

MSTO10-EP SEQ listing.ST25.txt  
SEQUENCE LISTING

<110> Monsanto  
<120> FAD2 mutants  
<130> MSTO.10A/EP  
<160> 20  
<170> PatentIn version 3.3

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<212> DNA  
<213> Brassica napus

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 <213> Brassica napus

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## MST010-EP SEQ listing.ST25.txt

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gaagaaaggt gtgttctggt acaacaataa gttatgagga trraagaaac tgaacctttc 1320
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<210> 3
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<213> Brassica napus

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<220>
<221> CDS
<222> (1)..(1155)

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Glu Thr Asp Thr Ile Lys Arg Val Pro Cys Glu Thr Pro Pro Phe Thr
20 25 30

gtc gga gaa ctc aag aaa gca atc cca ccg cac tgt ttc aaa cgc tcg 144
Val Gly Glu Leu Lys Lys Ala Ile Pro Pro His Cys Phe Lys Arg Ser
35 40 45

atc cct cgc tct ttc tcc tac ctc atc tgg gac atc atc ata gcc tcc 192
Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile Ile Ile Ala Ser
50 55 60

tgc ttc tac tac gtc gcc acc act tac ttc cct ctc ctc cct cac cct 240
Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro
65 70 75 80

ctc tcc tac ttc gcc tgg cct ctc tac tgg gcc tgc caa ggg tgc gtc 288
Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val
85 90 95

cta acc ggc gtc tgg gtc ata gcc cac gag tgc ggc cac cac gcc ttc 336
Leu Thr Gly Val Trp Val Ile Ala His Glu Cys Gly His His Ala Phe
100 105 110

agc gac tac cag tgg ctt gac gac acc gtc ggt ctc atc ttc cac tcc 384
Ser Asp Tyr Gln Trp Leu Asp Asp Thr Val Gly Leu Ile Phe His Ser
115 120 125

ttc ctc ctc gtc cct tac ttc tcc tgg aag tac agt cat cga cgc cac 432
Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser His Arg Arg His
130 135 140

cat tcc aac act ggc tcc ctc gag aga gac gaa gtg ttt gtc ccc aag 480
His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys
145 150 155 160

aag aag tca gac atc aag tgg tac ggc aag tac ctc aac aac cct ttg 528
Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu
165 170 175

gga cgc acc gtg atg tta acg gtt cag ttc act ctc ggc tgg ccg ttg 576
Gly Arg Thr Val Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu
180 185 190

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MST010-EP SEQ listing.ST25.txt

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Cys His Phe His Pro Asn Ala Ser Ile Tyr Asn Asp Arg Glu Arg Leu
210 215 220
cag ata tac atc tcc gac gct ggc atc ctc gcc gtc tgc tac ggt ctc 720
Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu
225 230 235 240
ttc cgt tac gcc gcc gcg cag gga gtg gcc tcg atg gtc tgc ttc tac 768
Phe Arg Tyr Ala Ala Ala Gln Gly Val Ala Ser Met Val Cys Phe Tyr
245 250 255
gga gtc ccg ctt ctg att gtc aat ggt ttc ctc gtg ttg atc act tac 816
Gly Val Pro Leu Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr
260 265 270
ttg cag cac acg cat cct tcc ctg cct cac tac gat tcg tcc gag tgg 864
Leu Gln His Thr His Pro Ser Leu Pro His Tyr Asp Ser Ser Glu Trp
275 280 285
gat tgg ttg agg gga gct ttg gct acc gtt gac aga gac tac gga atc 912
Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Asp Tyr Gly Ile
290 295 300
ttg aac aag gtc ttc cac aat att acc gac acg cac gtg gcg cat cat 960
Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His
305 310 315 320
ctg ttc tcc acg atg ccg cat tat cac gcg atg gaa gct acc aag gcg 1008
Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala
325 330 335
ata aag ccg ata ctg gga gag tat tat cag ttc gat ggg acg ccg gtg 1056
Ile Lys Pro Ile Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val
340 345 350
gtt aag gcg atg tgg agg gag gcg aag gag tgt atc tat gtg gaa ccg 1104
Val Lys Ala Met Trp Arg Glu Ala Lys Glu Cys Ile Tyr Val Glu Pro
355 360 365
gac agg caa ggt gag aag aaa ggt gtg ttc tgg tac aac aat aag tta 1152
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tga 1155

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<211> 384
<212> PRT
<213> Brassica napus

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35 40 45
Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile Ile Ile Ala Ser
50 55 60
Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro
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MST010-EP SEQ listing.ST25.txt

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115 120 125

Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser His Arg Arg His  
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His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys  
145 150 155 160

Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu  
165 170 175

Gly Arg Thr Val Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu  
180 185 190

Tyr Leu Ala Phe Asn Val Ser Gly Arg Pro Tyr Asp Gly Gly Phe Ala  
195 200 205

Cys His Phe His Pro Asn Ala Ser Ile Tyr Asn Asp Arg Glu Arg Leu  
210 215 220

Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu  
225 230 235 240

Phe Arg Tyr Ala Ala Ala Gln Gly Val Ala Ser Met Val Cys Phe Tyr  
245 250 255

Gly Val Pro Leu Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr  
260 265 270

Leu Gln His Thr His Pro Ser Leu Pro His Tyr Asp Ser Ser Glu Trp  
275 280 285

Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Asp Tyr Gly Ile  
290 295 300

Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His  
305 310 315 320

Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala  
325 330 335

Ile Lys Pro Ile Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val  
340 345 350

Val Lys Ala Met Trp Arg Glu Ala Lys Glu Cys Ile Tyr Val Glu Pro  
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## MST010-EP SEQ listing.ST25.txt

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 <212> DNA  
 <213> Brassica napus

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<210> 6  
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## MST010-EP SEQ listing.ST25.txt

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atc cct cgc tct ttc tcc tac ctc atc tgg gac atc atc ata gcc tcc Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile Ile Ile Ala Ser 50 55 60	192
tgc ttc tac tac gtc gcc acc act tac ttc cct ctc ctc cct cac cct Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro 65 70 75 80	240
ctc tcc tac ttc gcc tgg cct ctc tac tgg gcc tgc cag ggc tgc gtc Leu Ser Tyr Phe Val Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val 85 90 95	288
cta acc ggc gtc tgg gtc ata gcc cac gag tgc ggc cac cac gcc ttc Leu Thr Gly Val Trp Val Ile Ala His Glu Cys Gly His His Ala Phe 100 105 110	336
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gga cgc acc gtg atg tta acg gtt cag ttc act ctc ggc tgg cct ttg Gly Arg Thr Val Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu 180 185 190	576
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cag ata tac atc tcc gac gct ggc atc ctc gcc gtc tgc tac ggt ctc Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu 225 230 235 240	720
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ttg cag cac acg cat cct tcc ctg cct cac tat gac tcg tct gag tgg Leu Gln His Thr His Pro Ser Leu Pro His Tyr Asp Ser Ser Glu Trp 275 280 285	864
gat tgg ttg agg gga gct ttg gcc acc gtt gac aga gac tac gga atc Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Asp Tyr Gly Ile 290 295 300	912
ttg aac aag gtc ttc cac aat atc acg gac acg cac gtg gcg cat cac Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His 305 310 315 320	960

MST010-EP SEQ listing.ST25.txt

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 Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala  
 325 330 335

ata aag ccg ata ctg gga gag tat tat cag ttc gat ggg acg ccg gtg 1056  
 Ile Lys Pro Ile Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val  
 340 345 350

gtt aag gcg atg tgg agg gag gcg aag gag tgt atc tat gtg gaa ccg 1104  
 Val Lys Ala Met Trp Arg Glu Ala Lys Glu Cys Ile Tyr Val Glu Pro  
 355 360 365

gac agg caa ggt gag aag aaa ggt gtg ttc tgg tac aac aat aag tta 1152  
 Asp Arg Gln Gly Glu Lys Lys Gly Val Phe Trp Tyr Asn Asn Lys Leu  
 370 375 380

tga 1155

<210> 7  
 <211> 384  
 <212> PRT  
 <213> Brassica napus

<400> 7

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 35 40 45

Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile Ile Ile Ala Ser  
 50 55 60

Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro  
 65 70 75 80

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Leu Thr Gly Val Trp Val Ile Ala His Glu Cys Gly His His Ala Phe  
 100 105 110

Ser Asp Tyr Gln Trp Leu Asp Asp Thr Val Gly Leu Ile Phe His Ser  
 115 120 125

Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser His Arg Arg His  
 130 135 140

His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys  
 145 150 155 160

Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu  
 165 170 175

Gly Arg Thr Val Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu  
 180 185 190

Tyr Leu Ala Phe Asn Val Ser Gly Arg Pro Tyr Asp Gly Gly Phe Ala



195

200

205

Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp Arg Glu Arg Leu  
210 215 220

Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu  
225 230 235 240

Tyr Arg Tyr Ala Ala Val Gln Gly Val Ala Ser Met Val Cys Phe Tyr  
245 250 255

Gly Val Pro Leu Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr  
260 265 270

Leu Gln His Thr His Pro Ser Leu Pro His Tyr Asp Ser Ser Glu Trp  
275 280 285

Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Asp Tyr Gly Ile  
290 295 300

Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His  
305 310 315 320

Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala  
325 330 335

Ile Lys Pro Ile Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val  
340 345 350

Val Lys Ala Met Trp Arg Glu Ala Lys Glu Cys Ile Tyr Val Glu Pro  
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Asp Arg Gln Gly Glu Lys Lys Gly Val Phe Trp Tyr Asn Asn Lys Leu  
370 375 380

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<212> DNA  
<213> Brassica napus

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ttccatttct tctcattttt acgttggttt caatcttggt ctgttctttt cttatcgctt 180  
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attgcattaa actatagatc tggctttgat tctctgtttt catgtgtgaa atcttgatgc 300  
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acatgtaagt acatatattg tgaatctttg ggtaaaaaac ttatgtctct gggtaaaatt 600  
tgctgagaga ttgaccgat tcctattggc tctggattct gtagttacct aatacatgaa 660  
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## MSTO10-EP SEQ listing.ST25.txt

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 <212> DNA  
 <213> Brassica napus

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MSTO10-EP SEQ listing.ST25.txt

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cactgtcggg gaactcaaga aagcaatccc accgcactgt ttcaaacgct cgatccctcg 300
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cacttacttc cctctcctcc ctacacctct ctctacttct gcctggcctc tctactgggc 420
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<210> 10  
 <211> 1155  
 <212> DNA  
 <213> Brassica napus

<220>  
 <221> CDS  
 <222> (1)..(1155)

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gaa acc gac aac atc aag cgc gta ccc tgc gag aca ccg ccc ttc act 96
Glu Thr Asp Asn Ile Lys Arg Val Pro Cys Glu Thr Pro Pro Phe Thr
20 25 30

gtc gga gaa ctc aag aaa gca atc cca ccg cac tgt ttc aaa cgc tgc 144
Val Gly Glu Leu Lys Lys Ala Ile Pro Pro His Cys Phe Lys Arg Ser
35 40 45

atc cct cgc tct ttc tcc tac ctc atc tgg gac atc atc ata gcc tcc 192
Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile Ile Ile Ala Ser

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## MST010-EP SEQ listing.ST25.txt

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65	70	75	80
ctc tcc tac ttc gcc tgg cct ctc tac tgg gcc tgc cag ggc tgc gtc			288
Leu Ser Tyr Phe Val Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val			
	85	90	95
cta acc ggc gtc tgg gtc ata gcc cac gag tgc ggc cac cac gcc ttc			336
Leu Thr Gly Val Trp Val Ile Ala His Glu Cys Gly His His Ala Phe			
	100	105	110
agc gac tac cag tgg ctg gac gac acc gtc ggc ctc atc ttc cac tcc			384
Ser Asp Tyr Gln Trp Leu Asp Asp Thr Val Gly Leu Ile Phe His Ser			
	115	120	125
ttc ctc ctc gtc cct tac ttc tcc tgg aag tac agt cat cga cgc cac			432
Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser His Arg Arg His			
	130	135	140
cat tcc aac act ggc tcc ctc gag aga gac gaa gtg ttt gtc ccc aag			480
His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys			
	145	150	155
aag aag tca gac atc aag tgg tac ggc aag tac ctc aac aac cct ttg			528
Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu			
	165	170	175
gga cgc acc gtg atg tta acg gtt cag ttc act ctc ggc tgg cct ttg			576
Gly Arg Thr Val Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu			
	180	185	190
tac tta gcc ttc aac gtc tcg ggg aga cct tac gac ggc ggc ttc gct			624
Tyr Leu Ala Phe Asn Val Ser Gly Arg Pro Tyr Asp Gly Gly Phe Ala			
	195	200	205
tgc cat ttc cac ccc aac gct ccc atc tac aac gac cgt gag cgt ctc			672
Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp Arg Glu Arg Leu			
	210	215	220
cag ata tac atc tcc gac gct ggc atc ctc gcc gtc tgc tac ggt ctc			720
Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu			
	225	230	235
tac cgc tac gct gct gtc caa gga gtt gcc tcg atg gtc tgc ttc tac			768
Tyr Arg Tyr Ala Ala Val Gln Gly Val Ala Ser Met Val Cys Phe Tyr			
	245	250	255
gga gtt cct ctt ctg att gtc aac ggg ttc tta gtt ttg atc act tac			816
Gly Val Pro Leu Leu Ile Val Asn Phe Leu Val Leu Ile Thr Tyr			
	260	265	270
ttg cag cac acg cat cct tcc ctg cct cac tat gac tcg tct gag tgg			864
Leu Gln His Thr His Pro Ser Leu Pro His Tyr Asp Ser Ser Glu Trp			
	275	280	285
gat tgg ttg agg gga gct ttg gcc acc gtt gac aga gac tac gga atc			912
Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Asp Tyr Gly Ile			
	290	295	300
ttg aac aag gtc ttc cac aat atc acg gac acg cac gtg gcg cat cac			960
Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His			
	305	310	315
ctg ttc tcg acc atg ccg cat tat cac gcg atg gaa gct acg aag gcg			1008
Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala			
	325	330	335
ata aag ccg ata ctg gga gag tat tat cag ttc gat ggg acg ccg gtg			1056
Ile Lys Pro Ile Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val			
	340	345	350
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Val Lys Ala Met Trp Arg Glu Ala Lys Glu Cys Ile Tyr Val Glu Pro			

## MST010-EP SEQ listing.ST25.txt

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 tga 1155  
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 <212> PRT  
 <213> Brassica napus  
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 20 25 30  
 Val Gly Glu Leu Lys Lys Ala Ile Pro Pro His Cys Phe Lys Arg Ser  
 35 40 45  
 Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile Ile Ile Ala Ser  
 50 55 60  
 Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro  
 65 70 75 80  
 Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val  
 85 90 95  
 Leu Thr Gly Val Trp Val Ile Ala His Glu Cys Gly His His Ala Phe  
 100 105 110  
 Ser Asp Tyr Gln Trp Leu Asp Asp Thr Val Gly Leu Ile Phe His Ser  
 115 120 125  
 Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser His Arg Arg His  
 130 135 140  
 His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys  
 145 150 155 160  
 Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu  
 165 170 175  
 Gly Arg Thr Val Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu  
 180 185 190  
 Tyr Leu Ala Phe Asn Val Ser Gly Arg Pro Tyr Asp Gly Gly Phe Ala  
 195 200 205  
 Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp Arg Glu Arg Leu  
 210 215 220  
 Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu  
 225 230 235 240

MST010-EP SEQ listing.ST25.txt

Tyr Arg Tyr Ala Ala Val Gln Gly Val Ala Ser Met Val Cys Phe Tyr  
245 250 255

Gly Val Pro Leu Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr  
260 265 270

Leu Gln His Thr His Pro Ser Leu Pro His Tyr Asp Ser Ser Glu Trp  
275 280 285

Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Asp Tyr Gly Ile  
290 295 300

Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His  
305 310 315 320

Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala  
325 330 335

Ile Lys Pro Ile Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val  
340 345 350

Val Lys Ala Met Trp Arg Glu Ala Lys Glu Cys Ile Tyr Val Glu Pro  
355 360 365

Asp Arg Gln Gly Glu Lys Lys Gly Val Phe Trp Tyr Asn Asn Lys Leu  
370 375 380

<210> 12  
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<212> DNA  
<213> Brassica napus

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MST010-EP SEQ listing.ST25.txt

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## MST010-EP SEQ listing.ST25.txt

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<220>  
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Glu Thr Asp Thr Ile Lys Arg Val Pro Cys Glu Thr Pro Pro Phe Thr
20 25 30

gtc gga gaa ctc aag aaa gca atc cca ccg cac tgt ttc aaa cgc tcg 144
Val Gly Glu Leu Lys Lys Ala Ile Pro Pro His Cys Phe Lys Arg Ser
35 40 45

atc cct cgc tct ttc tcc tac ctc atc tgg gac atc atc ata gcc tcc 192
Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile Ile Ala Ser
50 55 60

tgc ttc tac tac gtc gcc acc act tac ttc cct ctc ctc cct cac cct 240
Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro
65 70 75 80

ctc tcc tac ttc gcc tgg cct ctc tac tgg gcc tgc caa ggg tgc gtc 288
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85 90 95

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MST010-EP SEQ listing.ST25.txt

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Ser Asp Tyr Gln Trp Leu Asp Thr Val Gly Leu Ile Phe His Ser	
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ttc ctc ctc gtc cct tac ttc tcc tgg aag tac agt cat cga cgc cac	432
Phe Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser His Arg Arg His	
130 135 140	
cat tcc aac act ggc tcc ctc gag aga gac gaa gtg ttt gtc ccc aag	480
His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys	
145 150 155 160	
aag aag tca gac atc aag tgg tac ggc aag tac ctc aac aac cct ttg	528
Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu	
165 170 175	
gga cgc acc gtg atg tta acg gtt cag ttc act ctc ggc tgg ccg ttg	576
Gly Arg Thr Val Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu	
180 185 190	
tac tta gcc ttc aac gtc tcg gga aga cct tac gac ggc ggc ttc gct	624
Tyr Leu Ala Phe Asn Val Ser Gly Arg Pro Tyr Asp Gly Gly Phe Ala	
195 200 205	
tgc cat ttc cac ccc aac gct ccc atc tac aac gac cgc gag cgt ctc	672
Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp Arg Glu Arg Leu	
210 215 220	
cag ata tac atc tcc gac gct ggc atc ctc gcc gtc tgc tac ggt ctc	720
Gln Ile Tyr Ile Ser Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu	
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ttc cgt tac gcc gcc gcg cag gga gtg gcc tcg atg gtc tgc ttc tac	768
Phe Arg Tyr Ala Ala Ala Gln Gly Val Ala Ser Met Val Cys Phe Tyr	
245 250 255	
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Gly Val Pro Leu Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr	
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Leu Gln His Thr His Pro Ser Leu Pro His Tyr Asp Ser Ser Glu Trp	
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Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Asp Tyr Gly Ile	
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Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His	
305 310 315 320	
ctg ttc tcc acg atg ccg cat tat cac gcg atg gaa gct acc aag gcg	1008
Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala	
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Ile Lys Pro Ile Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val	
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Val Lys Ala Met Trp Arg Glu Ala Lys Glu Cys Ile Tyr Val Glu Pro	
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gac agg caa ggt gag aag aaa ggt gtg ttc tgg tac aac aat aag tta	1152
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## MST010-EP SEQ listing.ST25.txt

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&lt;213&gt; Brassica napus

&lt;400&gt; 15

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Val Gly Glu Leu Lys Lys Ala Ile Pro Pro His Cys Phe Lys Arg Ser  
 35 40 45

Ile Pro Arg Ser Phe Ser Tyr Leu Ile Trp Asp Ile Ile Ile Ala Ser  
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Cys Phe Tyr Tyr Val Ala Thr Thr Tyr Phe Pro Leu Leu Pro His Pro  
 65 70 75 80

Leu Ser Tyr Phe Ala Trp Pro Leu Tyr Trp Ala Cys Gln Gly Cys Val  
 85 90 95

Leu Thr Gly Val Trp Val Ile Ala His Glu Cys Gly His His Ala Phe  
 100 105 110

Ser Asp Tyr Gln Trp Leu Asp Asp Thr Val Gly Leu Ile Phe His Ser  
 115 120 125

Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser His Arg Arg His  
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His Ser Asn Thr Gly Ser Leu Glu Arg Asp Glu Val Phe Val Pro Lys  
 145 150 155 160

Lys Lys Ser Asp Ile Lys Trp Tyr Gly Lys Tyr Leu Asn Asn Pro Leu  
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Gly Arg Thr Val Met Leu Thr Val Gln Phe Thr Leu Gly Trp Pro Leu  
 180 185 190

Tyr Leu Ala Phe Asn Val Ser Gly Arg Pro Tyr Asp Gly Gly Phe Ala  
 195 200 205

Cys His Phe His Pro Asn Ala Pro Ile Tyr Asn Asp Arg Glu Arg Leu  
 210 215 220

Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu  
 225 230 235 240

Phe Arg Tyr Ala Ala Ala Gln Gly Val Ala Ser Met Val Cys Phe Tyr  
 245 250 255

Gly Val Pro Leu Leu Ile Val Asn Gly Phe Leu Val Leu Ile Thr Tyr  
 260 265 270

Leu Gln His Thr His Pro Ser Leu Pro His Tyr Asp Ser Ser Glu Trp  
 275 280 285

MST010-EP SEQ listing.ST25.txt

Asp Trp Leu Arg Gly Ala Leu Ala Thr Val Asp Arg Asp Tyr Gly Ile  
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 Leu Phe Ser Thr Met Pro His Tyr His Ala Met Glu Ala Thr Lys Ala  
 325 330 335  
 Ile Lys Pro Ile Leu Gly Glu Tyr Tyr Gln Phe Asp Gly Thr Pro Val  
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 Val Lys Ala Met Trp Arg Glu Ala Lys Glu Cys Ile Tyr Val Glu Pro  
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## MST010-EP SEQ listing.ST25.txt

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## MST010-EP SEQ Listing.ST25.txt

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