



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

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGCGCAATTGAACGGGTGCCTA
 101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245) **Bsu36I (291)**

Psp1406I (203)
PvuII (239) **EcoNI (287)**

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCCTCCCGCCTGTGGTGCCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTTCCTGACCCGCTGTTGCTCAACTCTACGCTTTTGTTCGTTT

SphI (560)

KasI (535)
AgeI (552) **SacII (572)**

501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCAGCATGCCCGATCCCGGGCGCACCTGCCATTCTTCTATGG
1▶ M P D P A A H L P F F Y G

601 CAGCATCTCGGGGCTGAGGCCGAGGAGCACCTGAAGCTGGCAGGCATGGCCGACGGGCTGTTCTCTGCGCCAGTGTTCGCTCCCTGGCGGGCTAC
 13▶ S I S R A E A E E H L K L A G M A D G L F L L R Q C L R S L G G Y

BsiWI (764)

701 GTGCTGTCGTTGGTGACGAGCTGCGCTCCACCATTTCATCCGAGCGCAACTCAACGGCACGTACGCCATCGCGGGCGGGAAGGCGCACTGCGGCC
 47▶ V L S L V H D V R F H H F P I E R Q L N G T Y A I A G G K A H C G

XmaI (895)

801 CGGCCGAGCTCTGCCAGTCTACTCTCAGGACCCGACGGGCTGCCCTGCAACCTGCGTAAGCCGTGTAAACCGCCGCCCGGACTGGAGCCACAGCCCG
 80▶ P A E L C Q F Y S Q D P D G L P C N L R K P C N R P P G L E P Q P G

BbsI (901)

901 GGTCTTCGACTGCCTGCGTGTATGCTATGGTGGCGACTACGTGCGCCAGACCTGGAAGCTGGAGGGCGATGCACTAGAGCAGGCCATCATCAGCCAGGCC
 113▶ V F D C L R D A M V R D Y V R Q T W K L E G D A L E Q A I I S Q A

1001 CCACAGGTGAGAAGCTCATTGCTACCACAGCCACGAGCGAATGCCCTGGTATCACAGCAGCCTGACTCGTAGGAGGCCGAGCGCAAACCTCTATTCCG
 147▶ P Q V E K L I A T T A H E R M P W Y H S S L T R E E A E R K L Y S

NdeI (1151) **Bst1107I (1183)**

1101 GCCAGCAGCCGACGGCAAGTTCCTGCTGAGGCCCGGAAGGAGCAGGGCACATATGCACTGTCCTGGTCTATGGGAAAACCTGTATACCACTATCTCAT
 180▶ G Q Q T D G K F L L R P R K E Q G T Y A L S L V Y G K T V Y H Y L I

XcmI (1203)
ScaI (1220) **PvuII (1261)**

1201 CAGCCAGGACAAGGCTGGCAAGTACTGCATCCCGAAGGCACCAAGTTTGACACGCTCTGGCAGCTGGTGGAGTACCTGAAGCTGAAGCGGATGGACTA
 213▶ S Q D K A G K Y C I P E G T K F D T L W Q L V E Y L K L K A D G L

1301 ATTTACCGCTTGAAGGAGTCTGTCCCAACAGCAGCGCCAGCGCGCAGTTGTGTCACCCACCCTCCAGCCACCCATCCACATTCACTCAGCCTCAGA
 247▶ I Y R L K E V C P N S S A S A A V A A P T L P A H P S T F T Q P Q

NcoI (1484)

1401 GACGAGTGGACACCTGAAGTTCGACGAGTACACCCCTGAACAGCAGCTTAGCGTATCGACAGACAAGCCCGGCGGATGCCCATGGACACAAGTGT
 280▶ R R V D T L N S D G Y T P E P A R L A S S T D K P R P M P M D T S V

Bsu36I (1522) **XmnI (1542)**

1501 GTACGAGAGTCCCTACAGCGACCTGAGGAACCTCAAAGACAAGAGCTCTTCTGAGCGAGAGAATCTCCTCGTGGCGGACATCGAGCTTGGCTGTGGC
 313▶ Y E S P Y S D P E E L K D K K L F L K R E N L L V A D I E L G C G

FspI (1634)

SphI (1631)

1601 AACTTTGGCTCCGTGCGCCAGGGAGTCTATCGCATGCGCAAGAAGCAGATTGACGTGGCCATCAAGGTGCTGAAGCAGGGCACAGAGAAGGCCGACAAAG
 347▶ N F G S V R Q G V Y R M R K K Q I D V A I K V L K Q G T E K A D K

1701 ATGAGATGATGCGAGAGGCCAGATCATGCACAGCTGCACAACCCCTACATCGTGGCGTCTATCGCGGTGTCGACAGGAGAAGCACTCATGCTGGTCTAT
 380▶ D E M M R E A Q I M H Q L D N P Y I V R L I G V C Q A E A L M L V M

Bsp120I (1816) **NcoI (1895)**

1801 GGAGATGGCGGGAGGCGGCCCTGCACAAGTTCCTGCTGGGAAAGAAGGAGGAGATCCCTGTGAGCAATGTGGCTGAAGTGTGACACAGGTTGGCCATG
 413▶ E M A G G G P L H K F L L G K K E E I P V S N V A E L L H Q V A M

1901 GGCATGAAGTATTTGGAGGAGAAAACTTTGTGACCCGACCTGGCAGCCCGCAATGTTCTACTGGTCAATCGGCACTATGCCAAGATCAGCGACTTTG
 447▶ G M K Y L E E K N F V H R D L A A R N V L L V N R H Y A K I S D F

PstI (2048)

2001 GCCTGTCCAAAGCCCTGGGTGCTGACGACAGCTATTACACAGCCCGTCTGCAGGGAAGTGGCCTCTGAAGTGGTACGCGCCAGAGTGCATCAACTTTCCG
 480▶ G L S K A L G A D D S Y Y T A R S A G K W P L K W Y A P E C I N F R

BstEII (2136) **StuI (2150)** **Bsp120I (2190)**

2101 GAAGTTCCTCAGCCGAGTACGCTGAGCTATGGGTCACCATGTGGGAGGCTTCTCCTATGGCCAGAAGCCCTACAAGAAAATGAAGGCCCGGAG
 513▶ K F S S R S D V W S Y G V T M W E A F S Y G Q K P Y K K M K G P E

2201 GTCCTGGACTTCATCAAGCAGGGTAAGAGGATGGAATGTCGCGCGGAGTGTCTCCTGAGATGTATGCACTTATGAGTACTGCTGGATCTACAAGTGGG
 547▶ V L D F I K Q G K R M E C P P E C P P E M Y A L M S D C W I Y K W

SfiI (2358) **SmaI (2373)**

2301 AGGATCGCCCCACTTCTGACTGTGGAACAACGTATGCGGAACCTATTACTACAGCTTGCCAGCCGGCCGAGGACCCACAGTGTGAACAGGTGGC
 580▶ E D R P D F L T V E Q R M R N Y Y Y S L A S R A E G P P Q C E Q V A

NheI (2448)

2401 CGAGGCTGCATGTGGCTGAGCCCAAGCCTCCCTACACCTCTGTCCAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAA
 613▶ E A A C G •

HpaI (2586) **MfeI (2597)**

2501 CTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAACAAACAA

2601 **EcoRI (2682)**
 TTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAAATCTAAAATACAGCA

2701 TAGCAAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCT

2801 GTTTCGAGCCTCACCTTCTTTCATGAGGTTAAGATATAGTGATTTTCCAAGGTTTGAAGTCTCTTCATTTCTTTATGTTTTAAATGCACTGACCT

2901 **SspI (2921)** **SwaI (2935)**
 CCCACATTCCCTTTTATGTAATAATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGC

3001 CCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCT

3101 GGTGACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGC
 138 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 P A Y D S I L

3201 TCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCC
 104 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 I T D F D K Q G

3301 **StuI (3360)**
 CGTTGCTCACAGCAGACCAATGGCAATGGCTTACGACAGACAGTACCCTGCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTT
 71 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 S I I E G T K

3401 GGTCTGATGGCCGCCGACATGGTGTCTGTTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATG
 38 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 E L D Q Q S I

3501 **BspHI (3510)** **BbsI (3506)** **XmnI (3502)** **AseI (3568)**
 TTGAAGGTCCTCATGATGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTC
 4 N F T K M

3601 CAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGA

3700 **SpeI (3723)**
 CATTTTGAAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAAATCCCCGTGAGTCAAACCGCTATCCA

3799 **SnaBI (3851)**
 CGCCATTGATGTACTGCCAAAACCGCATCATGGTAATAGCGATGACTAATCGTAGATGTACTGCCAAGTAGGAAAGTCCCATAGGTCATGTACT

3899 **NdeI (3956)**
 GGCATAATGCCAGGCGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTTACCG

3999 TAAATACTCCACCATTGACGTCAATGAAAAGTCCTATTGGCGTTACTATGGAAACATACGTCAATTATTGACGTCAATGGCGGGGGTCTTGGCGGT

4099 **PstI (4135)** **SdaI (4134)** **PacI (4142)** **BspLU11I (4152)**
 CAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTG CAG GTT AA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAG

4197 GCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAA

4297 GATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGT

4397 GCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTCCGCTCCAAGCTGGGCTGTGTGCAGAACCCCGTTAGCCCGACCGC

4497 TCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGT

4597 ATGTAGGCGGTGTACAGAGTCTTGAAGTGGTGGCTAACTACGGCTACACTAGAAGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTT

4697 CGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGA

4797 **PacI (4882)** **SwaI (4891)**
 TCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTGACGCTCAGTGGAAACGAAAACCTACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTA

4897 **NotI (4901)**
 AATCAGCGGCGCAATAAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAACAAAACG

4997 AAACAAAACAAACTAGCAAAATAGGCTGTCCCAAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA