



125

PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGGCATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441)
NaeI (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555) **AgeI (552)** **Bsp120I (571)**

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTACCATGGACGAGGGCCCGTGGACCTGCGCACCCGGCCCAA
1▶ M D E G P V D L R T R P K

XmaI (606)

601 GGGCACCCCGGGCGCCGCTGCCACTCCGCAAACGCCGCTGCGCCCGCGTCCCGAGACCCGCAACCACGCGCAGCCCGCTGGACCCCTGGACGCC
 13▶ G T P G A A L P L R K R P L R P A S P E P A T T R S P A G P L D A

Bsp120I (733)

701 CTGCGCAGCGGCTGCGACGTCCCGTTGTCCTGGGCCCCCACTGTGTGGCCAGGCCGAGGCCCTTTACTACCAGGGACCTTTGATGCCATTTACT
 47▶ L R S G C D V P V V P G P P H C V A R P E A L Y Y Q G P L M P I Y

NcoI (869) **NcoI (899)**

801 CTACCCGACGATGGCCCCCACTTTCCGCTGCTGAACCTGCCTACTCACCCCTACTCCATGATATGCCCATGGAACACCCCTTTAGCTGATATTGC
 80▶ S T P T M A P H F P L L N L P T H P Y S M I C P M E H P L S A D I A

HindIII (997)

901 CATGGCCACTCGGGTGGATGAGGATGGAGACACGCTCTCCACATCGTGTGGTCCAGAATAACATAGCCGCTGTCTACCGAATACTCAGCCTTTTCAAG
 113▶ M A T R V D E D G D T P L H I A V V Q N N I A A V Y R I L S L F K

Tth111I (1078)

1001 CTTGGGAGCCGGAAGTAGAGCTCATAAACCTGCGGCAGACCCCGCTCCACTGGCTGTCAACACATTACCAGACATGGTCCGGCTCTTGGTGA
 147▶ L G S R E V D V H N N L R Q T P L H L A V I T T L P D M V R L L V

PstI (1183)
SdaI (1182)

NcoI (1115) **SphI (1156)**

1101 CAGCTGGTGCCAGCCCATGGCCCTGGATCGTACGGCCAGACTGCAATTACCTGGCATGCGAGCACCCGAGCCCGAGCTGCCTGCAGGCGCCTGCTGGA
 180▶ T A G A S P M A L D R H G Q T A I H L A C E H R S P S C L Q A L L D

Eco72I (1261)
BbrPI (1261)

Bsu36I (1208)

1201 CAGCGCAACCTCAGGCTCCGTGGACCTGGAGGTTGCAATTATGAAGGCTCACTGCCCTGACAGTGGCCGTGAACACCGGGTCCAGGAGGCTGTTCTG
 213▶ S A T S G S V D L E V R N Y E G L T A L H V A V N T G C Q E A V L

EagI (1347)

ClaI (1324) **EcoRV (1336)** **NotI (1346)**

1301 CTGCTCCTGGAGCTGGCGCGGACATGCAGTGGATATCAAGAGCGGCGCTCCCACTCATCCACGCCGTGGAGAACAACAGCCTGAACATGGTGC
 247▶ L L L E R G A D I D A V D I K S G R S P L I H A V E N N S L N M V

SacII (1476)

1401 AACTCCTGCTGCTGCACGGCGCCAACGTGAACGCTCAGATGTATTCTGGCAGCTCGGCTCTGCATTCTGCGTCTGGCCGCGGGCTTCTGCCTCTGGTGCG
 280▶ Q L L L L H G A N V N A Q M Y S G S S A L H S A S G R G L L P L V R

BssHIII (1567) **EcoRV (1588)**

1501 CACGCTGGTGGCAGCGGGGCTGACAGCGGCCTCAAGAAGTGTACAATGACACACCTCTCATGGTGGCGCGCAGCCGAGGGTCATTGATATCTTAAGG
 313▶ T L V R S G A D S G L K N C H N D T P L M V A R S R R V I D I L R

StuI (1604)

1601 GGGAAGGCCTCTCGGCTGCTTACAGGTCACAGCCTGAGCCATCCCCAGACCAAAGTGCACCAACTCCCCGAGAGCAGCAGTCTCAGCTCCAATG
 347▶ G K A S R A A S G S Q P E P S P D Q S A T N S P E S S S R L S S N

1701 GCCTCCAGTCTCGCAAGCTCCTACCCTCGTGTCTCCCCGAAAGATGCTCCTGGCTTCCCGCGACTCCCCAAAACCTTTTCTTCCACAACATC
 380▶ G L Q S S P S S S P S L S P P K D A P G F P A T P Q N F F L P T T S

NgoMI (1844)
NaeI (1844)

1801 TACACCTGCCTTCTGCCCTTCCAGGAGTCTCCGAGGCCCTGGCGGCCCGTACCCCTTCCCGAGCTCCAGGAAGCAGCTGAGACGGATGGGGGGGC
 413▶ T P A F L P F P G V L R G P G R P V P P S P A P G S S •

NheI (1919)

1901 AGACCCGACTCATGTGGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTGGACAAACCACAACCTAGAATGCAGTAAAAAATGCTTTATT

HpaI (2057) **MfeI (2068)**

2001 TGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACCAATTGCATTCATTTATGTTTCAGGTTTCAGG

EcoRI (2153)

2101 GGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACCTTTAACTCCAAATCAAGCC

2201 TCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGT

2301 TTAAGATATAGTGATTTTCCCAAGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAAATATCA **SspI (2392)**

2401 GAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTT **SwaI (2406)**

2501 GGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAA **SacI (2667)**
 141 • N R T Y K L P I L E E I

2601 TGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCAC **SacI (2667)**
 128 T 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

2701 CCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATG **SacI (2667)**
 95 R 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

2801 GCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCT **StuI (2831)**
 61 A 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

2901 TGTGTCTCATAGAGCATGGTGTCTTCTCAGTGGGACCTCCACCAGTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATA **XmnI (2973)**
 28 N 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

3001 GTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCCTAAACGAG **VspI (3039)** **AseI (3039)** **SacI (3096)**

3100 CTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAAGTCCCGTTGATTACTA **SpeI (3194)**

3199 GTCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGTATCCACGCCATTGATGTACTGCCAAAACCGCA

3298 TCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACC **SnaBI (3322)** **Eco105I (3322)**

3398 GTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGG **NdeI (3427)**

3498 AAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTT

3598 ATGTAACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGC **PstI (3606)** **SdaI (3605)** **PacI (3613)** **BspLU11I (3623)**

3696 TCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTC

3796 CCTCGTGGCTCTCTGTTCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGG

3896 TATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTG **ApaLI (3937)**

3996 AGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGTACAGAGTCTTGAA

4096 GTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCC

4196 GGCAAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTA

4296 CGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTT **EagI (4373)** **PacI (4353)** **SwaI (4362)** **NotI (4372)**

4395 ATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCT

4495 GTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA