



PvuI (7)
SgfI (6)
 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **Bsu36I (291)**
 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCCTTACGCGCCCGCCGCTACCTGAGGCC
 301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NaeI (441)
 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

BspLU11I (560)
KasI (535) **AgeI (552)**
 501 TCTGTTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTCAACATGTCAGACTATGAGAATGACGACGAGTGTGGAGCAC
 601 CCTGGAGAGCTTCCGGTGAAGCTCATCTGTGATTGACCCCTCCGGATCACACCTATCTACGCCAGTCAAAGTCTGAACCCCGATGATGAGGAG
 13▶ L E S F R V K L I S V I D P S R I T P Y L R Q C K V L N P D D E E **XhoI (799)**

Ppu10I (884)
NsiI (884)
MluI (861)
 801 TCGAGAGCCTGGAGCTCTACTACCTCAGTTATACCGAAAGTCACTGGCAAGGAGCCAGCAGCGCTTCTCCATGATCATTGATGCATCAGGGGAGTC
 80▶ L E S L E L Y Y P Q L Y R K V T G K E P A R V F S M I I D A S G E S
PshAI (921)
 901 TGGCTGACGCAGCTGTGATGACAGAGTCAAGCTGCAGAAGAAGTTCAAGACCTGACGGCCCTTCTGAGCTCAAGGACGACTTCATCAAGGAG
 113▶ G L T Q L L M T E V M K L Q K K V Q D L T A L L S S K D D F I K E

Eco47III (1088)
AfeI (1088)
FspI (1022) **BsrBI (1036)**
 1001 CTGAGGGTAAAGGACAGCCTACTGCGAAGCACCAGGAGCGGGTGCAGCGCTCAAGGAGGAGTGTGAGCTGAGCAGTGGGAGCTGAAGCGCTGCAAGG
 147▶ L R V K D S L L R K H Q E R V Q R L K E E C E L S S A E L K R C K

BstXI (1118)
MscI (1115)
 1101 ACGAGAATATGAGCTGGCCATGTGCCTGGCACATCTGAGTGAAGAGAAGGGCGCAGCACTCATGCGGAACCGTGACCTGCAGCTTGAAGTGGACCGGCT
 180▶ D E N Y E L A M C L A H L S E E K G A A L M R N R D L Q L E V D R L

NotI (1271)
 1201 CAGGCACAGCCTCATGAAGGCCGAGGATGACTGCAAGTGGAGCGCAAACACACACTGAAGCTCAGGCACGCCATGGAGCAGCGCCCTAGTCAGGAGCTG
 213▶ R H S L M K A E D D C K V E R K H T L K L R H A M E Q R P S Q E L

XmaI (1337)
 1301 CTGTGGAACTACAGCAGGAAAAGGACTTGTCTGAGGCGGGTGCAGGAGCTGCAGGTCTCTGTGCAGGAGGGTAAGCTAGACAGGAATAGTCCATACA
 247▶ L W E L Q Q E K D L L Q A R V Q E L Q V S V Q E G K L D R N S P Y

PshAI (1417)
 1401 TTCAAGTGTGGAGGAGGACTGGCGTCAAGCACTGCAGGAACACCAGAAGCAGGTGACACCATCTTCTCCCTACGGAAGGACCTCCGCCAGGCTGAGAC
 280▶ I Q V L E E D W R Q A L Q E H Q K Q V S T I F S L R K D L R Q A E T

ApaLI (1512)
Bsp120I (1505) **FspI (1556)** **BsrGI (1574)**
 1501 CCTCCGGGCCCCGTGCACGGAAGAAAAGGAGATGTTTCAGCTGCAGTGCCTGGCCTTGCAGCAAGGATGCCAAGATGTACAAGGACCGTATCGAGGCTATC
 313▶ L R A R C T E E K E M F E L Q C L A L R K D A K M Y K D R I E A I

SphI (1662)
 1601 CTGCTGCAGATGGAGGAGTCTCCATTGAGAGGGACCAGGCTATGGCCTCCAGGAAGAGCTGCATGCACAGTGTACCCAAAGCTTTCAGGACAAAGATA
 347▶ L L Q M E E V S I E R D Q A M A S R E E L H A Q C T Q S F Q D K D

BstBI (1703)
 1701 AGCTTCGAAAGCTGTTTCGAGAGCTGGGTGAGAAGGCAGATGAGCTGCAGCTACAGCTGTTCCAGACGGAGAGCCGATTACTGGCCGCGGAGGGCAGACT
 380▶ K L R K L V R E L G E K A D E L Q L Q L F Q T E S R L L A A E G R L

Bsu36I (1882)
 1801 CAAGCAGCAGCAATTGGACATGCTCATCTGAGCTCTGACTTGAAGACAGTTACCCAGGAACCTCCAGGAGCTCTCACTGCCTCAGGATCTGGAGGAG
 413▶ K Q Q Q L D M L I L S S D L E D S S P R N S Q E L S L P Q D L E E

NcoI (1992)
 1901 GATGCCAGCTCTCAGACAAAGTGTACTGGCAGACAGGGAGAGCCAGAGCAGCCCTTATGGCTCTGAACAAGGAGCATCTTTCAGTACCCATGGCA
 447▶ D A Q L S D K G V L A D R E S P E Q P F M A L N K E H L S L T H G

Bsp120I (2002) **BsrBI (2032)** **KasI (2039)**
 2001 TGGGGCCAGCAGCAGCGAGCCCCGGAGAAGGAGCGGGCGCCCTCAAGGAGAGCTTCGAGAATACCGCAGGAAGCGGGCGCTCCGCAAGATGCAGAA
 480▶ M G P S S S E P P E K E R R R L K E S F E N Y R R K R A L R K M Q N

MscI (2178)
NheI (2172)
 2101 CAGCTGGCGGCAGGGAGAAGGGGATCGCGGAATACGACAGGCAGCGACAACACCGACACCGAGGGCTCTAGCTAGCTGGCCAGACATGATAAGATACA
 513▶ S W R Q G E G D R G N T T G S D N T D T E G S •

2201 TTGATGAGTTTGACAAACCACAACCTAGAAATGCAGTGAAGAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTG

2301 **HpaI (2310)**
CAATAAACAAAGTTAAACAACAATTGCATTCATTTTTATGTTTCAGGTTCAAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGT

2401 **EcoRI (2406)**
GGTATGGAATTCTAAAATACAGCATAGCAAACTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGG

2501
GGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTGCTCTTCATTTCC

2601 **SspI (2645)** **SwaI (2659)**
TTTATGTTTTAAATGCACCTGACCTCCACATTCCTTTTTAGTAAAATATTAGAAAATATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATT

2701
AGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTAAATAGAAATTGGACAGCAAGAA

2801 **BstXI (2949)**
AGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTTCATCTCAATGAGCACAAAGCAG
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

2901 **BstXI (2949)**
TCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCA
112 D 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

3001 **StuI (3084)**
CAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGCCTGCCAATGTAGGCCTCAATGTGGAC
79 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

3101 **StuI (3084)**
AGCAGAGATGATCTCCAGTCTTGGTCTGATGGCCGCCGACATGGTGTGTTGCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCAC
46 A 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

3201 **XmnI (3226)** **AseI (3292)**
AGTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTG
12 L E L D Q Q S I N F T K M

3301 **XmnI (3226)**
TCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTGTC

3400 **SpeI (3447)**
GTCAATGGGGCGGAGTTGTTACGACATTTGGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAAT

3499 **SnaBI (3575)**
CCCCGTGAGTCAAACCGTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAG

3599 **NdeI (3680)**
GAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCATTACCCTGATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATG

3699 **NdeI (3680)**
TACTGCCAAGTGGGAGTTTACCCTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTC

3799 **SdaI (3858)** **PacI (3866)** **BspLU11I (3876)**
AATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCATTACCCTAAGTTATGTAACGCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCAG

3897 **SdaI (3858)** **PacI (3866)** **BspLU11I (3876)**
CAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAAAAATCGACGCTCAAGTCAGAGGT

3997 **SdaI (3858)** **PacI (3866)** **BspLU11I (3876)**
GGCGAAACCCGACAGGACTATAAAGATACCAGGCTTTCCCTGGAAGCTCCCTCGTGGCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTC

4097 **ApaLI (4190)**
CGCTTTTCTCCCTTCGGGAGCGTGGCGCTTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCAC

4197 **ApaLI (4190)**
GAACCCCCGTTACGCCGACCGCTGCGCCTTATCCGTAACATATCGTCTTGGTCCAAACCGGTAAGACACGACTTATGCCACTGGCAGCAGCCACTG

4297 **ApaLI (4190)**
GTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTG

4397 **ApaLI (4190)**
CGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCAGCTGGTAGCGGTGTTTTTTGTTTGAAGCAG

4497 **ApaLI (4190)**
CAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGG

4597 **EagI (4626)** **PacI (4606)** **SwaI (4615)** **NotI (4625)**
TCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGTTTTTTGTTGAATCGTAACCTAACA

4697 **EagI (4626)** **PacI (4606)** **SwaI (4615)** **NotI (4625)**
TACGCTCTCCATCAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA