

EXHIBIT 2

Part 2 of 4

FIG. 5A

Sau3A
 GATCCCGGCCCTGGACAGCCGCTCTCTCCAGGCCCGTGGGCTGGCCCTGCC
 CGCTGAACCTCCCGGATGAGGACTCCCGGTGTGGTACCCGCGCCTAGGTCGCTGAG
 -27
 Met Gly Val His Glu Cys Pro Ala Trp
 GGACCCCGGCCAGGCCGAGATG GGG GTG CAC GAA TGT CCT GCC TGG
 -20
 Leu Trp Leu Leu Ser Leu Val Ser Leu Pro Leu Gly Leu Pro
 CTG TGG CTT CTC CTG TCT CTC GTG TCG CTC CCT CTG GGC CTC CCA
 -10
 Val Pro Gly Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu
 -1 +1
 GTC CCG GGC GCC CCA CCA CGC CTC ATC TGT GAC AGC CGA GTC CTG
 10
 Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Val Thr Met
 20
 GAG AGG TAC CTC TTG GAG GCC AAG GAG GCC GAG AAT GTC ACG ATG
 *
 Gly Cys Ser Glu Ser Cys Ser Leu Asn Glu Asn Ile Thr Val Pro
 30
 GGC TGT TCC GAA AGC TGC AGC TTG AAT GAG AAT ATC ACC GTC CCA
 * 40

U.S. Patent

Aug. 15, 1995

Sheet 6 of 27

5,441,868

FIG.5B

50
 Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly
 GAC ACC AAA GTT AAC TTC TAT GCC TGG AAG AGG ATG GAG GTC GGG

60
 Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu
 CAG CAG GCT GTA GAA GTC TGG TGG CAG GGC CTG GCC CTG CTC TCA GAA

70
 Ala Val Leu Arg Gly Gln Ala Val Leu Ala Asn Ser Ser Gln Pro
 GCT GTC CTG CCG GGC CAG GCC GTG TTG GCC AAC TCT TCC CAG CCT

80
 Phe Glu Pro Leu Gln Leu His Met Asp Lys Ala Ile Ser Gly Leu
 TTC GAG CCC CTG CAG CAG CTG CAC ATG GAT AAA GCC ATC AGT GGC CTT

90
 Arg Ser Ile Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Glu Ala
 CGC AGC ATC ACC ACT CTG CTT CTT CGG GCG CTG GGA GCC CAG GAA GCC

100
 Ile Ser Leu Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
 ATC TCC CTC CCA GAT GCG GCC TCG GCT GCT CCA CTC CGA ACC ATC

110
 Thr Ala Asp Thr Phe Cys Lys Leu Phe Arg Val Tyr Ser Asn Phe
 ACT GCT GAC ACT TTC TGC AAA CTC TTC CGA GTC TAC TCC AAT TTC

120
 130
 140

FIG. 5C

150 Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Arg
 CTC CGG GGA AAG CTG AAG CTG TAC ACG GGG GAG GCC TGC AGG AGA
 160
 165 GLY ASP ARG OP
 GGG GAC AGA TGA CCAGGTGGTCCAGCTGGGCACATCCACCCTCCCTCACCACA
 CTGCCCTGTGCCACACCCCTCCCTCACCCACTCCCGAACCCCATCGAGGGGCTCTCAGCTAAG
 CGCCAGCCCTGTCCCATGGACACTCCAGTCCAGTCCAGCAATGACATCTCAGGGGCCAGAGGAAC
 TGTCCAGAGCACAACTCTGAGATCTAAGGATGTCGCGAGGGCCAACTTGAGGGCCCCAGAGC
 AGGAAGCATTTCAGAGAGCAGCTTTAAACTCAGGAGCAGACAAATGCCAGGGAAACACCT
 GAGCTCACTCGGCCACCCTGCAAAATTTGATGCAGGACACCGCTTTGGAGGCAATTTACCTG
 TTTTGTGCACCTACCATCAGGGACAGGATGACTGGAGAACTTAGGTGGCAAGCTGTGACTT
 CTC AAGGCCCTCAGGGCCTCCCTTGGTGGCAAGAGCCCTTGACACTGAGAGAAATATT
 TTGCAATCTGCAGCAGGAAAATAACGGACAGGTTTGGAGGTTGGAGGGTACTTGACAG
 GTGfGTGGGAAAGCAGGGCCGGJAGGGGTGGAGCTGGGATGCCAGfGAGAACCCGTGAAGAC
 AGGATGGGGGECTGGCCCTCTGGTTCTCGTGGGGTCCAAGCTT

HindIII

FIG. 6A

AAGCTTCTGGGCTTCCAGACCCAGCTACTTTGCGGAACCTCAGCAACCAGGCATCTCTGAGTCTCCGCCCA
AGACCGGGATGCCCCCCAGGGAGGTGTCCGGAGCCAGCCTTTCAGATAGCACGCTCCGCCAGTCCC
AAGGGTGCCTAACCCGGCTGCACTCCCTCCGCGACCCAGGGCCCGGAGCAGCCCCCATGACCCCAACAGGC
ACGTCTGCAGACCCCGGCTCAGCCCCGGGAGCCCTCAACCCAGGGCGTCTGCCCCCTGCTGACCCCGGG
GTGGCCCCCTACCCCTGGCGACCCCTCAGCCACACAGCCTCTCCCCCACCCCCACCCGCGCACACATG
CAGATAACAGCCCCGACCCCGGCCAGAGCCGXAGTCCCTGGGCCACCCCGGCCGCTCGCCTGCCGCTG
CGCCGACCGCGTGTCTCCCGAGCCGGGACCCGGGGCCACCGCGCCXGCTCTGCTCCGACACCCGGCC
CTTGGACAGCCGCCCTCTCCTCTAGGCCCGTGGGGCTGGCCCTGCACCCGCCGAGCTTCCCCGGGATGAGGX

CCCGGTGACCGGGCGCCCAAGTCCGCTAGGGACCCCGCCAGCGCGGAG ATG GGG GTG CAC G
GTGAGTACTCGCGGGCTGGCGCTCCCGCGCGGGTCTCCTGTTGAGCGGGGATTTAGCCCCCGGCT

-27
Met Gly Val His
-24

FIG. 6B

```

ATTGCCAAGAGGTGGCTGGGTTCAAGGACCGGCGACTTGTCAAGGACCCCGAAGGGGGGGGGTGGG
GCAGCCTCCACGTCGCCGGGGACTTGGGGAGTTCCTGGGGATGGCAAAAACCTGGCCCTGTTGAGGGGCA
CAGTTGGGGTGGGAGGAGGTTTGGGGTCTGCTGTGCAGTTGTGTCAGTGTCTCG[I.S.]
TTGCACCGCACAGATCAATAAGCCAGGACCCAGCAGCCTGAGTGTTCATGTTGGGACAGGAAGGACGGAG
CTGGGGCAGAGACGTTGGGATGAAGGAGTGTCTTCCACAGCCACCCTTCTCCCCCCCCCTGACTCT
-23
Glu Cys Pro Ala Trp Leu Trp Leu Trp Leu Ser Leu
AA TGT CCT GCC TGG TGG CTG TGG CTT CTC CTG TCC CTG
-20
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Leu Gly Ala Pro Pro Arg Leu Ile Cys
CTG TCG CTC CCT CCT CTG GCC CTC CCA GTC CTG GGC GGC CCA CCA GAG GAG GAG GAG GAG GAG GAG GAG
-1
Glu Cys Pro Ala Trp Leu Trp Leu Trp Leu Ser Leu
AA TGT CCT GCC TGG TGG CTG TGG CTT CTC CTG TCC CTG
-10
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Leu Gly Ala Pro Pro Arg Leu Ile Cys
CTG TCG CTC CCT CCT CTG GCC CTC CCA GTC CTG GGC GGC CCA CCA GAG GAG GAG GAG GAG GAG GAG GAG
10
Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile
GAC AGC CGA GTC CTG GAG AGG TAC CTC TTG GAG GCC AAG GAG GCC GAG AAT ATC
*
26
Thr
ACG GTGAGACCCCTTCCCCAGCACATTCACAGAACTCAGGCTCAGGGCTTCAGGGAACCTCCTCCCAGAT
CCAGGAACCTGGCACCTTGGTTTGGGGTGGAGTTGGGAAGCTAGACACTGCCCCCTACATAAGATAAGTC

```

FIG.6C

```

TGGTGGCCCCAACCATACCTGAAACTAGGCAAGGAGCAAAAGCCAGCAGATCCTACGCCCTGTGGGCCAGGG
27 Thr Gly Cys Ala Glu
CCAGAGCCTTCAGGGACCCTTGACTCCCGGGCTGTGTCATTTCAG 30 ACG GGC TGT GCT GAA
His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr
CAC TGC AGC TTG AAT GAG AAT ATC ACT ATC ACT GTC CCA GAC ACC AAA GTT AAT TTC TAT
* 40
50 Ala Trp Lys Arg Met Glu
GCC TGG AAG AGG ATG GAG GTGAGTTCCTTTTTCCTTTTTCCTTTTGGAGAATCTCATT
TGGAGCCCTGATTTGGATGAAAAGGGAGAAATGATCGGGGAAAGGTAATAATGGAGCAGCAGATGAGGCT
GCCTGGGGCCAGAGGCTCAGTCTATAATCCCAGGCTGAGATGGCCGAGATGGGAGAAATTTGAGCCCT
GGAGTTTCAGACCAACCCTAGGCAGCATAGTGAGATCCCCCATCTCTACAAAACATTTAAAAAATTAGTCAG
GTGAAGTGGTGCA TGGTGGTAGTCCCAGATATTTGGAAGGCTGAGGGGGAGGATCGCTTGAGCCCAGGAA
TTTGAGGCTGCAGTGAGCTGTGATCACACCACCTCCAGCCTCAGTGACAGATGAGGGCCCTGTCTCA

```

FIG. 6D

```

AAAAAGAAAAGAAAATAATGAGGGCTGTATGGAAATACATTTCATTTCACCTCACTCACT
CACTCATTCATTTCATTTCATCAACAAGTCTTATTGCAATACCTTCTGTTTGCCTCAGCTTGGGTGCTTGG
GGCTGCTGAGGGCAGGAGGGAGGGTGACATGGGTGAGCTCCAGACTCCACAGTCCACTCCCTGTAG
56                               60                               70
Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala
GTC GGG CAG CAG GCC GTA GAA GTC TGG CAG GGC CTG GCC CTG CTG TCG GAA GCT
Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu
GTC CTG CGG GGC CAG GCC CTG TTG GTC AAC TCT TCC CAG CCG TGG GAG CCC CTG
*                               80                               90
Gln Leu His Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu
CAG CTG CAT GTG GAT AAA GCC GTC AGT GGC CTT CGC AGC CTC ACC ACT CTG CTT
110                               115
Arg Ala Leu Gly Ala Gln
CGG GCT CTG GGA GCC CAG GTGAGTAGGAGCGGACACTTCTGCTTGCCTTCTGTAAAGAGGGGA
GAAGGGTCTTGCTAAGGAGTACAGGAACGTCCCGTATTCCTTCCCTTCTGTGGCACCTGCAGCCCTCCT
116                               120
Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala
GTTTTCCTCTGGCAG AAG GAA GCC ATC TCC CCT CCA GAT GCC GGC TCA GCT GCT

```


FIG. 6E

```

130 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser
    CCA CTC CGA ACA ATC ACT GCT GAC ACT TTC CGC AAA CTC TTC CGA GTC TAC TCC
140
150 Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly
    AAT TTC CTC CGG GGA AAG CTG AAG CTG TAC ACA GGG GAG GCC TGC AGG ACA GGG
160
    Asp Arg OP
    GAC AGA TGA CCAGGTGTGTCACCTGGGCATATCCACCCTCCCTCACCAACATTTGTTGCCACA
    CCTCCCCGCCACTCTGAACCCCTCGAGGGGCTCTCAGCTCAGCGCCAGCCCTGTCCCCTGGACACTCC
    AGTGCCAGCAATGACATCTCAGGGGCCAGAGGAAGTCTCCAGAGAGCAACTCTGAGATCTAAGGATGTCC
    AGGCCAACTTGAAGGGCCAGAGCAGGAAAGCATTCAGAGAGCAGCTTTAAACTCAGGGACAGGCCATGC
    TGGGAAGACGCCCTGAGCTCAGCTGGCACCCCTGCAAAATTGATGCCAGGACACGGCTTTGGAGGCCATTTAC
    CTGTTTTCGCCACCTACCATCAGGGACAGGATGACCTGGAGAACTTAGGTGGCAAGCTGTGACTTCTCCAGG
    TCTCACGGGCATGGGCATCCCTTGGTGGCAAGAGCCCTTGACACCGGGGTGGTGGGAACCATGAAGAC
    AXGATXGGGGCTGGCCCTCTGGCTCTCATGGGTCCAAAGTTTGTGTATTTCTCAACCTATTGACAGACTGAA
    ACACATATGAC
    
```

U.S. Patent

Aug. 15, 1995

Sheet 13 of 27

5,441,868

FIG. 7

<u>XbaI</u>	-1	1	<u>MetAla</u>
CTAG AAACCATGAG GGTAAATAAAA TAATGGCTCC GCCGCGTCTG			
TTTGGTACTC CCATTATTTT ATTACCGAGG CGGCGCAGAC			
ATCTGCGACT CGAGAGTTCT GGAACGTTAC CTGCTGGAAG CTAAGAAGC			
TAGACGCTGA GCTCTCAAGA CCTTGCAATG GACGACCTTC GATTTCTTCG			
TGAAAACATC ACCACTGGTT GTGCTGAACA CTGTTCTTTG AACGAAAACA			
ACTTTTGTAG TGGTGACCAA CACGACTTGT GACAAGAAAC TTGCTTTTGT			
TTACGGTACC AGACACCAAG GTTAACTTCT ACGCTTGGAA ACGTATGGAA			
AATGCCATGG TCTGTGGTTC CAATTGAAGA TGCGAACCTT TGCATACCTT			
GTTGGTCAAC AAGCAGTTGA AGTTTGGCAG GGTCTGGCAC TGCTGAGCGA			
CAACCAGTTG TTCGTCAACT TCAAACCGTC CCAGACCGTG ACGACTCGCT			
GGCTGTACTG CGTGGCCAGG CACTGCTGGT AAACTCCTCT CAGCCGTGGG			
CCGACATGAC GCACCGGTCC GTGACGACCA TTTGAGGAGA GTCGGCACCC			
AACCGCTGCA GCTGCATGTT GACAAAGCAG TATCTGGCCT GAGATCTCTG			
TTGGCGACGT CGACGTACAA CTGTTTCGTC ATAGACCGGA CTCTAGAGAC			
ACTACTCTGC TGGGTGCTCT GGGTGCACAG AAAGAGGCTA TCTCTCCGCC			
TGATGAGACG ACGCACGAGA CCCACGTGTC TTTCTCCGAT AGAGAGGCGG			
GGATGCTGCA TCTGCTGCAC CGCTGCGTAC CATCACTGCT GATACCTTCC			
CCTACGACGT AGACGACGTG GCGACGCATG GTAGTGACGA CTATGGAAGG			
GCAAACGTGTT TCGTGTATAC TCTAACTTCC TGGTGGTAA ACTGAAACTG			
CGTTTGACAA AGCACATATG AGATTGAAGG ACGCACCATT TGACTTTGAC			
TATACTGGCG AAGCATGCCG TACTGGTGAC CGCTAATAG			<u>SalI</u>
ATATGACCGC TTCGTACGGC ATGACCACTG GCGATTATCA GCT			

U.S. Patent

Aug. 15, 1995

Sheet 14 of 27

5,441,868

FIG. 8

<u>HindIII</u>	-1	+1			
	Arg	Ala			
AGCTTGGATA	AAAGAGCTCC	ACCAAGATTG	ATCTGTGACT	CGAGAGTTTT	
ACCTAT	TTTCTCGAGG	TGGTTCTAAC	TAGACACTGA	GCTCTCAAAA	
GGAAAGATAC	TTGTTGGAAG	CTAAAGAAGC	TGAAAACATC	ACCACTGGTT	
CCTTCTATG	AACAACCTTC	GATTTCTTCG	ACTTTTGTAG	TGGTGACCAA	
GTGCTGAACA	CTGTTCTTTG	AACGAAAACA	TTACGGTACC	AGACACCAAG	
CACGACTTGT	GACAAGAAAC	TTGCTTTTGT	AATGCCATGG	TCTGTGGTTC	
GTTAACTTCT	ACGCTTGGAA	ACGTATGGAA	GTTGGTCAAC	AAGCTGTTGA	
CAATTGAAGA	TGCGAACCTT	TGCATACCTT	CAACCAGTTG	TTCGACAAC	
AGTTTGGCAA	GGTTTGGCCT	TGTTATCTGA	AGCTGTTTTG	AGAGGTCAAG	
TCAAACCGTT	CCAACCCGGA	ACAATAGACT	TCGACAAAAC	TCTCCAGTTC	
CCTTGTTGGT	TAACCTTCT	CAACCATGGG	AACCATTGCA	ATTGCACGTC	
GGAAACAACCA	ATTGAGAAGA	GTTGGTACCC	TTGGTAACGT	TAACGTGCAG	
GATAAAGCCG	TCTCTGGTTT	GAGATCTTTG	ACTACTTTGT	TGAGAGCTTT	
CTATTTCCGGC	AGAGACCAAA	CTCTAGAAAC	TGATGAAACA	ACTCTCGAAA	
GGGTGCTCAA	AAGGAAGCCA	TTTCCCCACC	AGACGCTGCT	TCTGCCGCTC	
CCCACGAGTT	TTCCTTCGGT	AAAGGGGTGG	TCTGCGACGA	AGACGGCGAG	
CATTGAGAAC	CATCACTGCT	GATACCTTCA	GAAAGTTATT	CAGAGTTTAC	
GTAACCTTTG	GTAGTGACGA	CTATGGAAGT	CTTTCAATAA	GTCTCAAATG	
TCCAACCTTCT	TGAGAGGTAA	ATTGAAGTTG	TACACCGGTG	AAGCCTGTAG	
AGSTTGAAGA	ACTCTCCATT	TAACCTCAAC	ATGTGGCCAC	TTCGGACATC	
AACTGGTGAC	AGATAAGCCC	GACTGATAAC	AACAGTGTAG		
TTGACCACTG	TCTATTCGGG	CTGACTATTG	TTGTCACATC		
	<u>SalI</u>				
ATGTAACAAA	G				
TACATTGTTT	CAGCT				

FIG. 9

	-20	-10	+1	10	20	30	40
Human	MGVHECPAWLWLLLSLPLGLPVLGAPPRLICDSRVLERYLLEAKEAENITTGCAEHCSLNENITVPPDTK						
Monkey	MGVHECPAWLWLLLSLPLGLPVLGAPPRLICDSRVLERYLLEAKEAENITVMTGCSESCSLNENITVPPDTK						
	50	60	70	80	90	100	110
Human	VNFYANKRMEVGGQAVEVWQGLALLSEAVLRGQALLVNSSQPWEPLQLHVVDKAVSGLRSLTLLRALGAQKE						
Monkey	VNFYANKRMEVGGQAVEVWQGLALLSEAVLRGQAVLANSSQPFEPQLHMDKAIISGLRSITLLRALGAQ-E						
	120	130	140	150	160		
Human	AISLPPDAASAAPLRTITADTFCKLFRVYSNFLRGKLLKLYTGEACRGTDR						
Monkey	AISLPPDAASAAPLRTITADTFCKLFRVYSNFLRGKLLKLYTGEACRGRDR						

FIG. 10

1. **AATTCTAGAAACCATGAGGGTAATAAAATA**
2. **CCATTATTTTATTACCCTCATGGTTTCTAG**
3. **ATGGCTCCGCCGCGTCTGATCTGCGAC**
4. **CTCGAGTCGCAGATCAGACGCGGCGGAG**
5. **TCGAGAGTTCTGGAACGTTACCTGCTG**
6. **CTTCCAGCAGGTAACGTTCCAGAACT**
7. **GAAGCTAAAGAAGCTGAAAACATC**
8. **GTGGTGATGTTTTAGCTTCTTTAG**
9. **ACCACTGGTTGTGCTGAACACTGTTC**
10. **CAAAGAACAGTGTTTCAGCACAACCA**
11. **TTTGAACGAAAACATTACGGTACCG**
12. **GATCCGGTACCGTAATGTTTTCGTT**

U.S. Patent

Aug. 15, 1995

Sheet 17 of 27

5,441,868

FIG. 11

XbaI
EcoRI
AATTCTAG AAACCATGAG 1 GGTAAATAAA TATGGCTCC 3 GCCGCGTCTG
GATC TTTGGTACTC CCATTATTTT ATTACGAGG CGGCGCAGAC 4

ATCTGCGACT 5 CGAGAGTTCT GGAACGTTAC CTGCTGGAAG CTAAGAAGC
TAGACGCTGA GCTCTCAAGA CCTTGCAATG GACGACCTC GATTTCTTCG 6

TGAAAACATC 7 ACCACTGGTT 9 GTGCTGAACA CTGTTCTTTG 11 AACGAAAACA
ACTTTTGTAG TGGTGACCAA CACGACTTGT GACAAGAAAC TTGCTTTTGT 8 10

KpnI 0 BamHI
TTACGGTACC G
AATGCCATGG CCTAG
12

U.S. Patent

Aug. 15, 1995

Sheet 18 of 27

5,441,868

FIG. 12

1. **AATTCGGTACCAGACACCAAGGT**
2. **GTTAACCTGGTGTCTGGTACCG**
3. **TAACTTCTACGCTTGGAACGTAT**
4. **TTCCATACGTTTCCAAGCGTAGAA**
5. **GGAAGTTGGTCAACAAGCAGTTGAAGT**
6. **CCAAACTTCAACTGCTTGTTGACCAAC**
7. **TTGGCAGGGTCTGGCACTGCTGAGCG**
8. **GCCTCGCTCAGCAGTGCCAGACCCTG**
9. **AGGCTGTACTGCCGTGGCCAGGCA**
10. **GCAGTGCCTGGCCACGCAGTACA**
11. **CTGCTGGTAAACTCCTCTCAGCCGT**
12. **TTCCCACGGCTGAGAGGAGTTACCA**
13. **GGGAACCGCTGCAGCTGCATGTTGAC**
14. **GCTTTGTCAACATGCAGCTGCAGCGG**
15. **AAAGCAGTATCTGGCCTGAGATCTG**
16. **GATCCAGATCTCAGGCCAGATACT**

FIG. 13

EcoRI KpnI
 A ATTCGGTTACC AGACACCAAG GTTAACTTCT ACGCTTGGAA ACGTATGGAA
 GCCATGG TCTGTGGTTC CAATTGAGAG TCGGAACCTT TGCATACCTT

5 GTTGGTCAAC AAGCAGTTGA AGTTTGGCAG GGTCTGGCAC TGCTGAGCCGA
 CAACCACTTG TTCGTCAACT TCAAACCGTC CCAGACCCTG ACGACTCGCT

9 GGCTGTACTG CGTGGCCAGG CACTGCTGGT AAACTCCTCT CAGCCGTGGG
 CCGACATGAC GCACCGGTCC GTGACCACCA TTTGAGGAGA GTCGGCACCC

13 AACCGCTGCA GCTGCATGTT GACAAAGCAG TATCTGGCCT GAGATCTG
 TTGGCGACGT CGACGTACAA CTGTTTCTGTC ATAGACCCTG CTCTAGACCTAC

15 BglIII BamHI
 16

FIG. 14

1. GATCCAGATCTCTGACTACTCTGC
2. ACGCAGCAGAGTAGTCAGAGATCTG
3. TCCGTGCTCTGGGTGCACAGAAAGAGG
4. GATAGCCTCTTTCTGTGCACCCAGAGC
5. CTATCTCTCCGCCGGATGCTGCATCT
6. CAGCAGATGCAGCATCCGGCGGAGA
7. GCTGCACCGCTGCGTACCATCACTG
8. ATCAGCAGTGATGGTACGCAGCGGTG
9. CTGATACCTTCCGCAAACCTGTTTCG
10. ATACACGAAACAGTTTGCGGAAGGT
11. TGTATACTCTAACTTCCTGCGTGGTA
12. CAGTTTACCACGCAGGAAGTTAGAGT
13. AACTGAAACTGTATACTGGCGAAGC
14. GGCATGCTTCGCCAGTATACAGTTT
15. ATGCCGTACTGGTGACCGCTAATAG
16. TCGACTATTAGCGGTCAACAGTAC

U.S. Patent

Aug. 15, 1995

Sheet 21 of 27

5,441,868

FIG. 15

BamHI BglII
 GA TCCAGATCTCTG
 GTCTAGAGAC

1 ACTACTCTGC | TGCCTGCTCT 3 GGGTGCACAG AAAGAGGCTA 5 TCTCTCCGCC
 TGATGAGACG 2 ACGCACGAGA CCCACGTGTC TTTCTCCGAT AGAGAGGCCG

GGATGCTGCA TCTGCTGCAC 7 CGCTGCGTAC CATCACTGCT 9 GATACCTTCC
 CCTACGACGT 6 AGACGACGTG GCGACGCATG GTAGTGACGA CTATGGAAGG 8

GCAAACGTGT TCGTGTATAC 11 TCTAACTTCC TGCCTGGTAA 13 ACTGAAACTG
 CGTTTGACAA 10 AGCACATATG AGATTGAAGG 12 ACGCACCATT TGACTTTGAC

TATACTGGCG AAGCATGCCG 15 TACTGGTGAC CGCTAATAG SalI
 ATATGACCGC 14 TTCGTACGGC ATGACCACTG 16 GCGATTATC AGCT