



125

PvuI (7)
SgfI (6) **EcoNI (96)**
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441) **NaeI (441)**
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560) **BstEII (555)**
501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTACCACATGGAGCACATACAGGGAGCTTGAAGACGATCAGCAA
1 M E H I Q G A W K T I S N

KasI (535) **AgeI (552)**
601 TGGTTTTGGATTCAAAGATGCCGTGTTTGTGGCTCCAGCTGCATCTCTCTACAATAGTTTCCAGCAGTTTGGCTATCAGCGCCGGGCATCAGATGATGGC
13 G F G F K D A V F D G S S C I S P T I V Q Q F G Y Q R R A S D D G
701 AAACACAGATCCTTCTAAGACAAGCAACACTATCCGTGTTTCTTCCGCAACAGCAAAGAACAGTGGTCAATGTGCGAAATGGAATGAGCTTGCATG
47 K L T D P S K T S N T I R V F L P N K Q R T V V N V R N G M S L H
801 ACTGCCTTATGAAAGCACTCAAGGTGAGGGGCTGCAACCAGAGTGTGTGCAGTGTTCAGACTTCTCCACGAACACAAAAGTAAAAAGCAGCTTAGA
80 D C L M K A L K V R G L Q P E C C A V F R L L H E H K G K K A R L D
901 TTGAATACTGATGCTGCGTCTTTGATTGGAGAAGAATTCAAGTAGATTTCTGGATCATGTTCCCTCACAACACAACTTTGCTCGGAAGACGTT
113 W N T D A A S L I G E E L Q V D F L D H V P L T T H N F A R K T F

HindIII (1003) **PshAI (1018)** **BspHI (1077)**
1001 CTGAAGCTTGCCTTCTGTGACATCTGTCAGAAATTCCTGCTCAATGGATTTTCATGAGTGTGAGACTTGTGGCTACAAATTTTATGAGCACTGTAGCACC
147 L K L A F C D I C Q K F L L N G F R C Q T C G Y K F H E H C S T K
1101 TACCTACTATGTGTGGACTGGAGTAACATCAGACAACTTATTGTTTCCAAATCCACTATTGGTATAGTGGAGTCCCAGTACCTTCTTTGAC
180 V P T M C V D W S N I R Q L L F P N S T I G D S G V P A L P S L T
1201 TATGCGTCGTATGCGAGAGTCTGTTTCCAGGATGCCTGTTAGTCTCAGCACAGATATTCTACACCTCAGCCTTACCTTTAACACCTCCAGTCCCTCA
213 M R R M R E S V S R M P V S S Q H R Y S T P H A F T F N T S S P S

Sall (1329) **XcmI (1364)**
1301 TCTGAAGTTCCCTCTCCAGAGGAGGTCGACATCCACACCTAATGTCCACATGGTCAGCACCACCTGCCTGTGGACAGCAGGATGATTGAGGATG
247 S E G S L S Q R Q R S T S T P N V H M V S T T L P V D S R M I E D

BstBI (1403) **BstXI (1465)**
1401 CAATTCGAAGTCACAGCGAATCAGCCTCACCTTCCAGCCCTGTCCAGTAGCCCCAACAAATCTGAGCCCCAACAGGCTGGTACAGCCGAAACCCCGTGC
280 A I R S H S E S A S P S A L S S S P N N L S P T G W S Q P K T P V P

BsrBI (1510) **SandI (1528)**
1501 AGCACAAGAGAGCGGGCACCAGTATCTGGGACCAGGAGAAAAACAAATAGGCCTCGTGGACAGAGATTCAAGCTATTATTGGAAATAGAAGCC
313 A Q R E R A P V S G T Q E K N K I R P R G Q R D S S Y Y W E I E A

Sall (1699)
1601 AGTGAAGTGTGCTGTCCACTCGGATTGGGTCAGGCTCTTTTGGAACTGTTTATAAGGGTAAATGGCACGGAGATGTTGCAGTAAAGATCCTAAAGTTG
347 S E V M L S T R I G S G S F G T V Y K G K W H G D V A V K I L K V

FspI (1751)
1701 TCGACCCAAACCCAGAGCAATTCAGGCTTCCAGGAATGAGGTGGCTGTTCTGCGCAAAACACGGCATGTGAACATTCTGTTTTTATGCGGTACATGAC
380 V D P T P E Q F Q A F R N E V A V L R K T R H V N I L L F M G Y M T
1801 AAAGGACAACCTGGCAATTGTGACCCAGTGGTGGAGGCGAGCCTCTACAAACACCTGCATGTCCAGGAGACCAAGTTTCCAGATGTTCCAGCTAAT
413 K D N L A I V T Q W C E G S S L Y K H L H V Q E T K F Q M F Q L I

SphI (1938)
1901 GACATTGCCCGGACAGCGCTCAGGGAATGGACTATTTGCATGCAAAAGAACATCATCCATAGAGACATGAAATCCAACAATATATTTCTCATGAAGGCT
447 D I A R Q T A Q G M D Y L H A K N I I H R D M K S N N I F L H E G
2001 TAACAGTGAAAATTGGAGATTTTGGTTTGGCAACAGTAAAGTACAGCTGGAGTGGTTCTCAGCAGTTGAACAACCTACTGGCTGTCTCTGGATGGC
480 L T V K I G D F G L A T V K S R W S G S Q Q V E Q P T G S V L W M A
2101 CCCAGAGGTGATCCGAATGCAGGATAACAACCCATTGATTTCCAGTCCGATGCTACTCCTATGGCATCGTATTGTATGAAGTGTGACGGGGGAGCTT
513 P E V I R M Q D N N P F S F Q S D V Y S Y G I V L Y E L M T G E L

BglII (2265)
2201 CCTTATTCTCACATCAACAACCGAGATCAGATCATCTTTCATGGTGGGCCGAGGATATGCCTCCCGAGATCTTAGTAAAGTATATAAGAACTGCCCAAAG
547 P Y S H I N N R D Q I I F M V G R G Y A S P D L S K L Y K N C P K
2301 CAATGAAGAGGCTGGTAGCTGACTGTGTGAAGAAAGTAAAGGAAGAGAGGCTCTTTTTCCCGAGATCCTGTCTTCCATTGAGCTGCTCAACACTCTCT
580 A M K R L V A D C V K K V K E E R P L F P Q I L S S I E L L Q H S L

Eco47III (2416) **AfeI (2416)** **EcoRV (2458)** **Tth111I (2478)**
2401 ACCGAAGATCAACCGAGCGCTTCCGAGCCATCCTTGCATCGGGCAGCCACACTGAGGATATCAATGCTTGACGCTGACCAGTCCCGGAGGCTGCCT
613 P K I N R S A S E P S L H R A A H T E D I N A C T L T T S P R L P

MscI (2537) **NheI (2531)**
2501 GTCTTCTAGTTGACTTTGCACCTGTCTTCCAGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAACCACTAGAATGCAGTAAAA
647 V F •

2601 **HpaI (2669)**
AAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTGCATTCATTTTATGT

2701 **EcoRI (2765)**
TTCAGGTTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCT

2801
CCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTT

2901
CTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGTTTGAAGTAGCTCTTCATTTCTTTATGTTTAAATGCACTGACCTCCACATTCCCTTTTAA

3001 **SspI (3004)** **Swal (3018)**
GTAAAATATTTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCC

3101
AGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGA
141 • N R T Y K L P I

3201 **SacI (3279)**
TGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACA
132 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 C M G C

3301 **BstXI (3308)**
GGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGAC
99 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 S V A S

3401
CCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGTATGGCCGCC
65 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 I A A G

3501 **BspHI (3593)**
CGACATGGTGCTTGTCTCATAGAGCATGGTGATCTTCTAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGAT
32 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 T K M

3601 **AseI (3651)**
GGCCCTCTATAGTGAGTCGATTATATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTT

3701 **SacI (3708)**
CACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGT

3801 **SpeI (3806)**
TGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGC

3900 **SnaBI (3934)**
CAAAACCGCATCATCATGGTAATAGCGTAGCTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGG

4000 **NdeI (4039)**
GCCATTTACGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTG

4100
ACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTT

4200 **PstI (4218)** **SdaI (4217)** **PacI (4225)** **BspLU11I (4235)**
ACCGTAAGTTATGTAACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTT

4298
TTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCTTTCCCC

4398
CTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTC

4498 **ApaLI (4549)**
ACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAAC

4598
TATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAG

4698
AGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAG

4798
CTCTTGATCCGGCAAAACACCCTGCTGAGCGGTGGTTTTTTTGGTGTGAAATCGTAACATACGCTCTCCATCAAAAACAAACGAAACAAACAACTAGCA

4898 **EagI (4985)** **PacI (4965)** **Swal (4974)** **NotI (4984)**
ATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAA

4998
AATATCTTTATTTTACATCTGTGTGTTGGTTTTTTGTTGTAATCGTAACATACGCTCTCCATCAAAAACAAACGAAACAAACAACTAGCA

5098
AAATAGGCTGCCCGAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA