

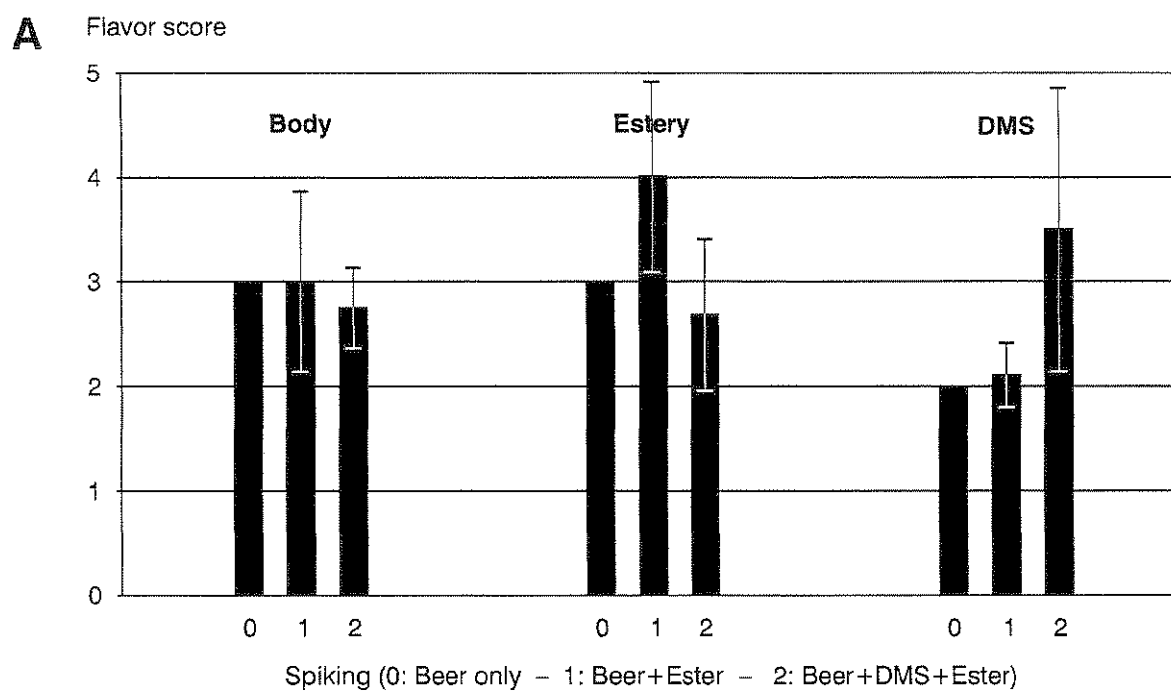
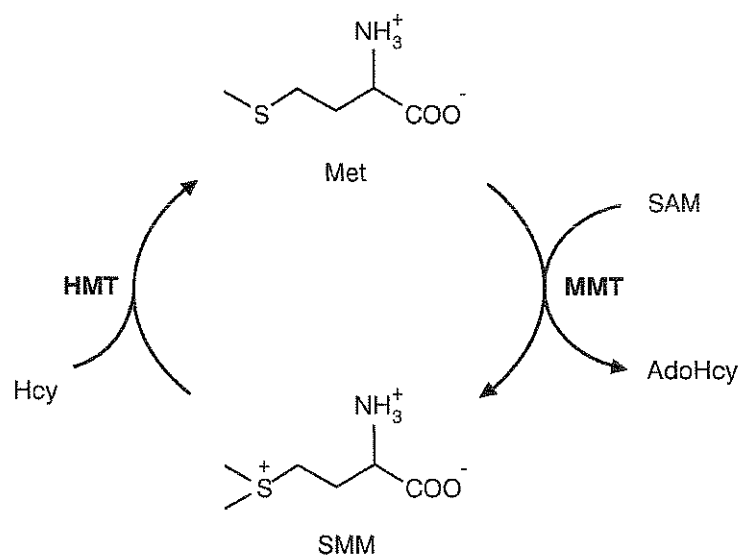


FIG. 1

B**FIG. 1**

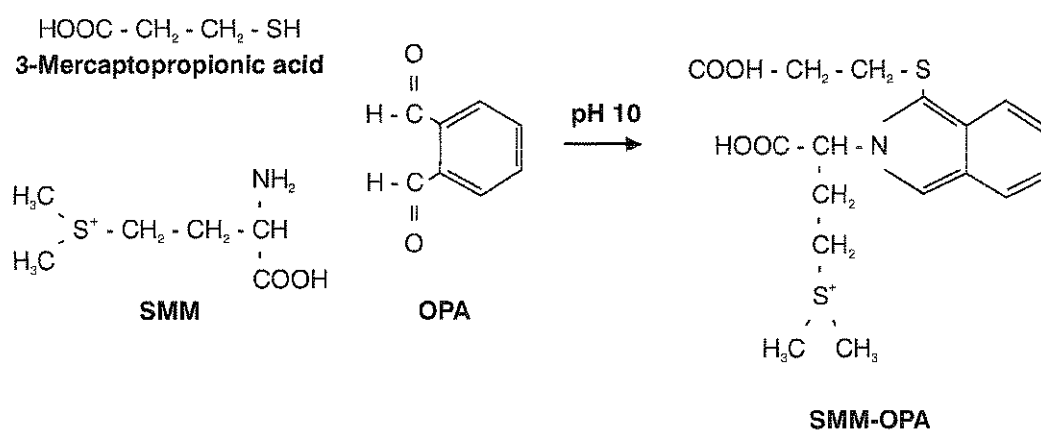


FIG. 2

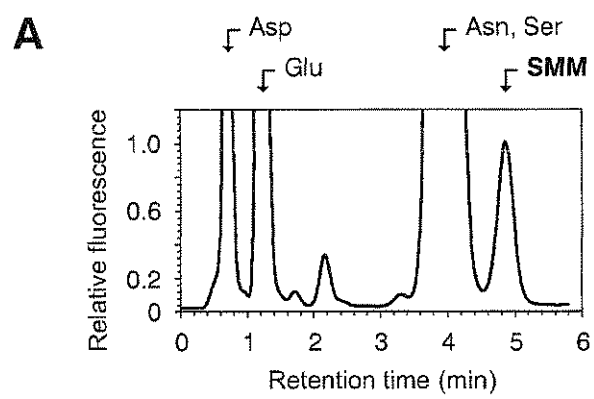


FIG. 3

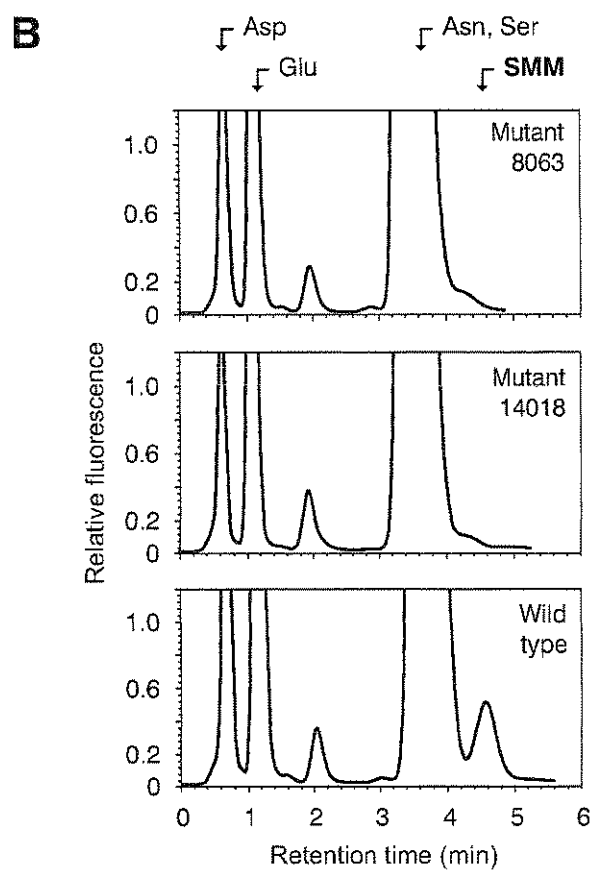


FIG. 3

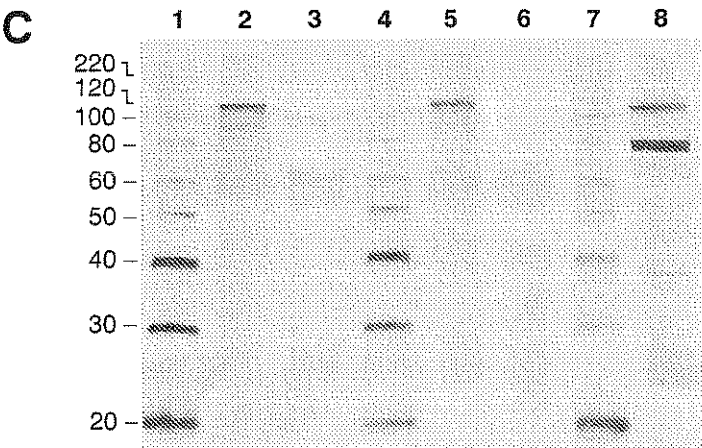


FIG. 3

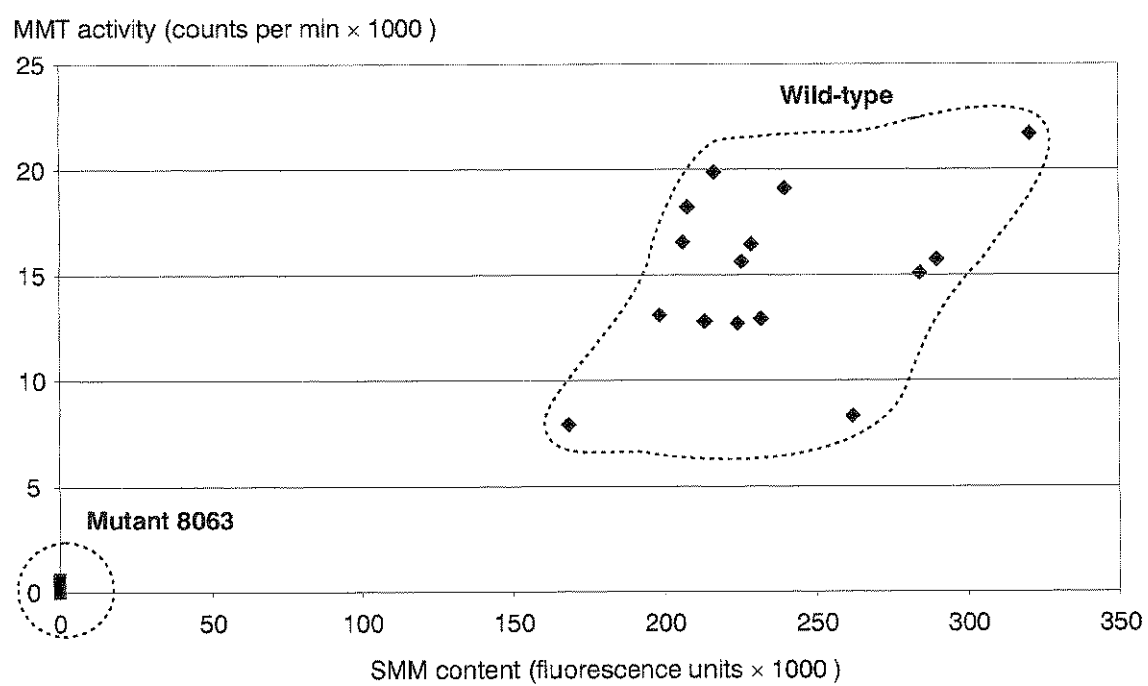


FIG. 4

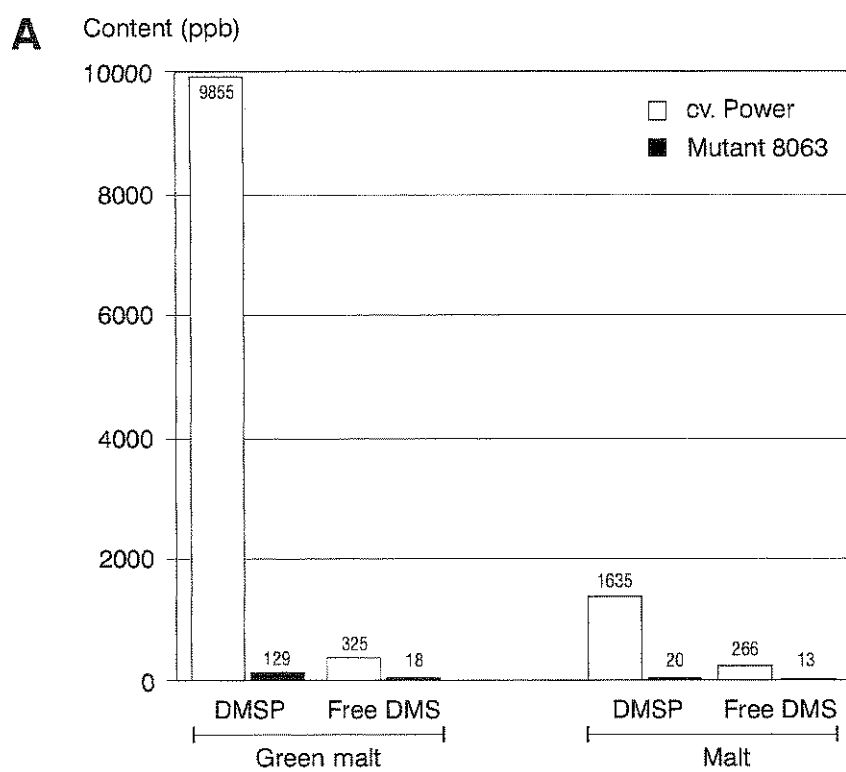


FIG. 5

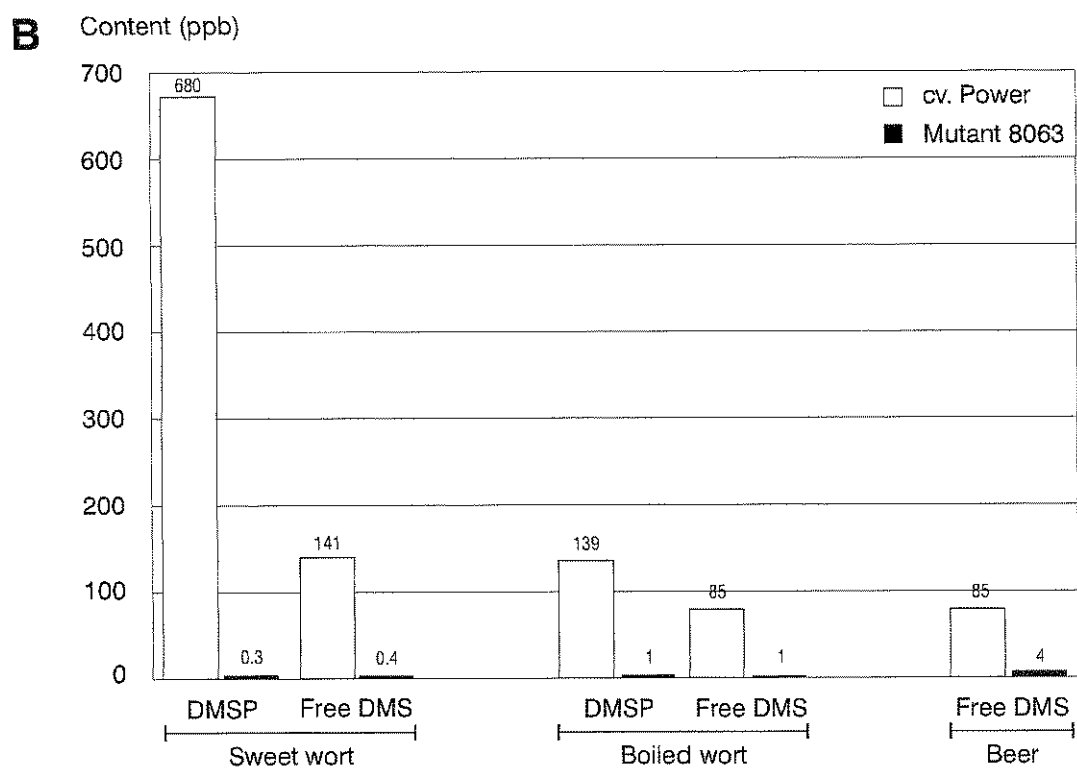


FIG. 5

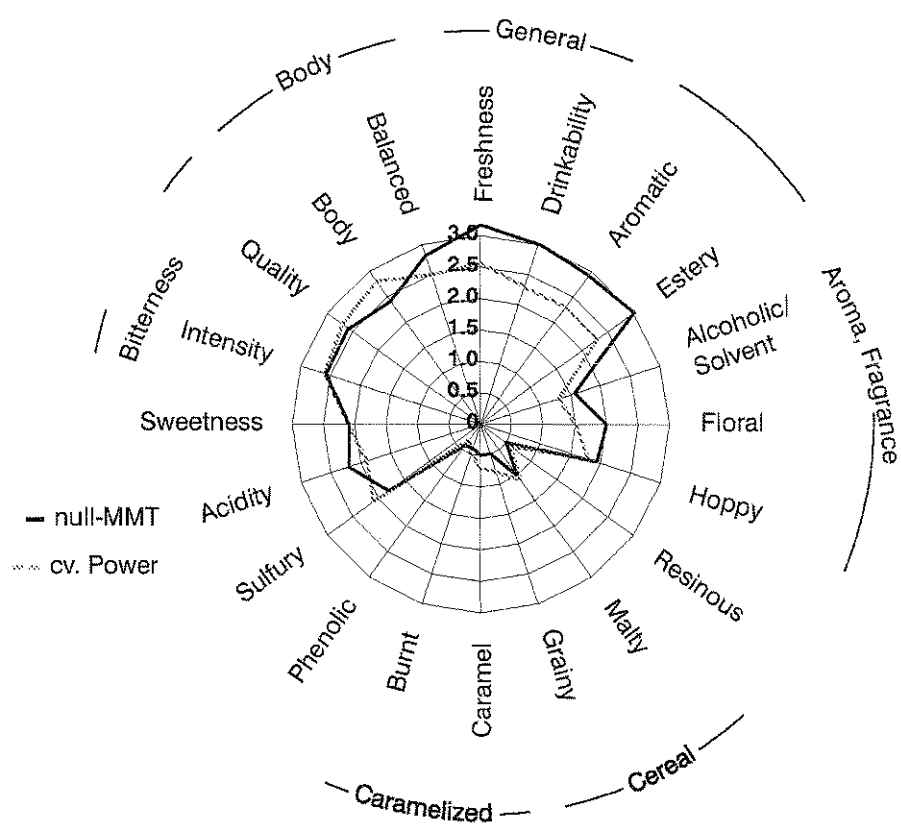
A

FIG. 6

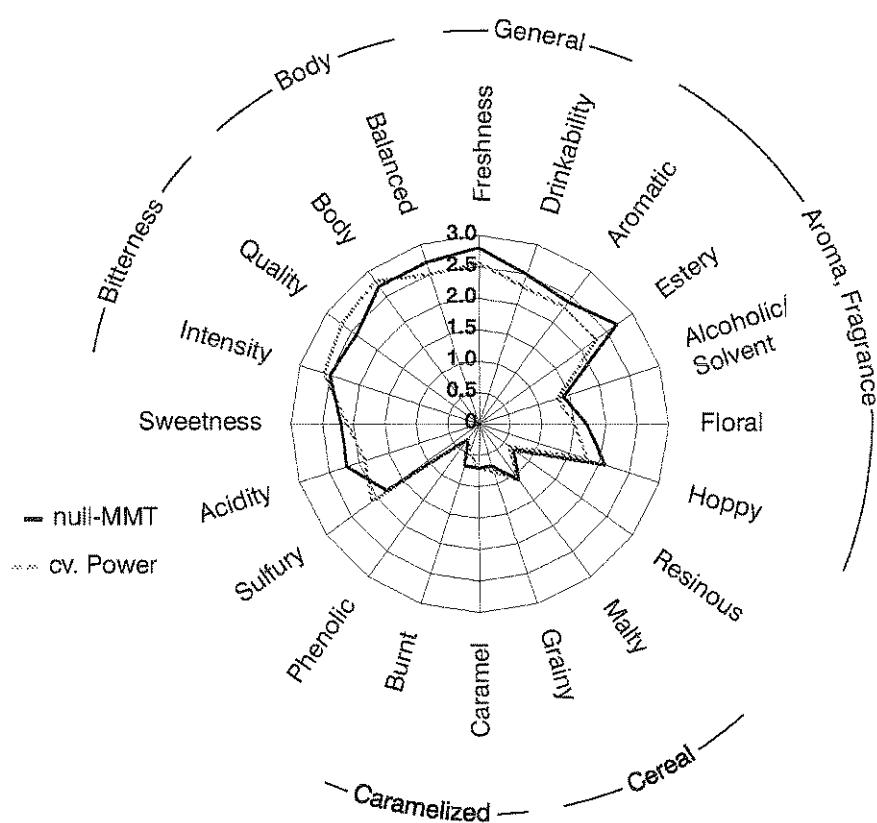
B

FIG. 6

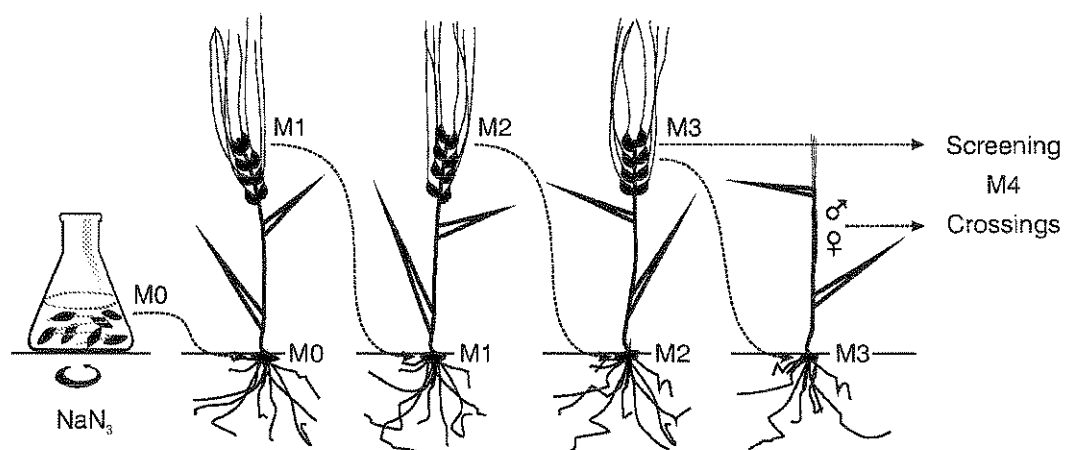


FIG. 7

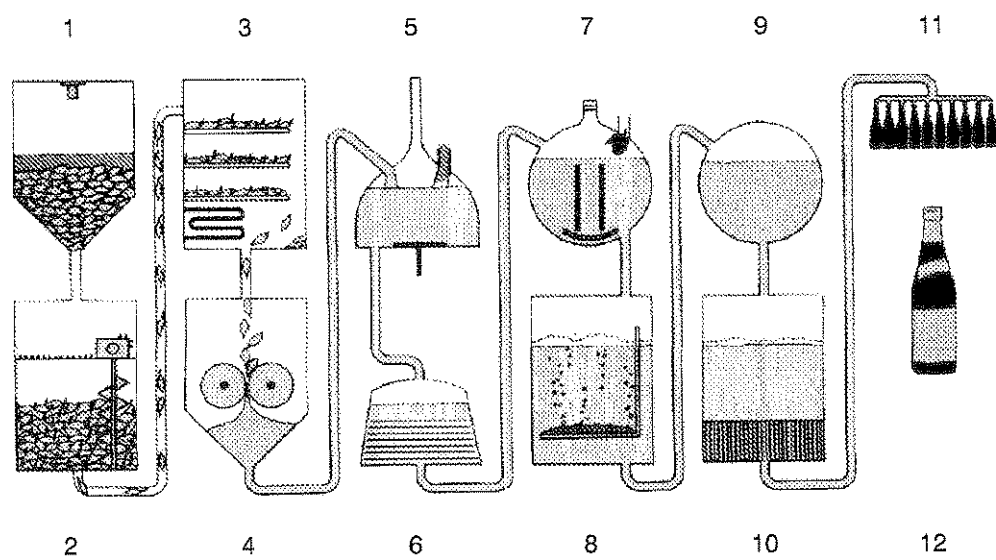


FIG. 8

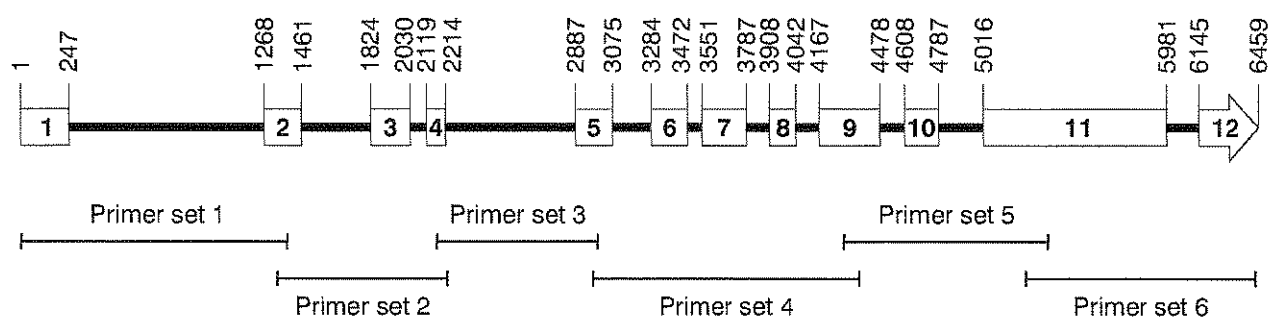


FIG. 9

```

1  ATGGCTGCGGCGCGGGGACGTGGAGGCGTTCTGGCGGCGTGCCAGGCGTGGGGCGAC 60
1  M A A A A G D V E A F L A A C Q A S G D 20
61  GCGGCGTACGGCGCGCCAGGCGGTGCTGGAGCGGCTCGAGGCGCGCCACGCGCGCC 120
21  A A Y G A A K A V L E R L E A P A T R A 40
121  GAGGCCAGGCGGCTCCTCGGCGCGTGCGACGCGGCTTCGCGCGCGGCGCGCGCGCG 180
41  E A R R L L G A V R R R F A A G G P A A 60
181  GGGCTCGAGTGCTTCGGCACCTTCCACTTCGCGCATCCAGACGTCGTCTCGACCCCGAC 240
61  G L E C F R T F H F R I H D V V L D P H 80
241  CTCGAAGGATTCAGCAAAGAAAGCTAACAATGATGGAGATACCCAGCATTTTCATT 300
81  L Q G F Q Q R K K L T M M E I P S I F I 100
301  CCAGAAGACTGGTCATTCACTTTCTACGAGGGTCTCAACCGGCATCCAGATTCATCTTC 360
101  P E D W S F T F Y E G L N R H P D S I F 120
361  AGGGATAAGACAGTAGCAGAGCTGGGATGTGGCAATGGTTGGATATCCATTGCACTTGCA 420
121  R D K T V A E L G C G N G W I S I A L A 140
421  GAAAAGTGGTGCCCTTCGAAGGTTTATGGTCTGGATATAAACCCAGAGCTATCAAGATT 480
141  E K W C P S K V Y G L D I N P R A I K I 160
481  GCATGGATAAACCTTTACTTGAATGCACTAGACGACGATGGTCTCCCAATCTATGATGCG 540
161  A W I N L Y L N A L D D D G L P I Y D A 180
541  GAGGGGAAACATTGCTTGACAGAGTCGAATTCATGAATCTGATCTTCTTTCTTACTGT 600
181  E G K T L L D R V E F Y E S D L L S Y C 200
601  AGAGATAACAAGATAGAAGTTGATCGCATTGTTGGATGCATACACAGATTCTTAACCC 660
201  R D N K I E L D R I V G C I P Q I L N P 220
661  AATCCAGAGGCAATGTCAAAGATTGTAAGTGAAGTCAAGTGAAGTGAAGTGAAGTGAAGT 720
221  N P E A M S K I V T E N S S E E F L Y S 240
721  TTGAGCAACTACTGTGCTCTCCAGGTTTGTGAGGACCAATTTGGCTCGGGTTGATT 780
241  L S N Y C A L Q G F V E D Q F G L G L I 260
781  GCTCGGCTGTTGAAGAAGGGATATCTGTGATAAAGCCTAGTGGTCTTATGGTATTCAAC 840
261  A R A V E E G I S V I K P S G L M V F N 280
841  ATGGGAGGCGCGCCAGGACAAGGTGCTGTGAGGCGCTATTTCTACGCGTGGATTTCGC 900
281  M G G R P G Q G V C E R L F L R R G F R 300
901  ATCAATAAGCTCTGGCAACAAAAATTATGACGGCTGCTGACACAGACATCTCCGCTTTA 960
301  I N K L W Q T K I M Q A A D T D I S A L 320
961  GTTGAAATTGAGAAAAATAGCCGACATCGCTTCGAGTTCTTTATGGATCTTGTGGGGAT 1020
321  V E I E K N S R H R F E F F M D L V G D 340
1021  CAGCCTGTGTGCGCGCACAGCATGGGCATACATGAAATCTGGTGGCCGCATTTACAT 1080
341  Q P V C A R T A W A Y M K S G G R I S H 360

```

FIG. 10

1081 GCTTTGCTGTGTATAGCTGTCAACTTCGCCAGCCCAACCAAGTGAAGAAAATTTGAG 1140
361 A L S V Y S C Q L R Q P N Q V K K I F E 380
1141 TTCCTTAAAGACGGATTCCATGAAGTCAGCAGCTCCCTCGATTTCCTTTGATGATGAT 1200
381 F L K D G F H E V S S S L D L S F D D D 400
1201 TCTGTTGCTGATGAAAAAATTCCTTTCCTAGCATACCTAGCTAGTTTCTTGAAGAGAAT 1260
401 S V A D E K I P F L A Y L A S F L Q E N 420
1261 AAGTCTAATCCTTGTGAGCCTCCAGCTGGATGTTTAAATTCGGAATCCTTGTGCTGGA 1320
421 K S N P C E P P A G C L N F R N L V A G 440
1321 TTTATGAAGAGTTACCAACCATCCCATTAACCTCTGATAATGTTGTTGTTCCCATCC 1380
441 F M K S Y H H I P L T P D N V V V F P S 460
1381 CGTGCTTTGCAATCGAAAATGCTCTTCGGTTGTTCACCTGGACTTGAATTTGTGAC 1440
461 R A V A I E N A L R L F S P G L A I V D 480
1441 GAACACCTAACCAGCACTTGCCCAAGCAATGGTTAATCTTTAGCAATTGAGGAAAAT 1500
481 E H L T R H L P K Q W L T S L A I E E S 500
1501 AACCATGCTAAAGATACAGTAACGTGAATCGAAGCACCAGCCAATCAGATTTGCTGATT 1560
501 N H A K D T V T V I E A P R Q S D L L I 520
1561 GAGTTGATCAGGAACTGAAGCCTCAGGTTGTGTTACTGGCATGGCTCAGTTTGAGGCT 1620
521 E L I R K L K P Q V V V T G M A Q F E A 540
1621 ATCACCAGTGCTGCTTTGCTGAACCTTATTAAGTGAACGAAAGATGTTGGTTCCGATTA 1680
541 I T S A A F V N L L S V T K D V G S R L 560
1681 TTACTAGATATTCAGAACATCTGGAATGTCTAGTCTGCCAAGCTCAAATGGTGATTG 1740
561 L L D I S E H L E L S S L P S S N G V L 580
1741 AAATATCTTGCTGGGAAGACCTGCTTCACATGCGGCTATATTGTGGCTTAGTTAAG 1800
581 K Y L A G K T L P S H A A I L C G L V K 600
1801 AATCAGGTTTATCTGATCTGGAAGTTGCTTTGCTATCTCTGAAGATCCAAGTGTAT 1860
601 N Q V Y S D L E V A F A I S E D P T V Y 620
1861 AAGGCATTGTCAAACTATTGAGCTATTGGAAGACATACCTTCTGTGATCAGCCAGCAC 1920
621 K A L S Q T I E L L E G H T S V I S Q H 640
1921 TATTATGGTTGTCTTTCCATGAGCTGCTGGCATTTCAAATGGTGACCGGCATCCACAA 1980
641 Y Y G C L F H E L L A F Q I G D R H P Q 660
1981 CAAGAGAGAGAACCTGCAGAAAGTGATATCTAAGGAGATGATAGGGTTTCAAGTTCAGCT 2040
661 Q E R E P A E V I S K E M I G F S S S A 680
2041 ATGTCCACCCTAGAAGGAGCTGAGTTTTCGTTTCCTGGTTCCATGGAATCCGGTGTCATA 2100
681 M S T L E G A E F F V P G S M E S G V I 700
2101 CATATGGATCTGGACCGCAGCTTCTTCCAGTACCTTCTGCAGTAAACGCCCTCCATTTTC 2160
701 H M D L D R S F L P V P S A V N A S I F 720
2161 GAAAGTTTGTTCGTGAGAACATCACTGATTCTGAAACCGATGTCGGTTCAGATTTCAG 2220
721 E S F V R Q N I T D S E T D V R S S I Q 740

FIG. 10 - continued

2221 CAGCTGGTGAAGATAGCTATGGTTTCTCAGCAGGCGGTGCTTCTGAAATTATACGGG 2280
741 Q L V K D S Y G F S A G G A S E I I Y G 760
2281 AACACCTGTCTCGCGCTCTTCAACAAGCTTGTCTTTGCTGCATGCAAGAACAGGGCACC 2340
761 N T C L A L F N K L V L C C M Q E Q G T 780
2341 TTGCTTTTCCCTTTGGGAACCAACGGGCATTACGTCAACGCAGCAAAGTTTGTGAATGCA 2400
781 L L F P L G T N G H Y V N A A K F V N A 800
2401 ACCACCTTGACTATTCCAAACGAAGGCAGATTCAAGGCTTCAAGATCGAACCAAGTGCTCTA 2460
801 T T L T I P T K A D S G F K I E P S A L 820
2461 GCGACACACTAGAGAAGGTGTCTCAGCCGTGGGTCTATATTTCTGGCCCCACAATCAAC 2520
821 A D T L E K V S Q P W V Y I S G P T I N 840
2521 CCTACTGGCTTCTGTACAGTGACGACGATATAGCAGAGCTGCTTTCTGTCTGTGCGACA 2580
841 P T G F L Y S D D D I A E L L S V C A T 860
2581 TACGGAGCCAGGGTGGTGATAGATACCTCCTCTGTGTCTGGAGTTCCAAGCCACCGGC 2640
861 Y G A R V V I D T S S S G L E F Q A T G 880
2641 TGCAGCCAGTGGAAATTTGAAAGATGTCTTTCTAATGTCAAGTCTTCAAAGCCCTCGTTC 2700
881 C S Q W N L E R C L S N V K S S K P S F 900
2701 TCCGTTGTCTGCTCGGAGAGCTGTCTTTGAGCTGACCACGGCTGGGCTTGATTTCGGG 2760
901 S V V L L G E L S F E L T T A G L D F G 920
2761 TTTCTGATTAGAGCGACTCCTCCTTGGTTGACACATTTTACAGTTTCCAAGCTTGAGT 2820
921 F L I M S D S S L V D T F Y S F P S L S 940
2821 CGGCCACACAGCAGTTGAAGTACAGTTCAGGAAGCTGTTGGGTCTTAAGAACCAGAAG 2880
941 R P H S T L K Y T F R K L L G L K N Q K 960
2881 GATCAGCATTTCTCTGATCTCATCCTTGAGCAGAAGGAGACGTTGAAGAATCGTGCCGAC 2940
961 D Q H F S D L I L E Q K E T L K N R A D 980
2941 CAGTTGATCAAGACGCTTGAGAGCTGCGGCTGGGACGCTGTGGGCTGCCATGGCGGCATC 3000
981 Q L I K T L E S C G W D A V G C H G G I 1000
3001 TCGATGCTTGCAAAACCGACCGCTACATTG3CAAATCGCTCAAGGTGGACGGCTTTGAG 3060
1001 S M L A K P T A Y I G K S L K V D G F E 1020
3061 GGCAGCTGGACAGCCACAACATGAGGGAAGCCCTCCTGAGGTCCACCGGGCTGTGCATT 3120
1021 G K L D S H N M R E A L L R S T G L C I 1040
3121 AGCAGCAGCGGGTGGACAGGGGTGCGGACTACTGCCGCTTCAAGCTTTGCTCTGGAGAGC 3180
1041 S S S G W T G V P D Y C R F S F A L E S 1060
3181 GGCAGCTTCGACCGGGCCATGGAGTGCATGCCCGGTTTCAGGGAGCTGGTCTTGGTGGC 3240
1061 G D F D R A M E C I A R F R E L V L G G 1080
3241 GGTGCTAAGGTGAATGGTAGCAACTAG
1081 G A K V N G S N *

FIG. 10 - continued

cv. Haruna Nijo	1	60
cv. Prestige	MAAAAGDVEAFLAACGASGDAAYGAAKAVLERLEAPATRAEARRLLGAVRRRFAAGSPAA	
	MAAAAGDVEAFLAACGASGDAAYGAAKAVLERLEAPATRAEARRLLGAVRRRFAAGSPAA	
cv. Haruna Nijo	61	120
cv. Prestige	GLECFRTFHFRIHDVVLDPHLGGFGQARKKLTMMETPSIFIPEDWSFTFYEGLNRHPDSIF	
	GLECFRTFHFRIHDVVLDPHLGGFGQARKKLTMMETPSIFIPEDWSFTFYEGLNRHPDSIF	
cv. Haruna Nijo	121	180
cv. Prestige	RDKTVAELGCGNGWISIALAEKWCPKSVYGLDINPRITIKIAWINLYNALDDGLPIYDA	
	RDKTVAELGCGNGWISIALAEKWCPKSVYGLDINPRITIKIAWINLYNALDDGLPIYDA	
cv. Haruna Nijo	181	240
cv. Prestige	EGKTL LDRVEFYESDLSYCRDNKIELDRIVGCIPIQILNPNPEAMSKIVTENSSEEFLYS	
	EGKTL LDRVEFYESDLSYCRDNKIELDRIVGCIPIQILNPNPEAMSKIVTENSSEEFLYS	
cv. Haruna Nijo	241	300
cv. Prestige	LSNYCALGGFVEDQFGLGLTARAVEEGI SVIKPSGLMVFNMGGRPQGGVCERLFLRRGFR	
	LSNYCALGGFVEDQFGLGLTARAVEEGI SVIKPSGLMVFNMGGRPQGGVCERLFLRRGFR	
cv. Haruna Nijo	361	360
cv. Prestige	INKLWQTKIMQAADTISALVEIEKNRHRFEFFMDLVGDQFVCARTAWAYMKSGGRI SH	
	INKLWQTKIMQAADTISALVEIEKNRHRFEFFMDLVGDQFVCARTAWAYMKSGGRI SH	
cv. Haruna Nijo	361	420
cv. Prestige	ALSVYSCQLRQPNQVKKIFEFLKDGFEVSSSLDLSFDDSDVADEKIPFLAYLASFLQEN	
	ALSVYSCQLRQPNQVKKIFEFLKDGFEVSSSLDLSFDDSDVADEKIPFLAYLASFLQEN	
cv. Haruna Nijo	421	480
cv. Prestige	KSNPCEPPAGCLNFRNLVAGFMKSYHHIPLTPDNVVFVPSRAVAIENALRLFSPGLAIVD	
	KSNPCEPPAGCLNFRNLVAGFMKSYHHIPLTPDNVVFVPSRAVAIENALRLFSPGLAIVD	
cv. Haruna Nijo	481	540
cv. Prestige	EHLTRHLPKQWLTSIAIEESNHAKDTVTVIEAPRQSDLLIELIRKLPQVVTGMAQFEA	
	EHLTRHLPKQWLTSIAIEESNHAKDTVTVIEAPRQSDLLIELIRKLPQVVTGMAQFEA	

FIG. 11

	541	600
cv. Haruna Nijo	ITSAAFVNL SVTKDVGSRLLLDISEHLELSSL PSSNGVL KYLAGKTL PSHAAILCGLVK	
cv. Prestige	ITSAAFVNL SVTKDVGSRLLLDISEHLELSSL PSSNGVL KYLAGKTL PSHAAILCGLVK	
	601	660
cv. Haruna Nijo	NGVYSDLEVAFAISEDPTVYKALSQTIELLEGHTSVISQHYGCLFHELLAFQIGDRHPQ	
cv. Prestige	NGVYSDLEVAFAISEDPTVYKALSQTIELLEGHTSVISQHYGCLFHELLAFQIGDRHPQ	
	661	720
cv. Haruna Nijo	QEREPAEVIKEMIGFSSSAMSTLEGAEFFVPGSMESGVIHMDLDRSFLPVPSAVNASIF	
cv. Prestige	QEREPAEVIKEMIGFSSSAMSTLEGAEFFVPGSMESGVIHMDLDRSFLPVPSAVNASIF	
	721	780
cv. Haruna Nijo	ESFVRQNIITDSETDVRSSTQQLVKDSYGFSAAGASEIIYGNTCLALFNKLVLCCMQEGGT	
cv. Prestige	ESFVRQNIITDSETDVRSSTQQLVKDSYGFSAAGASEIIYGNTCLALFNKLVLCCMQEGGT	
	781	840
cv. Haruna Nijo	LLFPLGTNGHYVNAKFVNATTLTIPTKADSGFKIEPSALADTLEKVSOPWVYISGPTIN	
cv. Prestige	LLFPLGTNGHYVNAKFVNATTLTIPTKADSGFKIEPSALADTLEKVSOPWVYISGPTIN	
	841	900
cv. Haruna Nijo	PTGFLYSDDDI AELL SVCATYGARVVIDTSSSGLEFQATGCSQWNLERCLSNVKSSKPSF	
cv. Prestige	PTGFLYSDDDI AELL SVCATYGARVVIDTSSSGLEFQATGCSQWNLERCLSNVKSSKPSF	
	901	960
cv. Haruna Nijo	SVVLLGELSFEITTAGLDFGFLIMSDSSLVDTFYSFSLSRPHSTLKYTFRKLGLKNQK	
cv. Prestige	SVVLLGELSFEITTAGLDFGFLIMSDSSLVDTFYSFSLSRPHSTLKYTFRKLGLKNQK	
	961	1020
cv. Haruna Nijo	DQHFSDLILEQKETLKNRADQLIKLESCGWDVAGCHGGISMLAKPTAYIGKSLKVDGFE	
cv. Prestige	DQHFSDLILEQKETLKNRADQLIKLESCGWDVAGCHGGISMLAKPTAYIGKSLKVDGFE	
	1021	1080
cv. Haruna Nijo	GKLDSHNMREALLRSTGLCISSSGWTGVPDYCRFSFALES GDFDRAMECIARFRELVLGG	
cv. Prestige	GKLDSHNMREALLRSTGLCISSSGWTGVPDYCRFSFALES GDFDRAMECIARFRELVLGG	
	1081	
cv. Haruna Nijo	GAKVNGSN	
cv. Prestige	GAKVNGSN	

FIG. 11 - continued

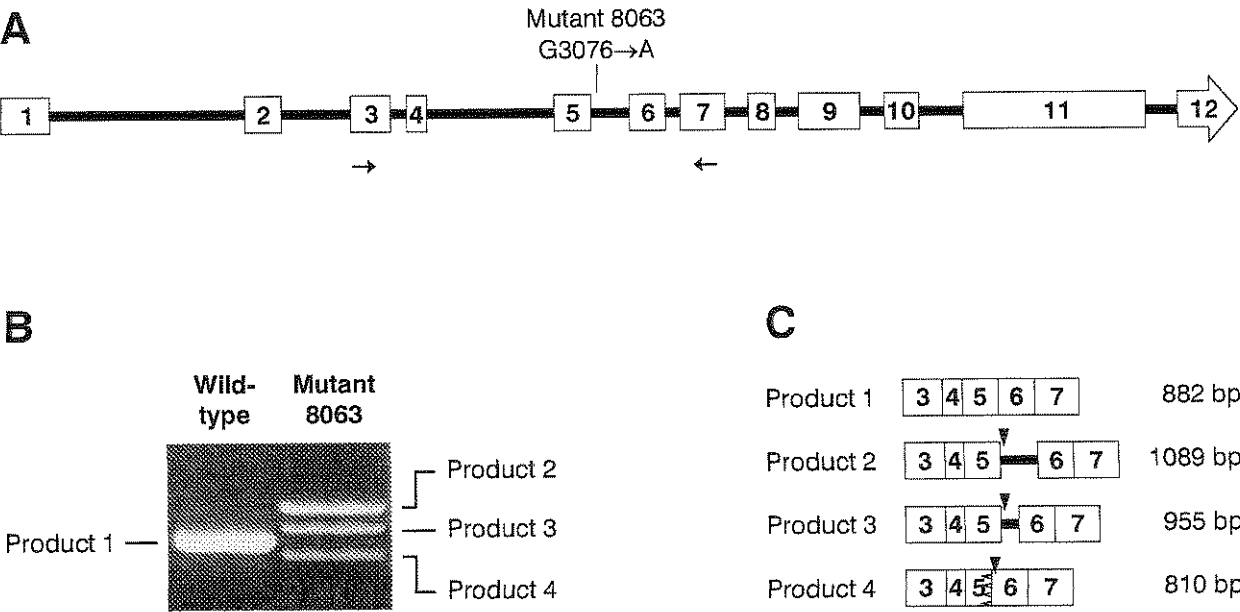
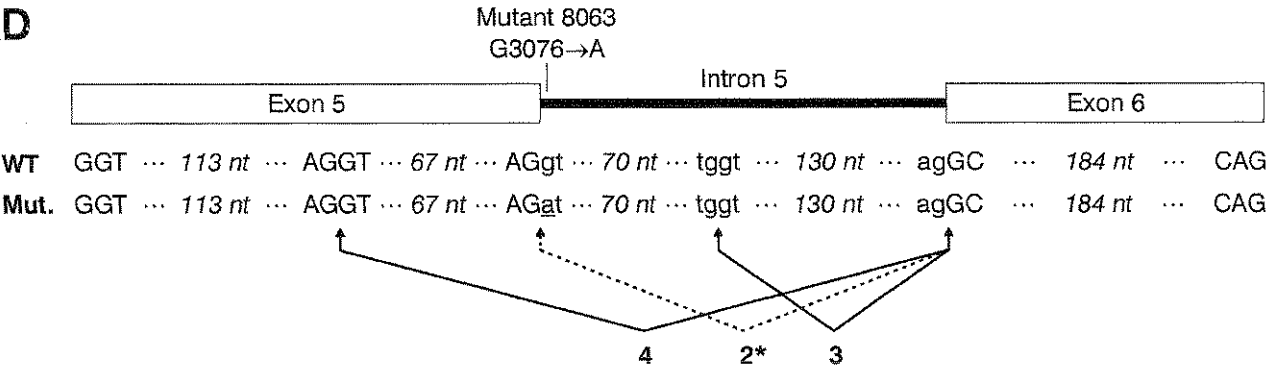


FIG. 12



E

	5' Splice site					3' Splice site				
	-2	-1	:	1	2	-2	-1	:	1	2
<i>Base composition in percent</i>										
G	9	79		100	0	0	100		62	24
A	64	7		0	0	100	0		14	18
C	14	8		0	0	0	0		15	18
T	12	6		0	100	0	0		9	39
Consensus	A	G	:	G	T	A	G	:	G	T
Intron 5, Mutant 8063	A	G	:	G	T	A	G	:	G	C

FIG. 12

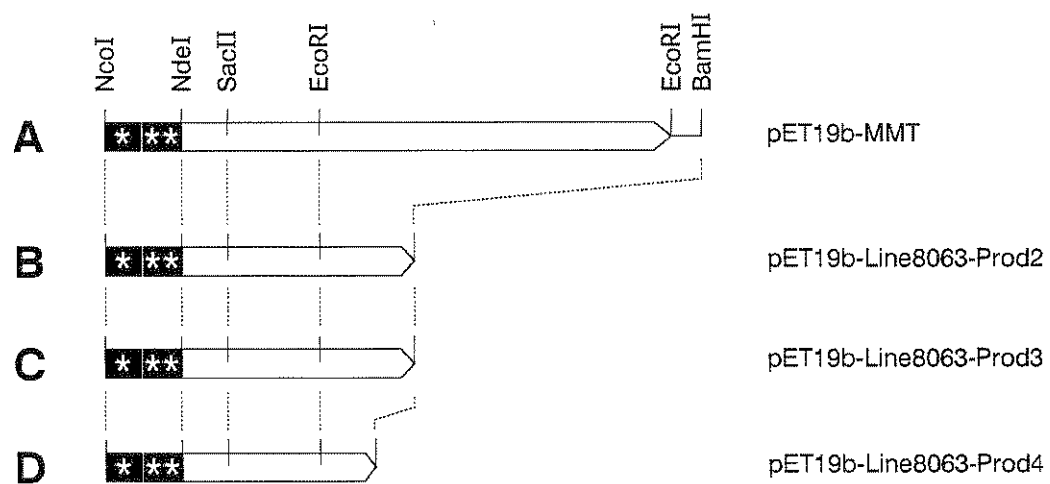


FIG. 13

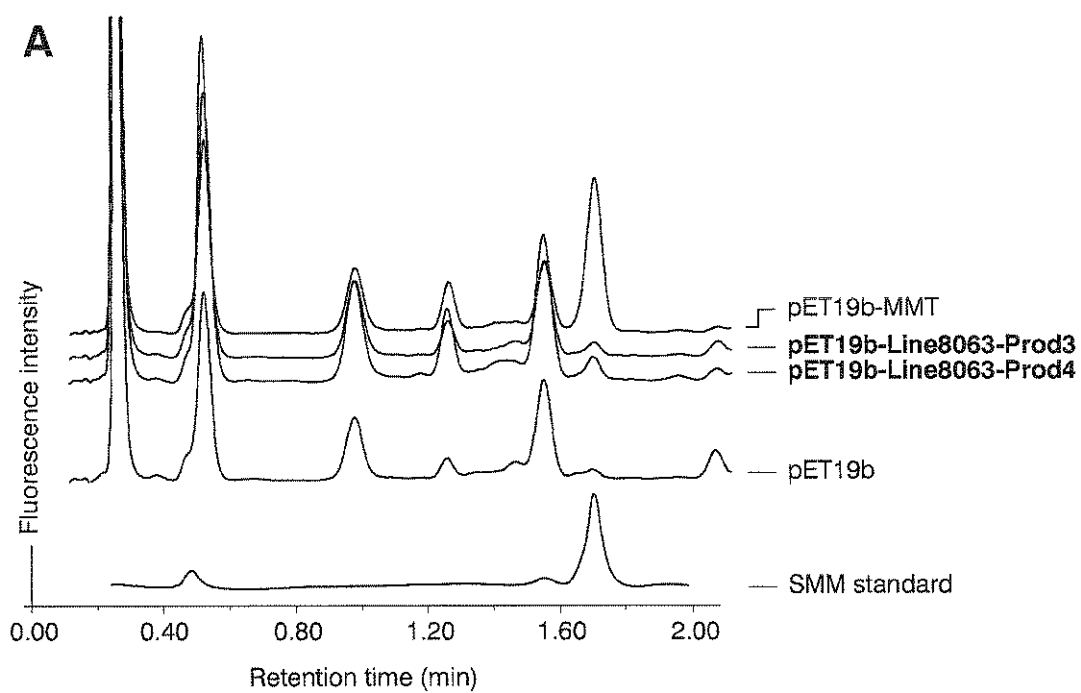


FIG. 14

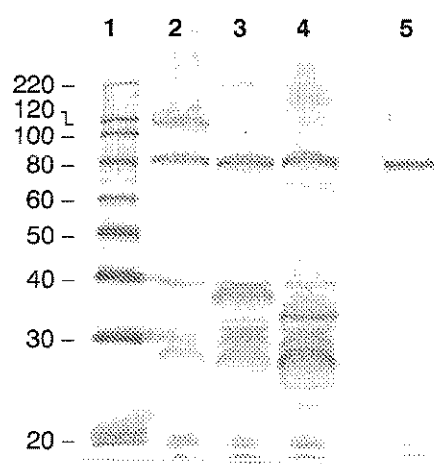
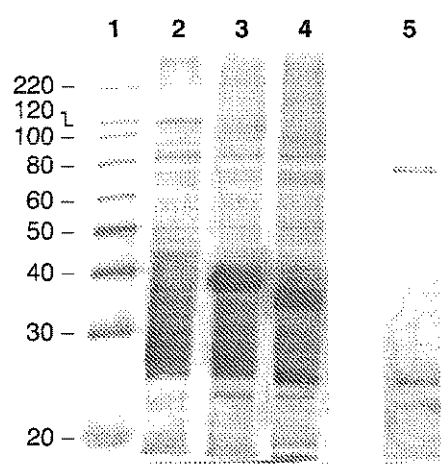
B**C**

FIG. 14

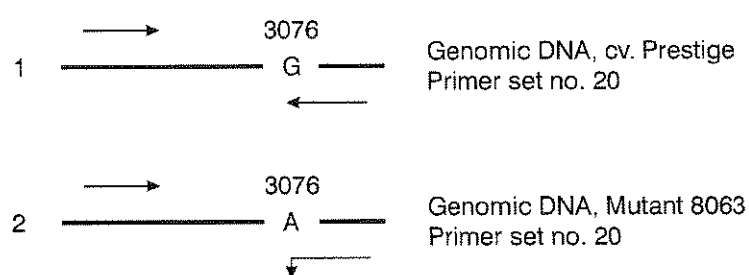
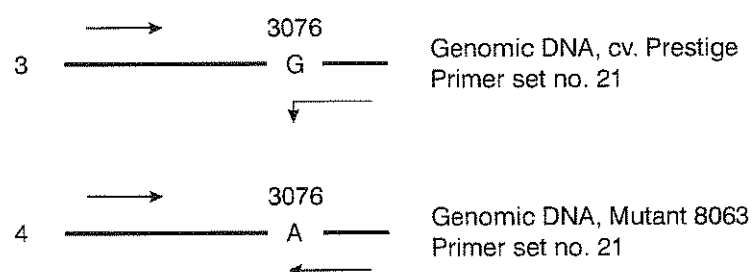
A**B**

FIG. 15

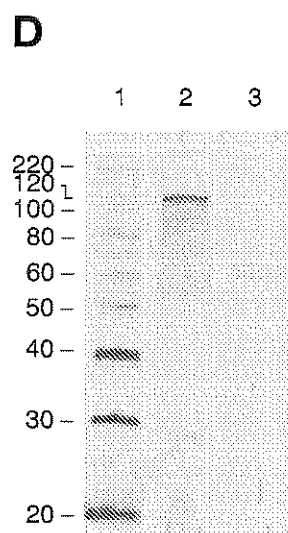
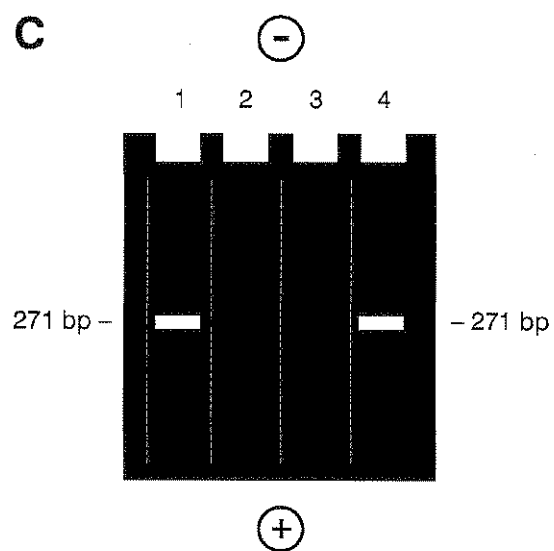


FIG. 15

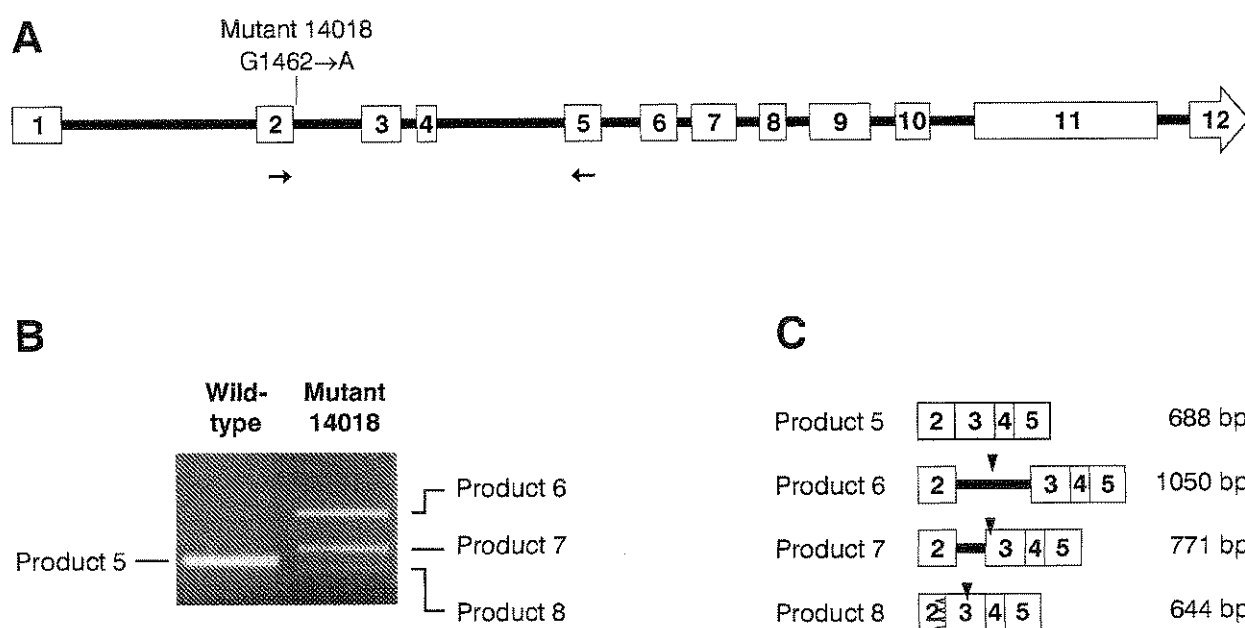
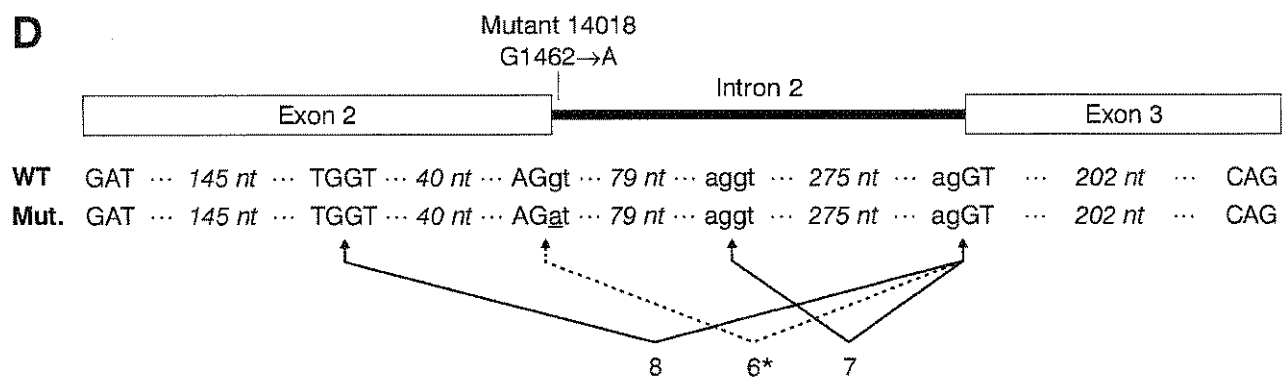


FIG. 16



E

	5' Splice site					3' Splice site				
	-2	-1	:	1	2	-2	-1	:	1	2
<i>Base composition in percent</i>										
G	9	79		100	0	0	100		62	24
A	64	7		0	0	100	0		14	18
C	14	8		0	0	0	0		15	18
T	12	6		0	100	0	0		9	39
Consensus	A	G	:	G	T	A	G	:	G	T
Intron 2, Mutant 14018	A	G	:	G	T	A	G	:	G	C

FIG. 16

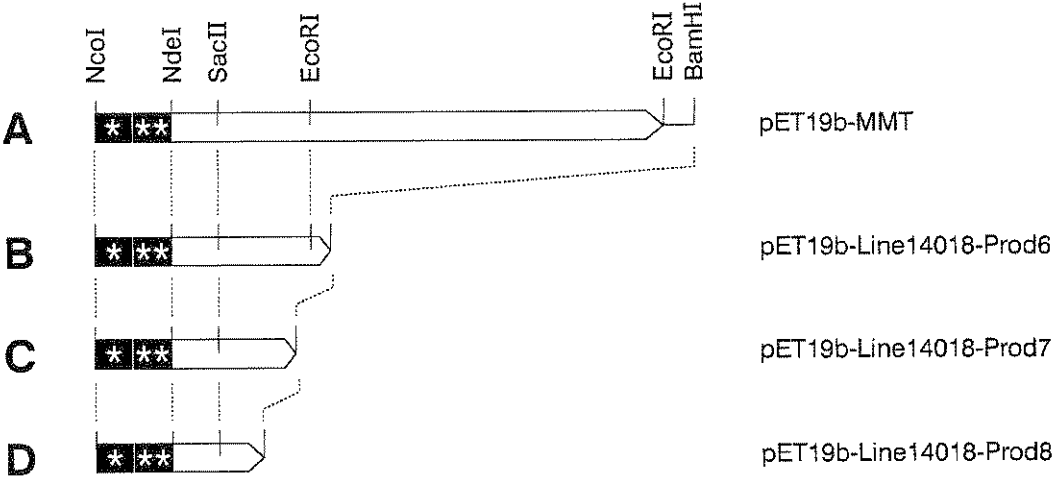


FIG. 17

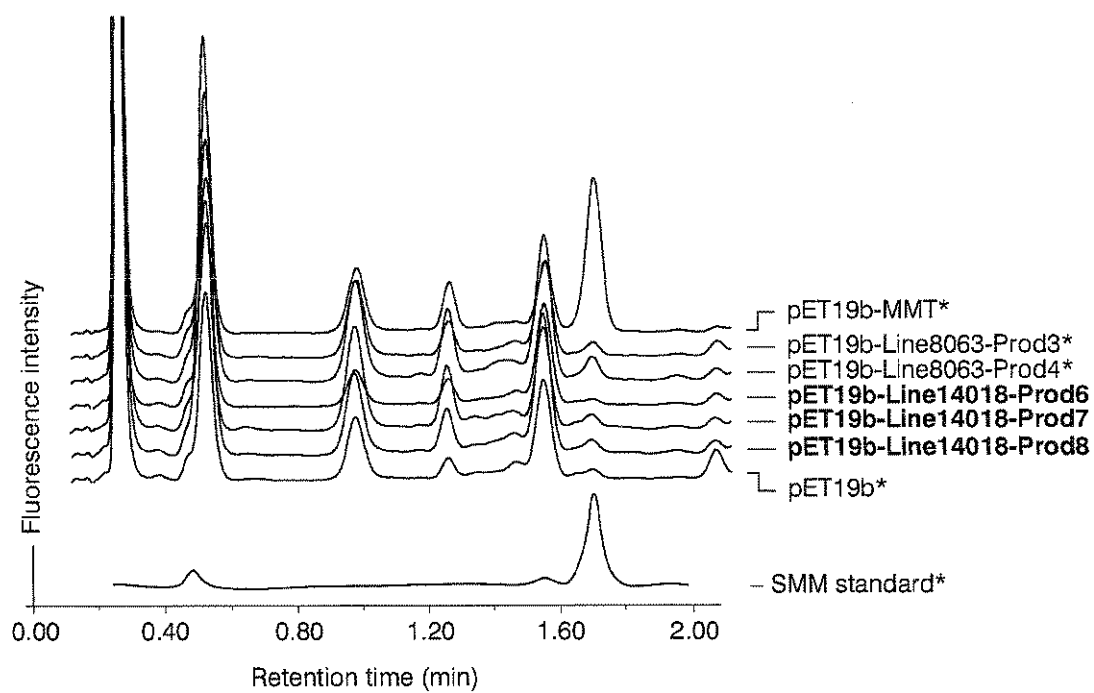


FIG. 18

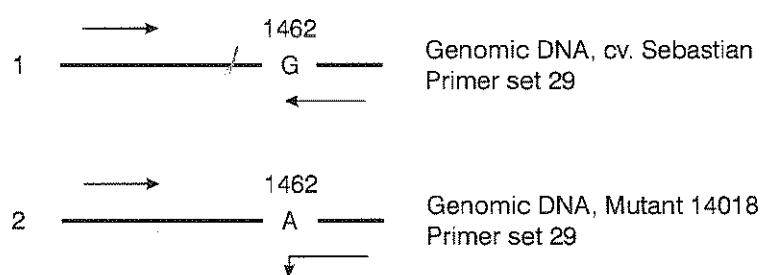
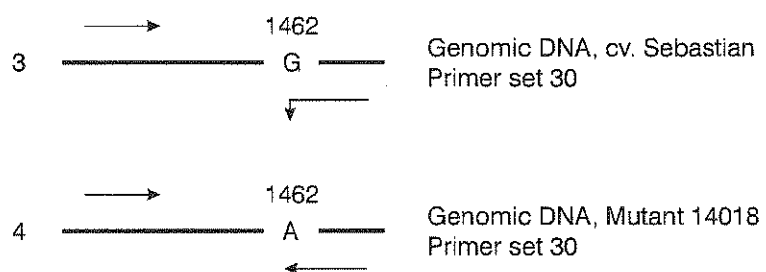
A**B**

FIG. 19

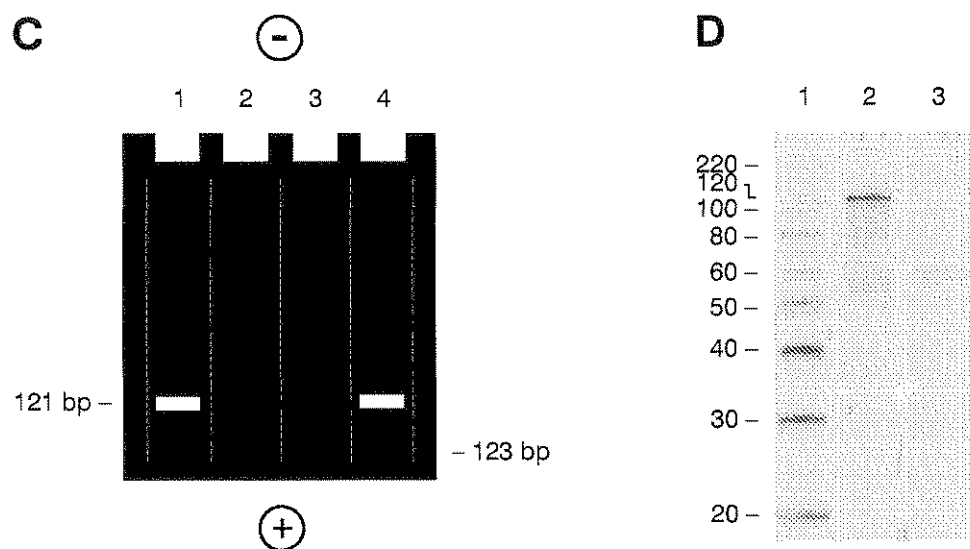


FIG. 19