



PvuI (7)
SgfI (6) MfeI (82) EcoNI (96)
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555) **AgeI (552)** **NeoI (560)**
501 TCTGTTTGTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCCTACCTGAGATCACCGGTACCATGGCTGCAGCCAGCGTGACCCCTGGCTCCCTGGA
1 M A A A S V T P P G S L E

XcmI (620) **XcmI (696)**
601 GTTGCTACAGCCCGCTTCTCAAGACCCTCTGGGACCAAGCTGGAAGCCAAGTACCTGTGCTCCGCTGCAGAAACGTCTCCGACGGCCCTTCCAG
13 L L Q P G F S K T L L G T K L E A K Y L C S A C R N V L R R P F Q

AgeI (713)
701 GCGCAGTGTGGCCACCGTACTGCTCTTCTGCTGGCAGCATCCTCAGCTCTGGCCCTCAGAACTGTGCTGCCTGTGTTACGAGGGCAGATATGAAG
47 A Q C G H R Y C S F C L A S I L S S G P Q N C A A C V H E G I Y E

EagI (872)
801 AAGCATTCTATTTTAGAAAGCAGTTCGCGCTTCCAGATAATGCTGCCCGCAGGGAGTGGAGAGCCTGCCCGCTGTCCAGTGATGGATGCAC
80 E G I S I L E S S S A F P D N A A R R E V E S L P A V C P S D G C T

SmaI (907) **BsrBI (949)**
901 CTGGAAGGGGACCCTGAAAGAATACGAGAGCTGCCACGAAGGCCGCTGCCCGCTCATGCTGACCGATGTCCCGCTGCAAAAGCCCTGGTCCGCTTGGT
113 W K G T L K E Y E S C H E G R C P L M L T E C P A C K G L V R L G
1001 GAAAAGGAGCGCCACCTGGAGCAGAGTCCCGGAGAGAACCTGAGCTGCCGGCATTGCCGGCACCTGCTGCGGAGCAGACTGAAGGCGCACACCG
147 E K E R H L E H E C P E R S L S C R H C R A P C C G A D V K A H H

XmaI (1154) **Tth111I (1171)**
1101 AGGTCTGCCCAAGTTCCTTAACTTGTGACGGCTGCGGCAAGAAGAAGATCCCCGGGAGAAGTTTTCAGGACCAGTCAAGACTTGTGGCAAGTGTGC
180 E V C P K F P L T C D G C G K K K I P R E K F Q D H V K T C G K C R

BstAPI (1272)
1201 AGTCCCTTGAGATTCCACGCCATCGGCTGCCTCGAGACGGTAGAGGGTGGAGAAACAGCAGGAGCAGGAGTGCAGTGGCTGCGGGAGCACCTGGCCATG
213 V P C R F H A I G C L E T V E G E K Q Q E H E V Q W L R E H L A M
1301 CTACTGAGCTCGGTGCTGGAGGCAAAGCCCTCTGGGAGACCAGAGCCACGGGGTGCAGAGTCTGCAGAGTGCAGAGCCTGGAGAAGAAGACGG
247 L L S S V L E A K P L L G D Q S H A G S E L L Q R C E S L E K K T
1401 CCACCTTTGAGAACATTGCTGCGTCTGAACCGGGAGGTGGAGAGGGTGGCCATGACTGCCGAGGCCTGCAGCCGGCAGCACCGGCTGGACCAAGACAA
280 A T F E N I V C V L N R E V E R V A M T A E A C S R Q H R L D Q D K

XhoI (1231) **DraIII (1264)** **BstAPI (1263)**
1501 GATTGAAGCCCTGAGTAGCAAGGTGCAGCAGCTGGAGAGGAGCATTGGCTCAAGGACCTGGCGATGGCTGACTTGGAGCAGAAGGTCTTGGAGATGGAG
313 I E A L S S K V Q Q L E R S I G L K D L A M A D L E Q K V L E M E

BglII (1631)
1601 GCATCCACTACGATGGGGTCTTCATCTGGAAGATCTCAGACTTCGCCAGGAAGCGCCAGGAAGCTGTGGCTGGCCGCATACCCGCCATCTTCTCCAG
347 A S T Y D G V F I W K I S D F A R K R Q E A V A G R I P A I F S P
1701 CCTTCTACACCAGCAGGTACGGCTACAAGATGTGTCTGCTATCTACCTGAACGGCGACGGCAGCGGGGAGGAAACACACCTGTCCCTTCTTGTGGT
380 A F Y T S R Y G Y K M C L R I Y L N G D G T G R G T H L S L F F V V

Bsp120I (1806) **BstEII (1848)** **BbrPI (1885)**
1801 GATGAAGGCCCCAATGACGCCCTGCTGCGGTGGCCCTTAACCAAGAAGGTGACCTTAATGCTGCTGACCAGAATAACCGGGAGCAGCTGATTGACGCC
413 M K G P N D A L L R W P F N Q K V T L M L L D Q N N R E H V I D A
1901 TTCAGGCCGACGTGACTTCATCTCTTTTTCAGAGGCCAGTCAACGACATGAACATCGCAAGCGGCTGCCCTCTTCTGCCCGTCTCAAGATGGAG
447 F R P D V T S S S F Q R P V N D M N I A S G C P L F C P V S K M E

EcoRI (2004) **NheI (2087)**
2001 CAAAGAATCCTACGTGCGGGACGATGCCATCTTCATCAAGGCCATTGTGGACCTGACAGGGCTCTAACTGCCCTACTGGTGTCTGCTAGCTGGCCAG
480 A K N S Y V R D D A I F I K A I V D L T G L •

EcoRI (2321)
2101 ACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAAATGCAAGTGAAGAAATGCTTTATTGTGAAATTTGTGATGCTATTGCTTTATTTGT

HpaI (2225) **MfeI (2236)**
2201 AACCATTAAGCTGCAATAAACAGTTAAACAACAACATTCATTCTTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGTTTTTAAAGCAAGTAA

EcoRI (2321)
2301 AACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACCTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAA
2401 GGCATAGGCATCAGGGGCTGTGCCAATGTCATTAGCTGTTGACGCTCACCTCTTTTCATGGAGTTAAGATATAGTGTATTTTCCAAAGTTTGAA

SapI (2503) **SspI (2560)** **SwaI (2574)**
2501 CTAGCTCTTCATTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAA
2601 TAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAA

2701 ATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCACTCA
 141 • N R T Y K L P I L E E I T T K V L K G N M E
 BstXI (2864)

2801 ATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGG
 117 I L V F C 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
 2901 GGTGCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTA
 84 H R V A V 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
 3001 GGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTTCCTCATAGAGCATGGTGATCTTCTCA
 51 A E I H V 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
 XmnI (3141)

3101 GTGGGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCTGATTATACTATGCCGATATACTAT
 17 T A V E V L E L D Q Q S I N F T K M
 AseI (3207)

3201 GCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAACAGAGCTCTGCTTATATAGACCTCCCACCGTACACGCC
 SpeI (3362)

3301 TACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTG
 SnaBI (3490)

3401 GAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGGACTAATACGTAGATG
 NdeI (3595)

3501 TACTGCCAAGTAGAAAGTCCCATAAAGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATAT
 3601 GATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGT
 PacI (3781)
 SdaI (3773) BspLU11I (3791)

3701 CATTATTGACGTCAATGGGCGGGGTCTGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAG
 3801 CAAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTC
 3901 AAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCTGGAAGTCCCTCGTGGCTCTCCTGTTCCGACCTGCCGCTTACC
 4001 GGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCTGCTCCAAGCTGG
 ApaLI (4105)

4101 GCTGTGTGCACGAACCCCCGTTACGCCGACCGTGGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGC
 4201 AGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTA
 4301 TTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGATTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTG
 4401 TTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTA
 EagI (4541)
 PacI (4521) SmaI (4530) NotI (4540)

4501 AGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAAT
 4601 CGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTA
 4701 TCGAA