



100

**PvuI (7)**  
**SgfI (6)** MfeI (82) EcoNI (96)  
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)** **HindIII (245)** **Bsu36I (291)**  
EcoNI (287)  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMI (441)**  
**NaeI (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGTCTTTGTTTCGTTT

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**KasI (535)** **AgeI (552)** **BspHI (560)** **Scal (587)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTTCATCATGACAAGGACGTATGAAAATTCCAGTACTTGGAGAA  
1 M T R T Y E N F Q Y L E N  
**Bsp120I (670)**  
601 TAAGTGAAAGTCCAGGGGTTAAAAATGGGCCACTTCTCTCCAGTCCCTCCTCGAGCGTCTCGCTCTGGGCCTGCCATCTCTGTGTCCCTGGGC  
13 K V K V Q G F K N G P L P L Q S L L Q R L R S G P C H L L L S L G  
**PstI (652)** **BsrBI (663)**  
701 CTCGGCCTGCTGCTGCTGGTTCATCATCTGTGTGGTTGGATTCCAAAATTCAAAATTCAGAGGGACCTGGTGACCCTGAGAACAGATTTTAGCAACTTCA  
47 L G L L L L V I I C V V G F Q N S K F Q R D L V T L R T D F S N F  
**BstEII (768)**  
801 CCTCAAACACTGTGGCGGAGATCCAGGCACTGACTTCCAGGGCAGCAGCTTGAAGAAACGATAGCATCTCTGAAAGCTGAGGTGGAGGGTTTCAAGCA  
80 T S N T V A E I Q A L T S Q G S S L E E T I A S L K A E V E G F K Q  
**AvrII (954)**  
901 GGAACGGCAGGCAGGGGTATCTGAGCTCCAGGAACACACTACGCAGAAGGCACACCTAGGCCACTGTCCCACTGCCATCTGTGTGTGCCAGTTCAT  
113 E R Q A G V S E L Q E H T T Q K A H L G H C P H C P S V C V P V H  
1001 TCTGAAATGCTCCTGCGAGTCCAGCAGCTGGTGAAGACCTGAAGAACTGACCTGCCAGGTGGCTACTCTCAACAACAAATGCCTCCACTGAAGGGACCT  
147 S E M L L R V Q Q L V Q D L K K L T C Q V A T L N N N A S T E G T  
**Scal (1181)**  
1101 GCTGCCCCGTCAACTGGGTGGAGCACCAAGACAGCTGCTACTGTTTCTCTCACTCTGGGATGTCTGGGCCGAGGCTGAGAAGTACTGCCAGTGAAGAA  
180 C C P V N W V E H Q D S C Y W F S H S G M S W A E A E K Y C Q L K N  
**DraIII (1204)**  
1201 CGCCACCTGGTGGTTCATCAACTCCAGGGAGGAGCAGAATTTTGTCCAGAAATATCTAGGCTCCGCATACACCTGGATGGCCTCAGTGACCCTGAAGGA  
213 A H L V V I N S R E E Q N F V Q K Y L G S A Y T W M G L S D P E G  
**BstXI (1363)**  
1301 GCCTGGAAGTGGGTGGATGGAACAGACTATGCGACCGCTTCCAGAACTGGAAGCCAGGCCAGCCAGCAGCTGGCAGGGGCACGGGCTGGGTGGAGGCG  
247 A W K W V D G T D Y A T G F Q N W K P G Q P D D W Q G H G L G G G  
**XcmI (1420)** **Tth111I (1438)**  
1401 AGGACTGTGCTCACTTCCATCCAGACGGCAGGTGAATGACGACGCTGCCAGAGGCCCTACCACTGGGTCTGCGAGGCTGGCCTGGGTGAGACCAGCCA  
280 E D C A H F H P D G R W N D D V C Q R P Y H W V C E A G L G Q T S Q  
**MscI (1531)**  
**NheI (1525)**  
1501 GGAGAGTCACTGAGCTGCCTTTGGTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACAGAAATGCAAGTGAAGAAAAATGC  
313 E S H •

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**HpaI (1663)** **MfeI (1674)**  
1601 TTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAAACAACATTCATTATTTATGTTTCAGG

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**EcoRI (1759)**  
1701 TTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAAT  
1801 CAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCA

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**SspI (1998)**  
1901 TGGAGTTTAAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTTCCCTTTTATAGTAAAA

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**Swal (2012)**  
2001 TATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTA  
2101 GTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGGGGGATGAGTT  
141 • N R T Y K L P I L E  
2201 CCTCAATGGTGGTTTTGACCAGCTTCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCT  
130 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 P S  
**BstXI (2302)**  
2301 GACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATG  
97 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 G I  
**StuI (2437)**  
**Eco147I (2437)**  
2401 GCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGTCTGATGGCCGCCCGACAT  
63 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 V H

BspHI (2587)

2501 GGTGCTTGTTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGGCTTCATGATGGCCCT  
30 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

VspI (2645)  
AseI (2645)

2601 CCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAA

2701 ACGAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTT

SpeI (2800)

2801 ACTAGTCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAAC

SnaBI (2928)  
Eco105I (2928)

2900 CGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCACTGACTGGGCATAATGCCAGGCGGGCCATT

NdeI (3033)

3000 TACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCAAGTGGCAGTTTACCAGTAAATACTCCACCATTGACGTCA

3100 ATGAAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTA

PstI (3212)  
SdaI (3211) PacI (3219) BspLU11I (3229)

3200 AGTTATGTAACGCC T G 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 G A A C C G T A A A A A G G C C G T T G C T G G C G T T T T C C A T

3298 A G G C T C G C C C C C T G A C G A G C A T C A C 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 C C C G A C A G G A C T A T A A G A T A C C A G G C G T T T C C C C T G G A A

3398 G 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 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 T C C T T C G G G A A G C G T G G C G T T T C T C A T A G C T C A C G C T G

ApaLI (3543)

3498 T A G G T A T C T C A G T T C G G T G T A G G T C G T T C G T C C A A G C T G G G C T G T G T G C A G A A C C C C C G T T C A G C C C G A C C G T G C G C T T A T C C G G T A A C T A T C G T

3598 C T T G A G T C C A A C C C G G T A A G A C A C G A C T T A T C G C C A C T G G C A G C A G C C A C T G G T A A C A G G A T T A G C A G A G C G A G G T A T G T A G G C G G T G C T A C A G A G T T C T

3698 T G A A G T G G T G G C C T A A C T A C G G T A C A C T A G A A G A A C A G T A T T T G G T A T C T G C G C T C T G T G A A G C C A G T T A C C T T C G G A A A A A G A G T T G G T A G C T C T T G

3798 A T C C G G C A A A C A A A C C A C C G C T G G T A G C G G T G G T T T T T T G T T T G C A A G C A G C A G A T T A C G C G C A G A A A A A A G G A T C T C A G A A G A T C C T T T G A T C T T T

EagI (3979)  
PacI (3959) SwaI (3968) NotI (3978)

3898 T C T A C G G G G T C T G A C G C T C A G T G G A A C G A A A A C T C A C G T T A A G G G A T T T T G G T C A T G G C T A G T T A A T T A A C A T T T A A A T C A G C G C C G C A A T A A A A T A T C

3998 T T T A T T T T C A T T A C A T C T G T G T T G T T T T T T G T G T G A A T C G T A A C A T A C A T A C G C T C C A T C A A A C A A A A C G A A C A A A C A A A C T A G C A A A T A G

4098 G C T G T C C C C A G T G C A A G T G C A G G T G C C A G A A C A T T T C T A T C G A A