



PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA MfeI (82)

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC PvuII (239) **Bsu36I (291)**

301 GCCATCCACGCCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT NgoMIV (441)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATTGACCACCTCGGGCGTCCCTCTGGCCCCAGGTCGG **NcoI (560)**
BstEII (555)
AgeI (552) 1► M D H L G A S L W P Q V G XmaI (692)

601 CTCCTTTGTCTCCTGCTCGCTGGGGCCGCTGGGCGCCCGCCCTAACCTCCCGACCCCAAGTTTCGAGAGCAAAGCGGCTTGTGGCGGCCCGGGG XmaI (703)
SapI (703) 701 CCCGAAGAGCTTCTGTGCTTACCAGGCGTTGGAGGACTTGGTGTGTTTCTGGGAGGAAGCGGCGAGCGCTGGGGTGGGCCCGGCAACTACAGCTTCT XmaI (780)
BsrBI (724) 47► P E E L L C F T E R L E D L V C F W E E A A S A G V G P G N Y S F **SrfI (779)**

801 CCTACCAGCTCGAGGATGAGCCATGGAAGCTGTGTCGCTGCACCAGGCTCCACGGCTCGTGGTGGGTCGCTTCTGGTGTTCGCTGCCTACAGCCGA **XhoI (808)** **NcoI (820)**
80► S Y Q L E D E P W K L C R L H Q A P T A R G A V R F W C S L P T A D

901 CACGTCGAGCTTCTGTCGCCCTAGAGTTGCGCGTCACAGCAGCTCCGGCGCTCCCGGATATCACCGTGTCCATCCATCAATGAAGTAGTGCCTTAGAC **EcoRV (956)**
113► T S S F V P L E L R V T A A S G A P R Y H R V I H I N E V V L L D

1001 GCCCCGTTGGGGCTGGTGGCGCGGTTGGCTGACGAGAGCGCCACGTAGTGTGCGCTGGCTCCCGCCGCTGAGACACCCATGACGCTCACATCCGCT **DraIII (1042)**
147► A P V G L V A R L A D E S G H V V L R W L P P P E T P M T S H I R

1101 ACGAGGTGGACGCTCTCGGCCGCAACGGCGCAGGGAGCGTACAGAGGGTGGAGATCCTGGAGGGCCGACCGAGTGTGTGCTGAGCAACCTGCGGGGCGG **EagI (1115)** **DraIII (1167)**
180► Y E V D V S A G N G A G S V Q R V E I L E G R T E C V L S N L R G R

1201 GACGCGCTACACCTTCGCGCTCCGCGCGTATGGCTGAGCCGAGCTTCGCGGCTTCTGAGAGCGCTGGTGGAGCCTGTGTGCTGCTGACGCTAGC **BssHII (1223)**
213► T R Y T F A V R A R M A E P S F G G F W S A W S E P V S L L T P S

1301 GACCTGGACCCCTCATCCTGACGCTCTCCCTCATCCTCGTGGTTCATCCTGGTGTGCTGACCGTGTCTCGCGCTGCTCTCCACCGCCGGGCTCTGAGC **BglIII (1403)** **StuI (1443)** **PvuII (1474)**
1401 AGAAGATCTGGCCTGGCATCCCGAGCCAGAGAGCGAGTTTGAAGGCCCTTCCACCCACACAAGGGTAACTCCAGCTGTGGCTGACCAGAATGATGG **Eco47III (1568)**
280► Q K I W P G I P S P E S E F E G L F T T H K G N F Q L W L Y Q N D G

1501 CTGCTGTGGTGGAGCCCTGCACCCCTTACGGAGGACCCACCTGCTTCCCTGGAAGTCTCTCAGAGCGCTGGGGGACGATGCAGGCAGTGGAG **SphI (1647)** **BsaBI (1657)**
313► C L W W S P C T P F T E D P P A S L E V L S E R C W G T M Q A V E

1601 CCGGGACAGATGATGAGGGCCCTGCTGGAGCCAGTGGGCGTGGAGTGGCCATGGATGAAGGCTCAGAAGCATCCTCTGCTCATCTGCTTTGGCCTCGAA **NcoI (1748)**
347► P G T D D E G P L L E P V G S E H A Q D T Y L V L D K W L L P R N

1701 CGCCAGTGAGGACCTCCAGGGCTGGTGGCAGTGTGGACATAGTGGCCATGGATGAAGGCTCAGAAGCATCCTCTGCTCATCTGCTTTGGCCTCGAA **MscI (1745)**
380► P P S E D L P G P G G S V D I V A M D E G S E A S S C S S A L A S K

1801 GCCCAGCCAGAGGGAGCCTCTGCTGCCAGCTTTGAGTACACTATCCTGGACCCAGCTCCAGCTTTCGCTCCATGGACACTGTGCCCTGAGTGGCC **NcoI (1873)**
413► P S P E G A S A A S F E Y T I L D P S S Q L L R P W T L C P E L P

1901 CCTACCCACCCACCTAAAGTACCTGTACCTTGTGGTATCTGACTCTGGCATCTCAACTGACTACAGCTCAGGGGACTCCAGGGAGCCAAAGGGGCT **PstI (2098)**
447► P T P P H L K Y L Y L V V S D S G I S T D Y S S G D S Q G A Q G G

2001 TATCCGATGGCCCTACTCCAACCTTATGAGAACAGCCTTATCCCAGCCGCTGAGCCTCTGCCCCAGCTATGTGGCTTGTCTTAGGACACCCAGGCT **MscI (2122)**
480► L S D G P Y S N P Y E N S L I P A A E P L P P S Y V A C S •

2101 GCAGATGATCAGGGATGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGT **NheI (2116)**

2201 GAAATTTGTATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAACAAGTTAAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGG **HpaI (2254)** **MfeI (2265)**

2301 **EcoRI (2350)**
 AGGTGTGGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCT

2401 ACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTTA

2501 **SapI (2532)** **SspI (2589)**
 AGATATAGTGTATTTTCCAAGGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTGTAGAAAATATTCAGAA

2601 **Swal (2603)**
 ATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGA

2701 CTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGGAGGGGATGAGTTCCTCAATGG
 141 • N R T Y K L P I L E E I T

2801 **SacI (2864)**
 TGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGTGACCACCCT
 127 T K V L K G N M 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

2901 GATGGATCTGCCACCTCATCAGAGTAGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCT
 94 I S R D V E D S 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

3001 **StuI (3028)**
 TCAGCACAGACAGTGACCCTGCCAATGTAGGCCCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGT
 60 E A C V T V R G 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

3101 **BbsI (3174)** **XmnI (3170)**
 TGCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCCTATAGTG
 27 D E Y L M T I K E T A V E V L E L D Q Q S I N F T K M

3201 **AseI (3236)** **SacI (3293)**
 AGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAAACGAGCTCT

3301 **SpeI (3391)**
 GCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTGTATTACTAGTCAA

3401 AACAAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCA

3501 **SnaBI (3519)**
 TGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTATGTACTGGGCATAATGCCAGGGGGCCATTTACCGTCATT

3601 **NdeI (3624)**
 GACGTC AATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCCTAAATACTCCACCATTGACGTC AATGGAAAGTC

3701 CCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCTGTTGGCGGTGAGCCAGGCGGGCCATTTACCCTAAGTTATGTAA

3801 **PacI (3810)** **PstI (3803)** **SdaI (3802)** **BspLU11I (3820)**
 CGCCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCC

3901 CCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGC

4001 GCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAG

4101 **ApaLI (4134)**
 TTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTACAGCCGACCGCTGCGCTTATCCGTAACATATCGTCTTGAGTCCAAC

4201 CCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAAGTGGTGGC

4301 CTAACACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACA

4401 AACACCGCTGGTAGCGGTGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCT

4501 **EagI (4570)** **PacI (4550)** **Swal (4559)** **NotI (4569)**
 GACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCAATAAAATATCTTTATTTTCATT

4601 ACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCCAGT

4701 GCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA