



PvuI (7)
SgfI (6) 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA MfeI (82) EcoNI (96)

101 GAGAAAGTGGCGGGGTAAGTGGAAAGTGATGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTCGCAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC EcoNI (287) **Bsu36I (291)**

301 GCCATCCACGCGGTTGAGTGCCTTCTGCCGCTCCCGCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCTCCCTTGGAGCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATTGTACAACATGATGGAGACGGAGCTGAAGCCGCGGG **AgeI (552)** **BsrGI (563)** **Bsp120I**
1▶ M Y N M E T E L K P P G
Th111I (676)

601 CCCGAGCAAACCTCGGGGGCGGGCGGCAACTCCACCGGGCGGGCGGGCGGCAACAGAAAAACAGCCCGGACCGGTCAAGCGGCCCATGAAT **RsrII (674)** **XmnI (696)**
13▶ P Q Q T S G G G G N S T A A A G G N Q K N S P D R V K R P M N

701 GCCTTCATGGTGTGGTCCCGCGGACGGCGCAAGATGGCCAGGAGAACCCCAAGATGCACAACCTCGAGATCAGCAAGCGCTGGGCGCCGAGTGGGA
47▶ A F M V W S R G Q R R K M A Q E N P K M H N S E I S K R L G A E W

801 AACTTTTGTGCGAGACGGAGAAGCGCCGTTTCATCGACGAGGTAAGCGGCTGCGAGCGTGCACATGAAGGAGACCCCGATTATAAATACCGCCCGG **Eco47III (855)** **AfeI (855)**
80▶ K L L S E T E K R P F I D E A K R L R A L H M K E H P D Y K Y R P R

901 GCGGAAACCAAGACGCTCATGAAGAAGATAAGTACACGCTGCCCGGGGCTGCTGGCCCCGGCGCAATAGCATGGCGAGCGGGTTCGGGGTGGGC **BspHI (917)** **BsrBI (981)**
113▶ R K T K T L M K K D K Y T L P G G L L A P G G N S M A S G V G V G

1001 GCCGGCTGGGCGGGCGTGAACCAGCGCATGGACAGTTACGCGCATGAACGGCTGGAGCAACGGCAGCTACAGCATGATGCAGGACCAGCTGGGCT **PvuII (1090)**
147▶ A G L G A G V N Q R M D S Y A H M N G W S N G S Y S M M Q D Q L G

1101 ACCCGCAGACCCGGCCTCAATGCGCACGGCGCAGCGCAGATGCAGCCATGCACCGCTACGACGTGAGCGCCCTGCAGTACAACCTCATGACCAGCTC **XmaI (1110)** **SmaI (1110)** **FspI (1122)** **PstI (1174)**
180▶ Y P Q H P G L N A H G A A Q M Q P M H R Y D V S A L Q Y N S M T S S

1201 GCAGACCTACATGAACGGCTCGCCACCTACAGCATGTCTACTCGCAGCAGGGCACCCCTGGCATGGCTCTTGGCTCCATGGGTTCCGGTGGTCAAGTCC **NcoI (1277)** **XcmI (1277)**
213▶ Q T Y M N G S P T Y S M S Y S Q Q G T P G M A L G S M G S V V K S

1301 GAGGCCAGCTCCAGCCCTGTGGTTACTCTTCTCCACTCCAGGGCGCCCTGCCAGGGGACCTCCGGGACATGATCAGCATGTATCTCCCGG **EcoO109I (1364)**
247▶ E A S S S P P V V T S S S H S R A P C Q A G D L R D M I S M Y L P

1401 GCGCCGAGGTGCCGGAACCCGCCCCCGCAGCAGACTTACATGTCCAGCACTACCAGAGCGGCCCGGTGCCCGGCACGGCCATTAACGGCACACTGCC **BspLU11I (1439)** **BsrBI (1458)**
280▶ G A E V P E P A A P S R L H M S Q H Y Q S G P V P G T A I N G T L P

1501 CCTCTCACACATGGAGTCCGGAGGGGGTGGCTCTCTGGCAGAGCTGTGCGCGCAGCGCAGGGCCCGCGGATCCTATCCCTATGATGTGCCAGAC **BspEI (1516)** **Th111I (1541)** **BamHI (1573)**
313▶ L S H M E S G G G G S P G R R R R R R R R R R G S Y P Y D V P D

1601 TATGCTGGCTATCCATATGATGTTCTGATTATGCTGGATACCCTTATGATGTGCCAGACTATGCCTAAAGCTAGCTGGCCAGACATGATAAGATACATT **NdeI (1613)** **MscI (1676)** **NheI (1670)**
347▶ Y A G Y P Y D V P D Y A G Y P Y D V P D Y A •

1701 GATGAGTTTGGACAAACCACAAC TAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCA

1801 AATAACAAGTTAAACAACAACAAATTGCATTCAATTTATGTTTCAGGTTCCAGGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCTACAAATGTGG **HpaI (1808)** **MfeI (1819)**

1901 TATGGAATCTAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTGAACTCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGG **EcoRI (1904)**

2001 CTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTTAAAGATATAGTGTATTTTCCAAGGTTTGAAGTCTTTCATTTCTT

2101 TATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAATATTCAGAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAG **SspI (2143)** **SwaI (2157)**

2201 GCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTGTAGTGTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAG **EcoO109I (2218)**

2301 CGAGCTTCTAGCTTTAGTTCTGGTGTACTTGGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAGCAGTC
141▶ N R T Y K L P I L E E I T T K V L K G N M E I L V F C D

2401 AGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACA **SacI (2418)** **BstXI (2447)**
112▶ 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 Y P H R V A V

StuI (2582)

Eco147I (2582)

2501 ATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCCTCAATGTGGACAG
78 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 I Y A E I H V A
2601 CAGAGATGATCTCCCAGTCTTGGTCCTGATGGCCGCCCGACATGGTCTTGTTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAG
45 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 E T A V E V L

BspHI (2732)

VspI (2790)

AseI (2790)

XmnI (2724)

2701 CTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTC
12 E L D Q Q S I N F T K M

SacI (2847)

2801 AAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTGCGTCT
A

SpeI (2945)

2901 AATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTGATTTACTAGTCAAAACAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCC

SnaBI (3073)

Eco105I (3073)

3000 CGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGGATGACTAATACGTAGATGTACTGCCAAGTAGGAA

NdeI (3178)

3100 AGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTAC

3200 TGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAAT

PstI (3357)

SdaI (3356)

PacI (3364)

BspLU11I (3374)

3300 GGGCGGGGTCGTTGGCGGTGACCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCC T G C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G C A A

3398 AAGGCCAGGAACCGTAAAAAGCCGCTTGGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGC

3498 GAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGTCCCTCGTGCGCTCTCCTGTTCCGACCTGCCGTTACCGGATACCTGTCCGC

ApaLI (3688)

3598 CTTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTCCGCTCCAAGCTGGGCTGTGTGCACGAA

3698 CCCCCGTTACGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTA

3798 ACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGC

3898 TCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGGAAGCAGCAG

3998 ATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACTCACGTTAAGGGATTTTGGTCA

PacI (4104)

SwaI (4113)

NotI (4123)

4098 TGGCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGGAATCGTAACTAACATAC

4198 GCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA