



PvuI (7)
SgfI (6) **MfeI (82)**
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCGCCCTACCTGAGGGCC
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441) **NaeI (441)**
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **BspHI (560)** **PvuII (591)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCATCATGATTCACACCAACCTGAAGAAAAAGTTTCAGCTGCTG
1 M I H T N L K K K F S C C
601 CGTCCTGGTCTTTCTTCTGTTTGCAGTCATCTGTGTGTGGAAGGAAAAGAAAGGGAGTTACTATGATTCCTTTAAATTTGCAAACCAAGGAATTCAG
13 V L V F L L F A V I C V W K E K K K G S Y Y D S F K L Q T K E F Q

NcoI (725) **MseI (722)** **AvrII (880)** **BglII (893)**
701 GTGTTAAAGAGTCTGGGAAATTTGGCCATGGGGTCTGATTCCAGTCTGTATCCTCAAGCAGCACCCAGGACCCACAGGGGCCAGACCCTCGGCA
47 V L K S L G K L A M G S D S Q S V S S S S T Q D P H R G R Q T L G
801 GTCTCAGAGGCTAGCCAAGGCCAAACAGAGGCTCCTTCCAGGTGTGGAACAAGGACAGCTCTTCCAAAAACCTTACCTAGGCTGCAAAAAGATCTG
80 S L R G L A K A K P E A S F Q V W N K D S S S K N L I P R L Q K I W
901 GAAGAATTACCTAAGCATGAACAAGTACAAAGTCTCTACAAGGGCCAGGACAGGCATCAAGTTCAGTGCAGAGGCCCTGCGCTGCCACCTCCGGGAC
113 K N Y L S M N K Y K V S Y K G P G P G I K F S A E A L R C H L R D

NcoI (1013)
1001 CATGTGAATGTATCCATGGTAGAGTCCACAGATTTTCCCTTCAATACCTCTGAATGGGAGGGTATCTGCCAAAGGAGAGCATTAGGACCAAGGCTGGGC
147 H V N V S M V E V T D F P F N T S E W E G Y L P K E S I R T K A G

BspHI (1173)
BspHI [m] (1171) **Bsu36I (1185)**
ClaI (1165) **Tth111I (1177)**
1101 CTTGGGGCAGGTGTGCTGTTGTGTGTCGTACGCGGATCTCTGAAGTCTCCCAACTAGGACAGAGAAATCGATGATGATGACGCGAGTCTGAGGTTAATGG
180 P W G R C A V V S S A G S L K S S Q L G R E I D D H D A V L R F N G

Eco47III (1283)
BstEII (1269) **AfeI (1283)**
1201 GGCACCCACAGCCAACTTCCAACAAGATGTGGGCACAAAACTACCATTGCGCTGATGAACTCTCAGTTGGTTACCACAGAGAAGCGCTTCTCAAAGAC
213 A P T A N F Q Q D V G T K T T I R L M N S Q L V T T E K R F L K D

BsrGI (1304) **SandI (1331)** **Bst1107I (1342)** **EcoRV (1354)** **Asp718I (1367)**
Acc65I (1367)
1301 AGTTTGTACAATGAAGGAATCCTAATTGTATGGGACCCATCTGTATACCACTCAGATATCCCAAAGTGGTACCAGAATCCGGATTATAATTTCTTTAACA
247 S L Y N E G I L I V W D P S V Y H S D I P K W Y Q N P D Y N F F N
1401 ACTACAAGACTTATCGTAAGCTGCACCCCAATCAGCCCTTTACATCCTCAAGCCCCAGATGCCTTGGGAGCTATGGGACATTCTTCAAGAAATCTCCCC
280 N Y K T Y R K L H P N Q P F Y I L K P Q M P W E L W D I L Q E I S P

BspHI (1550)
1501 AGAAGAGATTGAGCCAAACCCCATCTCTGGGATGCTTGGTATCATCATCATGATGACGCTGTGTGACCAGGTGGATATTTATGAGTTCCTCCCATCC
313 E E I Q P N P P S S G M L G I I I M M T L C D Q V D I Y E F L P S
1601 AAGCGCAAGACTGATGTGTGCTACTACTACCAGAAGTCTTTCGATAGTGCCTGCACGATGGGTGCCTACCACCCGCTGCTCTATGAGAAGAAATTTGGTGA
347 K R K T D V C Y Y Y Q K F F D S A C T M G A Y H P L L Y E K N L V

BspEI (1763)
1701 AGCATCTCAACCAGGACACAGATGAGGACATCTACCTGCTTGGAAAAGCCACACTGCCTGGCTTCCGGACCATTACTGCTAAGCACAGGCTCCTCACTC
380 K H L N Q G T D E D I Y L L G K A T L P G F R T I H C •

MseI (1823) **NheI (1817)**
1801 TTCTCCATCAGGCATTAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTG

HpaI (1955) **MfeI (1966)**
1901 TGAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACAATTGCATTCATTTTATGTTTCAGGTTACAGGGG

EcoRI (2051)
2001 GAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTC
2101 TACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTT

SspI (2290)
2201 AAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATGATAAAATATTCAGA

2301 SwaI (2304) AATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGG

2401 ACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTTCTGGTGTACTTGAGGGGATGAGTTCCTCAATG
141 • N R T Y K L P I L E E I

2501 GTGGTTTTGACCAGCTTGCCATTCACTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCC
127 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 P S V V R

2601 TGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCCGTTGCTCAGCAGACCCAATGGCAATGGC
94 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 G I A I A

2701 TTCAGCACAGACAGTGCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCGACATGGTGCTTG
61 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 V H H K

BspHI (2879)

2801 TTGCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGT
27 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

AseI (2937) SacI (2994)

2901 GAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTC

3001 TGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTC
SpeI (3092)

3100 AAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCAT

SnaBI (3220)

3200 CATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTAAGTGGCATAATGCCAGGGGGCCATTTACCGTCA

NdeI (3325)

3300 TTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTAAGTGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAG

3400 TCCCTATTGGCGTTACTATGGAAACATACGTCATTATTGACGTCAATGGGGGGGTCGTTGGCGGTGAGCCAGGGGGCCATTTACCGTAAGTTATGT

PstI (3504) SdaI (3503) PacI (3511) BspLU11I (3521)

3500 AACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGCCGCTTGGTGGCGTTTTTCCATAGGCTCCG

3598 CCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCAAACCCGACAGGACTATAAAGATACAGGCGTTTTCCCTGGAAGCTCCCTC

3698 GTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTCTCCCTTCGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATC

ApaLI (3835)

3798 TCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTGAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTC

3898 CAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGG

3998 TGGCTAACTACGGCTACACTAGAAGAAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCA

4098 AACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGG

EagI (4271) PacI (4251) SwaI (4260) NotI (4270)

4198 GTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCCAATAAAATATCTTTATTTT

4298 CATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCC

4398 CAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA