



PvuI (7)
SgfI (6) 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA **MfeI (82)**
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

Psp1406I (203) 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTACGCGCCCGCCGCTACCTGAGGCC **HindIII (245)** **Bsu36I (291)**
301 GCCATCCACGCGGGTTGAGTCGCGTTTCTGCCGCCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGCTTTTGTTCGTTT **NgoMIV (441)**

501 TCTGTTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCCTACCTGAGATCACCGGTATCATGACACTTCTGTGGTGTAGTGAGTCTCTACTTTTA **BspHI (560)** **AgeI (552)**
601 TGGAACTCTGCAAAGTGATGCTCAGAAGCTGCGATGACTGGGGACTAGACACCATGAGGCAAATCCAAGTGTGGAAGATGAGCCAGCTCGCATCAAG **1 M T L L W C V V S L Y F Y**
130 G I L Q S D A S E R C D D W G L D T M R Q I Q V F E D E P A R I K

701 TGCCCACTTTTGAACACTTCTTGAATTAACAACACAGCACAGCCATTGAGCTGGCCTTACTCTGATCTGGTATTGGACTAGGCAGGACCGGGACCTTG **BstXI (744)**
470 C P L F E H F L K F N Y S T A H S A G L T L I W Y W T R Q D R D L
801 AGGAGCCAATTAACCTCCGCTCCCGGAGAACCGCATTAGTAAGGAGAAAGATGTGCTGTGGTCCGCGCCACTCTCCTCAATGACACTGGCAACTATAC
800 E E P I N F R L P E N R I S K E K D V L W F R P T L L N D T G N Y T

901 CTGCATGTTAAGGAACACTACATATTGCAGCAAAGTTGCATTTCCCTTGGAAAGTTGTTCAAAAAGACAGCTGTTTCAATTTCCCCCATGAAACTCCCAGTG **XmnI (949)**
1130 C M L R N T T Y C S K V A F P L E V V Q K D S C F N S P M K L P V
1001 CATAAACTGTATATAGAATATGGCATTGAGGATCATTGTCCAAATGTAGATGGATTTTTCTTCCAGTGTCAAACCGACTATCATTGGTATATGG
1470 H K L Y I E Y G I Q R I T C P N V D G Y F P S S V K P T I T W Y M

1101 GCTGTTATAAAATACAGAATTTTAAATAATGTAATACCCGAAGGTATGAACTTGAGTTTCTCATTGCCTTAATTTCAAATAATGGAAATTACACATGTGT **BspLU11I (1192)**
1800 G C Y K I Q N F N N V I P E G M N L S F L I A L I S N N G N Y T C V

1201 TGTTACATATCCAGAAAATGGAGCTACGTTTTCATCTCACCAGGACTCTGACTGTAAGGTAGTAGGCTCTCCAAAAATGCAGTGCCCCCTGTGATCCAT **BsiWI (1222)**
2130 V T Y P E N G R T F H L T R T L T V K V V G S P K N A V P P V I H
1301 TCACCTAATGATCATGTGGTCTATGAGAAAGAACCAGGAGAGGAGCTACTCATTCCCTGTACGGTCTATTTTAGTTTTCTGATGGATTCTCGCAATGAGG
2470 S P N D H V V Y E K E P G E E L L I P C T V Y F S F L M D S R N E
1401 TTTGGTGGACATTGATGAAAACCACTGATGACACTACTATTGATGTCACCAATTAACGAAAGTATAAGTCATAGTAGAACAAGAGTAAAACAAGAAC
2800 V W T T I D G K K P D D I T I D V T I N E S I S H S R T E D E T R T
1501 TCAGATTTTGGAGCATCAAGAAAGTTACCTCTGAGGATCTCAAGCGCAGCTATGTCTGTGATGTAAGGTGCAAAAGGCGAAGTTGCAAAAGCGCAAG
3130 Q I L S I K K V T S E D L K R S Y V C H A R S A K G E V A K A A K
1601 GTGAAGCAGAAAGTGCCAGCTCCAGATACACAGTGGAACTGGCTTGTGGTTTTGGAGCCACAGTCTGCTAGTGGTATTCTCATTGTTGTTTACCATG
3470 V K Q K V P A P R Y T V E L A C G F G A T V L L V V I L I V V Y H
1701 TTTACTGGCTAGAGATGGTCTATTTTACCGGGCTCATTGGAACAGATGAAACATTTTAGATGAAAAGAGTATGATTTTATGTATCCTATGCAAG
3800 V Y W L E M V L F Y R A H F G T D E T I L D G K E Y D I Y V S Y A R
1801 GAATGCGGAAGAAGAAGATTTGTATTACTGACCTCCGTGGAGTTTTGGAGAATGAATTTGGATACAAGCTGTGCATCTTTGACCGAGACAGCTGCCT
4130 N A E E E E F V L L T L R G V L E N E F G Y K L C I F D R D S L P
1901 GGGGAATTGTACAGATGAGACTTTGAGCTTCATTGAGAAAAGCAGCGCTCCTGTTGTTCTAAGCCCAACTACGTGCTCCAGGGAACCAAGCCC
4470 G G I V T D E T L S F I C Q K S R L L V L S P N Y V L Q G T Q A
2001 TCCTGGAGCTCAAGGCTGGCCTAGAAAATATGGCTCTCGGGCAACATCAACGCTATTTTAGTACAGTACAAAGCTGTGAAGGAAACGAGGTGAAAGA
4800 L L E L K A G L E N M A S R G N I N V I L V Q Y K A V K E T K V K E

MscI (2192)
2101 GCTGAAGAGGGCTAAGACGGTGCTCACGGTCATTAATGGAAAGGGGAAAAATCCAAGTATCCACAGGCGAGGTTCTGGAAGCAGCTGCAGGTGGCCATG **PstI (2185)**
5130 L K R A K T V L T V I K W K G E K S K Y P Q G R F W K Q L Q V A M

MscI (2298)
2201 CCAGTGAAGAAAAGTCCAGCGGTCTAGCAGTGATGAGCAGGCGCTCTCGTATTTCATCTTTGAAAAATGTATGAAAGGAATAATGAAAAGGGCTAGCTG **NheI (2292)**
5470 P V K K S P R R S S S D E Q G L S Y S S L K N V •
2301 GCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTA

2401 TTTGTAACCATTATAAGCTGCAATAAACCAAGTTAAACAACAACATTGCATTTTATGTTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCA **HpaI (2430)** **MfeI (2441)**

2501 AGTAAAACCTCTACAAATGTGGTATGGAATTTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATG **EcoRI (2526)**
2601 AATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTAGCTGTTGCGAGCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGGT

2701 TTGAAGTACTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCCACATTCCTTTTTAGTAAAATATTCAGAAAATATTTAAATACATCATTGCAAT **SapI (2708)** **SspI (2765)** **SwaI (2779)**
2801 GAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAA

2901 TAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCA
 141 • N R T Y K L P I L E E I T T K V L K G N M

3001 TCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGA
 119 E I L V F C D P A Y D S I L E R C M G C P S V V R I S R D V E D S

3101 GTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCTGCCA
 86 Y P H R V A V I T D F D K Q G N S V A S G I A I A E A C V T V R G

3201 ATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTTCCTCATAGAGCATGGTGATCT
 52 I Y A E I H V A S I I E G T K T R I A A G V H H K N D E Y L M T I K

BbsI (3350)
 XmnI (3346)

3301 TCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATAT
 19 E T A V E V L E L D Q Q S I N F T K M

AseI (3412)

3401 ACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCCTAAACGAGCTCTGCTTATATAGACCTCCCACCGTAC

SpeI (3567)

3501 ACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTGACGTCAATG

SnaBI (3695)

3601 GGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGT

3701 AGATGTACTGCCAAGTAGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGG

NdeI (3800)

3801 CATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACA

PacI (3986)
 PstI (3979)
 SdaI (3978) BspLU11I (3996)

3901 TACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGTACGCCAGGGGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAATTAAGAACAT
 4001 GTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAATAATCGA

4101 CGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCGTGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCTGCCGC

4201 TTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGTTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAA

ApaLI (4310)

4301 GCTGGGCTGTGTGCACGAACCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAAGTCCAAACCGTAAGACACGACTTATCGCCA

4401 CTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAA

4501 CAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTT

4601 TTTTGTTCGAAAGCAGGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACCTCA

EagI (4746)
 PacI (4726) SwaI (4735) NotI (4745)

4701 CGTTAAGGGATTTGGTCTAGTGAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTG

4801 TGAATCGTAACTAACATACGCTCTCCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGACAGGTGCCAGAACATTT

4901 CTCTATCGAA