



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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCCGCCGCCCTACCTGAGGCC
 301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

BstEII (555)
KasI (535) **AgeI (552)** **NcoI (560)**

501 TCTGTTCTGGCGCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCACCATGGTGCCTGTGTTACTAATTCTTGTGGAGCTTTGGC
 601 AACACTGCAAGCTGACTTACTTAATCACAAAAAGTTTTTACTTCTACCACCTGTCAATTTTACCATTAAAGCCACTGGATTAGCTCAAGTTCTTTTACAC
 13▶ T L Q A D L L N H K K F L L L P P V N F T I K A T G L A Q V L L H

SmaI (701) **EcoO109I (701)** **XbaI (738)** **BbrPI (748)** **BbsI (772)**

701 TGGGACCCAAATCCTGACCAAGAGCAAAGGCATGTTGATCTAGAGTATCACGTGAAAAATAATGCCCCACAAGAGACGAATATGATACCAGAAAGACTG
 47▶ W D P N P D Q E Q R H V D L E Y H V K I N A P Q E D E Y D T R K T

BspHI (822) **NheI (838)** **MscI (878)**

801 AAAGCAATGTGTGACCCCTTCATGAAGCCTTGCAGCTAGCGTGAGGACCATTCTGAAGAGCAGCCATACAACCTGCGCCAGCAGTTGGGTTTCTGC
 80▶ E S K C V T P L H E G F A A S V R T I L K S S H T T L A S S W V S A
 901 TGAAGTCAAAGCTCCACCAGGATCTCCTGGAACCTCGGTTACGAATTTAACTTGTACCACACACTGTTGTAAGTAGCCACCCACTTAAGGCCATAC
 113▶ E L K A P P G S P G T S V T N L T C T T H T V V S S H T H L R P Y

Bsu36I (1042)

1001 CAAGTGTCCCTTCGTTGCACCTGGCTTGTGGGAAGGATGCCCTGAGGACACACAGTATTTCTATACTACAGGTTTGGTGTTTGACTGAAAAATGCC
 147▶ Q V S L R C T W L V G K D A P E D T Q Y F L Y Y R F G V L T E K C

AseI (1195)
SphI (1135) **ApaLI (1189)**

1101 AAGAATACAGCAGAGATGCACTGAACAGAAATACTGCATGCTGGTTTCCAGGACATTTATCAACAGCAAAGGGTTTGGAGCAGCTTGCTGTGCACATTAA
 180▶ Q E Y S R D A L N R N T A C W F P R T F I N S K G F E Q L A V H I N
 1201 TGGCTCAAGCAAGCGTGTGCAATCAAGCCCTTTGATCAGCTGTTTCAGTCCACTTGCCATTGACCAAGTGAATCCTCAAGGAATGTCACAGTGGAAATT
 213▶ G S S K R A A I K P F D Q L F S P L A I D Q V N P P R N V T V E I
 1301 GAAAGCAATTCTCTATATACAGTGGGAGAAACCACTTTCTGCCTTTCCAGATCATTGCTTTAACTATGAGCTGAAAAATTTACAACCAAAAAATGGTC
 247▶ E S N S L Y I Q W E K P L S A F P D H C F N Y E L K I Y N T K N G
 1401 ACATTGAAAGGAAAAACTGATCGCCAATAAGTTCATCTCAAAAATTGATGATGTTTCTACATATTCCATTCAAGTGAAGAGCAGCTGTGAGCTCACCTTG
 280▶ H I Q K E K L I A N K F I S K I D D V S T Y S I Q V R A A V S S P C

BstXI (1507)

1501 CAGAATGCCAGGAAGGTGGGCGAGTGGAGTCAACCTATTTATGTGGGAAAGGAAAGGAGTCTTGGTAGAATGGCATCTCATTGTGCTCCCAACAGCC
 313▶ R M P G R W G E W S Q P I Y V G K E R K S L V E W H L I V L P T A

PstI (1632) **AgeI (1668)** **BglII (1698)**

1601 GCCTGCTTCGTCTTGTAAATCTTCTCACTCATCTGCAGAGTGTGCATCTATGGACCAGGTTGTTTCCACCGGTTCCGGCCCCAAAGAGTAACATCAAAG
 347▶ A C F V L L I F S L I C R V C H L W T R L F P P V P A P K S N I K

BstBI (1731) **BsrGI (1755)**

1701 ATCTCCCTGTGGTACTGAATATGAGAAACCTTGAATGAAACAAAATTGAAGTTGTACATTGTGTGGAAGAGGTTGGATTTGAAGTCAATGGGAAATTC
 380▶ D L P V V T E Y E K P S N E T K I E V V H C V E E V G F E V M G N S

AvrII (1837) **MscI (1849)**

1801 CACGTTTTGATGGCATTGTCATTCTGAAATGAACCTCTAGGACTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGA
 413▶ T F •

HpaI (1981) **MfeI (1992)**

1901 ATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTAAACAACAACAAATTGCA

EcoRI (2077)

2001 TTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCA
 2101 AAACTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTG
 2201 CAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTCCAAGGTTTGAAGTACTGCTCTTCAATTTCTTATGTTTAAATGCACTGACCTCCAC

SspI (2316) **SwaI (2330)** **EcoO109I (2391)**

2301 ATTCCCTTTTATGTAATAATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTC
 2401 ATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTAAATAGAAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGT
 141▶ • N R T Y

BstXI (2620)

2501 ACTTGAGGGGGATGAGTTCTCAATGGTGGTTTTGACCAGCTTGCCATTCACTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCT
 136▶ 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 E R
 2601 GCACATGCCACAGGGGCTGACCACCTGATGGATCTGCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTG
 103▶ 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 N

StuI (2755)

2701 CTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCC
69 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 T R

XmnI (2897)

2801 TGATGGCCGCCCCGACATGGTGTCTTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAA
36 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 N F

BspHI (2905) **BbsI (2901)** **AseI (2963)**

2901 GGCTTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGC T
3 T K M

3001 TATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCCTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTT

SpeI (3118)

3101 GGAAAGTCCC GTT GATTACTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCTGAGTCAAACCGCTATCCACGCCCA

SnaBI (3246)

3200 TTGATGTA CTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTA CTGCCAAGTAGGAAAGTCCATAAGGTCATGTA CTGGGCAT

NdeI (3351)

3300 AATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGCCATATGATACACTTGATGTA CTGCCAAGTGGGCAGTTTACCGTAAATA
3400 CTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCA

PstI (3530) **SdaI (3529)** **PacI (3537)** **BspLU111 (3547)**

3500 GGGCGGCCATTTACCGTAAGTTATGTAACGCTG 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 A A G G C C A G A A A C C G T A A A A G G C C G C G
3598 TTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATC A A A A A T C G A C G C T C A A G T C A G A G G T G G C G A A A C C G A C A G G A C T A T A A G A T A C C
3698 A G G C G T T T C C C C T G G A A G C T C C C T C G T G C G C T C T C T G T T C C G A C C C T G C C G T T A C C G G A T A C C T G T C C G C T T T C C C T T C G G G A A G C G T G G C G C T

ApaLI (3861)

3798 TTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCC
3898 TTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAG
3998 GCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAA
4098 AAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAA

PacI (4277) **SwaI (4286)** **NotI (4296)**

4198 GAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AG

EagI (4297)

4298 CGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAA
4398 AACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA