Phe Phe Ser Phe Gly Thr Asn Asp Leu Thr Gln Met
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PhoenixTemp59752.tmp.txt

Thr Phe Gly Tyr Ser Arg Asp Asp Val Gly Lys Phe Ile Pro Val Tyr
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Leu Ala Gln Gly Ile Leu Gln His Asp Pro Phe Glu Val Leu Asp Gln
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Arg Gly Val Gly Glu Leu Val Lys Phe Ala Thr Glu Arg Gly Arg Lys
885 890 895

Ala Arg Pro Asn Leu Lys Val Gly Ile Cys Gly Glu His Gly Gly Glu
900 905 910

Pro Ser Ser Val Ala Phe Phe Ala Lys Ala Gly Leu Asp Tyr Val Ser
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Leu Val
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Arg Ser Val Ala Ala Pro Arg Pro Pro His Ala Lys Ala Ala Gly Val
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Ile Arg Ser Asp Ser Gly Ala Gly Arg Arg Gln His Cys Ser Pro Leu
50 55 60

agg gcc gtc gtt gac gcc gcg ccg ata cag acg acc tcg cag agg gtg 240
Arg Ala Val Val Asp Ala Ala Pro Ile Gln Thr Thr Ser Gln Arg Val
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Phe His Phe Gly Lys Gly Lys Ser Glu Gly Asn Lys Thr Met Lys Glu
85 90 95

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PhoenixTemp59752.tmp.txt

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Leu Leu Gly Gly Lys Gly Ala Asn Leu Ala Glu Met Ala Ser Ile Gly
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Leu Ser Val Pro Pro Gly Phe Thr Val Ser Thr Glu Ala Cys Gln Gln
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Tyr Gln Asp Ala Gly Arg Ala Leu Pro Pro Gly Leu Trp Ala Glu Val
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Asp Ser Phe Arg Arg Phe Leu Asp Met Phe Gly Asn Val Val Met Asp
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Ile Pro His Ser Leu Phe Glu Glu Lys Leu Glu His Met Lys Glu Ser
Page 49

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 Phe Pro Ser Asp Pro Lys Lys Gln Leu Glu Leu Ala Val Leu Ala Val
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PhoenixTemp59752.tmp.txt

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PhoenixTemp59752.tmp.txt

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Val Leu Asp Gln Arg Gly Val Gly Glu Leu Val Lys Leu Ala Thr Glu
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Ser Ala Gln Glu Gly Ile Gly Arg Met Ala Ala Ser Val Ser Arg Ala
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Ile Cys Val Gln Lys Pro Gly Ser Lys Cys Thr Arg Asp Arg Glu Ala
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acc tcc ttc gcc cgc cga tcg gtc gca gcg ccg agg ccc ccg cac gcc 192

PhoenixTemp59752.tmp.txt

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His	Cys	Ser	Pro	Leu	Arg	Ala	Val	Val	Asp	Ala	Ala	Pro	Ile	Gln	Thr	
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acc	aaa	aag	agg	gtg	ttc	cac	ttc	ggc	aag	ggc	aag	agc	gag	ggc	aac	336
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Asn	Val	Val	Met	Asp	Ile	Pro	His	Ala	Leu	Phe	Glu	Glu	Lys	Leu	Glu	
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gcc	atg	aag	aaa	gcc	aag	ggg	ctg	aag	aac	gac	acc	gac	ctc	acc	gcc	816
Ala	Met	Lys	Lys	Ala	Lys	Gly	Leu	Lys	Asn	Asp	Thr	Asp	Leu	Thr	Ala	
			260					265					270			
acc	gac	ctc	aaa	gag	ctg	gtg	agc	cag	tac	aag	gac	gtc	tac	gtg	gag	864
Thr	Asp	Leu	Lys	Glu	Leu	Val	Ser	Gln	Tyr	Lys	Asp	Val	Tyr	Val	Glu	
		275					280					285				
gct	aag	gga	gag	cca	ttc	ccc	tca	gac	ccc	aag	agg	cag	ctg	gag	ttg	912
Ala	Lys	Gly	Glu	Pro	Phe	Pro	Ser	Asp	Pro	Lys	Arg	Gln	Leu	Glu	Leu	
	290					295					300					
gca	gtg	ctg	gcc	gtg	ttc	gac	tcg	tgg	gag	agc	ccg	agg	gca	aag	aag	960
Ala	Val	Leu	Ala	Val	Phe	Asp	Ser	Trp	Glu	Ser	Pro	Arg	Ala	Lys	Lys	
305					310					315					320	
tac	agg	agc	atc	aac	cag	atc	acc	ggc	ctc	aga	ggc	acc	gcc	gtg	aac	1008
Tyr	Arg	Ser	Ile	Asn	Gln	Ile	Thr	Gly	Leu	Arg	Gly	Thr	Ala	Val	Asn	

				325					330					335		
gtg	cag	tgc	atg	gtg	ttc	ggc	aac	atg	ggg	aac	acc	tct	ggc	acc	ggc	1056
Val	Gln	Cys	Met	Val	Phe	Gly	Asn	Met	Gly	Asn	Thr	Ser	Gly	Thr	Gly	
			340					345					350			
gtg	ctc	ttc	act	agg	aac	ccc	aac	acc	gga	gag	aag	aag	ctg	tac	ggc	1104
Val	Leu	Phe	Thr	Arg	Asn	Pro	Asn	Thr	Gly	Glu	Lys	Lys	Leu	Tyr	Gly	
		355					360					365				
gag	ttc	ctg	gtg	aat	gct	cag	ggc	gag	gat	gtg	gtt	gct	gga	atc	aga	1152
Glu	Phe	Leu	Val	Asn	Ala	Gln	Gly	Glu	Asp	Val	Val	Ala	Gly	Ile	Arg	
	370					375					380					
acc	ccg	gag	gat	ctt	gat	gcc	atg	aag	gac	gtt	atg	cca	cag	gcc	tac	1200
Thr	Pro	Glu	Asp	Leu	Asp	Ala	Met	Lys	Asp	Val	Met	Pro	Gln	Ala	Tyr	
385					390					395					400	
caa	gag	cta	gtc	gag	aac	tgc	agg	ata	ctg	gag	agc	cac	tat	aaa	gaa	1248
Gln	Glu	Leu	Val	Glu	Asn	Cys	Arg	Ile	Leu	Glu	Ser	His	Tyr	Lys	Glu	
				405					410					415		
atg	cag	gac	atc	gaa	ttt	act	gtt	cag	gag	agc	agg	ctg	tgg	atg	ttg	1296
Met	Gln	Asp	Ile	Glu	Phe	Thr	Val	Gln	Glu	Ser	Arg	Leu	Trp	Met	Leu	
			420					425					430			
cag	tgc	agg	aca	ggg	aaa	cgt	acg	ggc	aaa	agc	gcc	gta	aag	atc	gcc	1344
Gln	Cys	Arg	Thr	Gly	Lys	Arg	Thr	Gly	Lys	Ser	Ala	Val	Lys	Ile	Ala	
		435					440					445				
gtg	gac	atg	gtt	aac	gag	ggc	ctt	gtt	gag	cgc	cgt	gcg	gcg	atc	aag	1392
Val	Asp	Met	Val	Asn	Glu	Gly	Leu	Val	Glu	Arg	Arg	Ala	Ala	Ile	Lys	
	450					455					460					
atg	gta	gag	cca	ggc	cac	ctg	gac	cag	ctt	ctc	cat	cct	cag	ttt	gag	1440
Met	Val	Glu	Pro	Gly	His	Leu	Asp	Gln	Leu	Leu	His	Pro	Gln	Phe	Glu	
465					470					475					480	
aac	cca	tcg	gcg	tac	aag	gac	caa	gtc	att	gcc	acg	ggc	cta	ccg	gcg	1488
Asn	Pro	Ser	Ala	Tyr	Lys	Asp	Gln	Val	Ile	Ala	Thr	Gly	Leu	Pro	Ala	
				485					490					495		
tca	cct	ggg	gcc	gct	gtg	ggc	cag	gtt	gta	ttc	act	gct	gag	gac	gct	1536
Ser	Pro	Gly	Ala	Ala	Val	Gly	Gln	Val	Val	Phe	Thr	Ala	Glu	Asp	Ala	
			500					505					510			
gaa	aca	tgg	cat	tcc	caa	ggg	aaa	tca	gtt	att	ctg	gtg	agg	gcg	gag	1584
Glu	Thr	Trp	His	Ser	Gln	Gly	Lys	Ser	Val	Ile	Leu	Val	Arg	Ala	Glu	
		515					520					525				
acc	agc	cct	gag	gac	gtc	ggc	ggc	atg	cac	gcg	gct	gcc	gga	atc	ctc	1632
Thr	Ser	Pro	Glu	Asp	Val	Gly	Gly	Met	His	Ala	Ala	Ala	Gly	Ile	Leu	
	530					535					540					
aca	gaa	aga	ggt	ggc	atg	acc	tcc	cat	gcc	gcc	gtg	gtc	gca	cgc	ggg	1680
Thr	Glu	Arg	Gly	Gly	Met	Thr	Ser	His	Ala	Ala	Val	Val	Ala	Arg	Gly	
545					550					555					560	
tgg	gga	aaa	tgc	tgt	gtc	tcg	gga	tgc	tct	ggg	att	cgt	gta	aat	gac	1728
Trp	Gly	Lys	Cys	Cys	Val	Ser	Gly	Cys	Ser	Gly	Ile	Arg	Val	Asn	Asp	
			565						570					575		
gca	gag	aag	gtt	gtg	aag	att	gga	ggc	aat	gtg	ctg	cgc	gaa	ggt	gag	1776
Ala	Glu	Lys	Val	Val	Lys	Ile	Gly	Gly	Asn	Val	Leu	Arg	Glu	Gly	Glu	
			580					585					590			
tgg	cta	tcg	ctg	aat	gga	tcg	acc	ggc	gaa	gtg	atc	ctc	gga	aag	cag	1824
Trp	Leu	Ser	Leu	Asn	Gly	Ser	Thr	Gly	Glu	Val	Ile	Leu	Gly	Lys	Gln	
		595					600					605				

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ccg	ctc	tcc	cca	cca	gcc	ctc	agt	ggc	gat	ctg	gga	aca	ttc	atg	tcc	1872
Pro	Leu	Ser	Pro	Pro	Ala	Leu	Ser	Gly	Asp	Leu	Gly	Thr	Phe	Met	Ser	
	610					615					620					
tgg	gtg	gat	gac	gtt	aga	aag	ctc	aag	gtc	ctg	gca	aac	gcg	gat	acc	1920
Trp	Val	Asp	Asp	Val	Arg	Lys	Leu	Lys	Val	Leu	Ala	Asn	Ala	Asp	Thr	
	625				630					635					640	
cct	gag	gat	gca	ttg	gct	gcg	cgg	aac	aac	ggg	gca	gaa	gga	atc	ggg	1968
Pro	Glu	Asp	Ala	Leu	Ala	Ala	Arg	Asn	Asn	Gly	Ala	Glu	Gly	Ile	Gly	
				645					650					655		
tta	tgc	cgg	aca	gag	cac	atg	ttc	ttc	gct	tcg	gat	gag	agg	att	aag	2016
Leu	Cys	Arg	Thr	Glu	His	Met	Phe	Phe	Ala	Ser	Asp	Glu	Arg	Ile	Lys	
			660					665					670			
gct	gtg	agg	cag	atg	att	atg	gct	ccc	aca	gtt	gag	ctg	agg	cag	cag	2064
Ala	Val	Arg	Gln	Met	Ile	Met	Ala	Pro	Thr	Val	Glu	Leu	Arg	Gln	Gln	
		675					680					685				
gcg	ctg	gat	cgc	ctt	ctg	cct	tac	cag	agg	tct	gac	ttc	gaa	ggc	att	2112
Ala	Leu	Asp	Arg	Leu	Leu	Pro	Tyr	Gln	Arg	Ser	Asp	Phe	Glu	Gly	Ile	
	690					695					700					
ttc	cgt	gct	atg	gat	gga	ctt	tca	gtg	act	att	cga	ctt	ctg	gac	cct	2160
Phe	Arg	Ala	Met	Asp	Gly	Leu	Ser	Val	Thr	Ile	Arg	Leu	Leu	Asp	Pro	
	705				710					715					720	
ccc	ctc	cac	gag	ttc	ctt	cca	gaa	ggg	aac	gtc	gag	gaa	atc	gtg	cgt	2208
Pro	Leu	His	Glu	Phe	Leu	Pro	Glu	Gly	Asn	Val	Glu	Glu	Ile	Val	Arg	
				725					730					735		
gaa	ctg	tgt	tct	gag	acg	gga	gcc	aac	cag	gag	gat	gcc	ctc	gca	cgg	2256
Glu	Leu	Cys	Ser	Glu	Thr	Gly	Ala	Asn	Gln	Glu	Asp	Ala	Leu	Ala	Arg	
			740					745					750			
atc	gaa	aag	ctt	tcg	gaa	gta	aac	ccg	atg	ctt	ggc	ttc	cgt	ggc	tgc	2304
Ile	Glu	Lys	Leu	Ser	Glu	Val	Asn	Pro	Met	Leu	Gly	Phe	Arg	Gly	Cys	
		755					760					765				
agg	ctt	ggt	ata	tcg	tac	cct	gag	cta	aca	gaa	atg	caa	gcc	cgt	gcc	2352
Arg	Leu	Gly	Ile	Ser	Tyr	Pro	Glu	Leu	Thr	Glu	Met	Gln	Ala	Arg	Ala	
	770					775					780					
atc	ttt	gaa	gct	gct	ata	gcg	atg	acc	aac	cag	ggc	gtt	caa	gtc	ttt	2400
Ile	Phe	Glu	Ala	Ala	Ile	Ala	Met	Thr	Asn	Gln	Gly	Val	Gln	Val	Phe	
	785				790					795					800	
cca	gag	ata	atg	gtt	cct	ctt	gtt	gga	aca	ccg	cag	gaa	ttg	gga	cat	2448
Pro	Glu	Ile	Met	Val	Pro	Leu	Val	Gly	Thr	Pro	Gln	Glu	Leu	Gly	His	
				805					810					815		
cag	gtg	gcc	ctt	atc	cgt	caa	gtc	gct	aac	aaa	gtt	ttc	acc	agt	atg	2496
Gln	Val	Ala	Leu	Ile	Arg	Gln	Val	Ala	Asn	Lys	Val	Phe	Thr	Ser	Met	
			820					825					830			
ggg	aaa	act	att	ggg	tac	aag	atc	gga	acg	atg	att	gag	att	ccc	agg	2544
Gly	Lys	Thr	Ile	Gly	Tyr	Lys	Ile	Gly	Thr	Met	Ile	Glu	Ile	Pro	Arg	
		835					840					845				
gca	gct	cta	gtg	gct	gac	gag	atc	gcg	gag	cag	gct	gaa	ttc	ttc	tcc	2592
Ala	Ala	Leu	Val	Ala	Asp	Glu	Ile	Ala	Glu	Gln	Ala	Glu	Phe	Phe	Ser	
	850					855					860					
ttt	gga	acg	aac	gac	ctc	acg	cag	atg	acc	ttt	ggc	tac	agc	agg	gat	2640
Phe	Gly	Thr	Asn	Asp	Leu	Thr	Gln	Met	Thr	Phe	Gly	Tyr	Ser	Arg	Asp	
	865				870					875					880	

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gat gtg ggg aag ttc atc ccc att tat ctg gct cag ggc atc ctc cag 2688
 Asp Val Gly Lys Phe 885 Ile Pro Ile Tyr Leu 890 Ala Gln Gly Ile Leu 895 Gln

cat gac ccc ttc gag gtt ctc gac cag aga gga gtg ggc gag ctg gtt 2736
 His Asp Pro Phe 900 Glu Val Leu Asp Gln 905 Arg Gly Val Gly Glu 910 Leu Val

aag ctt gct aca gag agg ggc cgc aaa gct agg cct aac ttg aag gtg 2784
 Lys Leu Ala Thr Glu Arg Gly Arg Lys Ala Arg Pro Asn 925 Leu Lys Val 915

ggc att tgt gga gaa cat ggt gga gag cct tca tcg gtt gct ttc ttc 2832
 Gly Ile Cys Gly Glu His Gly Gly Glu Pro Ser Ser 940 Val Ala Phe Phe 930

gcc aag act ggg ctg gat tac gtt tct tgc tcc cct ttc agg gtc ccg 2880
 Ala Lys Thr Gly Leu Asp 950 Tyr Val Ser Cys Ser 955 Pro Phe Arg Val Pro 960 945

atc gct agg cta gct gca gct cag gtg ctt gtc tga 2916
 Ile Ala Arg Leu Ala 965 Ala Ala Gln Val Leu 970 Val

<210> 18
 <211> 971
 <212> PRT
 <213> Zea mays

<400> 18

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

Ser Ala Gln Glu Gly Ile Gly Arg Met Ala Ala Ser Val Ser Arg Ala
 20 25 30

Ile Cys Val Gln Lys Pro Gly Ser Lys Cys Thr Arg Asp Arg Glu Ala
 35 40 45

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

Lys Ala Ala Gly Val Ile Arg Ser Asp Ser Gly Ala Gly Arg Gly Gln
 65 70 75 80

His Cys Ser Pro Leu Arg Ala Val Val Asp Ala Ala Pro Ile Gln Thr
 85 90 95

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

Lys Asn Met Lys Glu Leu Leu Gly Gly Lys Gly Ala Asn Leu Ala Glu
 115 120 125

Met Ala Ser Ile Gly Leu Ser Val Pro Pro Gly Phe Thr Val Ser Thr
 130 135 140

Glu Ala Cys Gln Gln Tyr Gln Glu Ala Gly Arg Ala Leu Pro Pro Gly

145 150 155 160
 Leu Trp Ala Glu Val₁₆₅ Leu Asp Gly Leu Arg₁₇₀ Trp Val Glu Glu Tyr₁₇₅ Met
 Gly Ala Ala Leu₁₈₀ Gly Asp Pro Arg₁₈₅ Pro Leu Leu Leu Ser₁₉₀ Val Arg
 Ser Gly Ala₁₉₅ Ala Val Ser Met₂₀₀ Gly Met Met Asp Thr₂₀₅ Val Leu Asn
 Leu Gly₂₁₀ Leu Asn Asp Gln Val₂₁₅ Ala Ala Gly Leu Ala₂₂₀ Ala Lys Ser Gly
 Asp₂₂₅ Arg Phe Ala Tyr Asp₂₃₀ Ser Phe Arg Arg Phe₂₃₅ Leu Asp Met Phe Gly₂₄₀
 Asn Val Val Met₂₄₅ Ile Pro His Ala Leu₂₅₀ Phe Glu Glu Lys Leu₂₅₅ Glu
 Ala Met Lys Lys₂₆₀ Ala Lys Gly Leu Lys₂₆₅ Asn Asp Thr Asp Leu₂₇₀ Thr Ala
 Thr Asp Leu₂₇₅ Lys Glu Leu Val Ser₂₈₀ Gln Tyr Lys Asp Val₂₈₅ Tyr Val Glu
 Ala Lys₂₉₀ Gly Glu Pro Phe Pro₂₉₅ Ser Asp Pro Lys Arg₃₀₀ Gln Leu Glu Leu
 Ala₃₀₅ Val Leu Ala Val Phe₃₁₀ Asp Ser Trp Glu Ser₃₁₅ Pro Arg Ala Lys Lys₃₂₀
 Tyr Arg Ser Ile Asn₃₂₅ Gln Ile Thr Gly Leu₃₃₀ Arg Gly Thr Ala Val₃₃₅ Asn
 Val Gln Cys Met₃₄₀ Val Phe Gly Asn Met₃₄₅ Gly Asn Thr Ser Gly₃₅₀ Thr Gly
 Val Leu Phe₃₅₅ Thr Arg Asn Pro Asn₃₆₀ Thr Gly Glu Lys Lys₃₆₅ Leu Tyr Gly
 Glu Phe₃₇₀ Leu Val Asn Ala Gln₃₇₅ Gly Glu Asp Val Val₃₈₀ Ala Gly Ile Arg
 Thr₃₈₅ Pro Glu Asp Leu Asp₃₉₀ Ala Met Lys Asp Val₃₉₅ Met Pro Gln Ala Tyr₄₀₀
 Gln Glu Leu Val Glu₄₀₅ Asn Cys Arg Ile Leu₄₁₀ Glu Ser His Tyr Lys₄₁₅ Glu
 Met Gln Asp Ile₄₂₀ Glu Phe Thr Val Gln₄₂₅ Glu Ser Arg Leu Trp₄₃₀ Met Leu

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Gln Cys Arg Thr Gly Lys Arg Thr Gly Lys Ser Ala Val Lys Ile Ala
435 440 445

Val Asp Met Val Asn Glu Gly Leu Val Glu Arg Arg Ala Ala Ile Lys
450 455 460

Met Val Glu Pro Gly His Leu Asp Gln Leu Leu His Pro Gln Phe Glu
465 470 475 480

Asn Pro Ser Ala Tyr Lys Asp Gln Val Ile Ala Thr Gly Leu Pro Ala
485 490 495

Ser Pro Gly Ala Ala Val Gly Gln Val Val Phe Thr Ala Glu Asp Ala
500 505 510

Glu Thr Trp His Ser Gln Gly Lys Ser Val Ile Leu Val Arg Ala Glu
515 520 525

Thr Ser Pro Glu Asp Val Gly Gly Met His Ala Ala Ala Gly Ile Leu
530 535 540

Thr Glu Arg Gly Gly Met Thr Ser His Ala Ala Val Val Ala Arg Gly
545 550 555 560

Trp Gly Lys Cys Cys Val Ser Gly Cys Ser Gly Ile Arg Val Asn Asp
565 570 575

Ala Glu Lys Val Val Lys Ile Gly Gly Asn Val Leu Arg Glu Gly Glu
580 585 590

Trp Leu Ser Leu Asn Gly Ser Thr Gly Glu Val Ile Leu Gly Lys Gln
595 600 605

Pro Leu Ser Pro Pro Ala Leu Ser Gly Asp Leu Gly Thr Phe Met Ser
610 615 620

Trp Val Asp Asp Val Arg Lys Leu Lys Val Leu Ala Asn Ala Asp Thr
625 630 635 640

Pro Glu Asp Ala Leu Ala Ala Arg Asn Asn Gly Ala Glu Gly Ile Gly
645 650 655

Leu Cys Arg Thr Glu His Met Phe Phe Ala Ser Asp Glu Arg Ile Lys
660 665 670

Ala Val Arg Gln Met Ile Met Ala Pro Thr Val Glu Leu Arg Gln Gln
675 680 685

Ala Leu Asp Arg Leu Leu Pro Tyr Gln Arg Ser Asp Phe Glu Gly Ile
690 695 700

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Phe Arg Ala Met Asp Gly Leu Ser Val Thr Ile Arg Leu Leu Asp Pro
 705 710 715 720
 Pro Leu His Glu Phe Leu Pro Glu Gly Asn Val Glu Glu Ile Val Arg
 725 730 735
 Glu Leu Cys Ser Glu Thr Gly Ala Asn Gln Glu Asp Ala Leu Ala Arg
 740 745 750
 Ile Glu Lys Leu Ser Glu Val Asn Pro Met Leu Gly Phe Arg Gly Cys
 755 760 765
 Arg Leu Gly Ile Ser Tyr Pro Glu Leu Thr Glu Met Gln Ala Arg Ala
 770 775 780
 Ile Phe Glu Ala Ala Ile Ala Met Thr Asn Gln Gly Val Gln Val Phe
 785 790 795 800
 Pro Glu Ile Met Val Pro Leu Val Gly Thr Pro Gln Glu Leu Gly His
 805 810 815
 Gln Val Ala Leu Ile Arg Gln Val Ala Asn Lys Val Phe Thr Ser Met
 820 825 830
 Gly Lys Thr Ile Gly Tyr Lys Ile Gly Thr Met Ile Glu Ile Pro Arg
 835 840 845
 Ala Ala Leu Val Ala Asp Glu Ile Ala Glu Gln Ala Glu Phe Phe Ser
 850 855 860
 Phe Gly Thr Asn Asp Leu Thr Gln Met Thr Phe Gly Tyr Ser Arg Asp
 865 870 875 880
 Asp Val Gly Lys Phe Ile Pro Ile Tyr Leu Ala Gln Gly Ile Leu Gln
 885 890 895
 His Asp Pro Phe Glu Val Leu Asp Gln Arg Gly Val Gly Glu Leu Val
 900 905 910
 Lys Leu Ala Thr Glu Arg Gly Arg Lys Ala Arg Pro Asn Leu Lys Val
 915 920 925
 Gly Ile Cys Gly Glu His Gly Gly Glu Pro Ser Ser Val Ala Phe Phe
 930 935 940
 Ala Lys Thr Gly Leu Asp Tyr Val Ser Cys Ser Pro Phe Arg Val Pro
 945 950 955 960
 Ile Ala Arg Leu Ala Ala Ala Gln Val Leu Val
 965 970