



125

**PvuI** (7) **MfeI** (82)  
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
**SgfI** (6)

101 GAGAAAGTGGCGGGGTAAGTGGAAAGTGATGTCGTGTACTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCATATAAGTGCAGTAGTCGCC

**Psp1406I** (203) **HindIII** (245) **Bsu36I** (291)  
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTTCACGCGCCCGCCGCTACCTGAGGGCC  
301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCCCTCCCGCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGTCAAGTTCAGGTCGAGCC

**NgoMI** (441) **NaeI** (441)  
401 GGGCCTTGTCCGGGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCAGCCTTTGCTGACCCTGTTGCTCAACTCTACGCTTTTGTTCGTTT

**NcoI** (560) **BstEII** (555) **BsrBI** (577)  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATGGAGGTGGAGCCTCCGCTCTACCCTGTGGCCGGGGC  
601 CGCGGTCCTCAAGGGATGAAGACCGCACGGAGTTCTGTAGTGGCCAGAGGCTCCCTTGGACGAACCTCGTGGGTGCTACCCCAACTACAATGAGGAG  
130 M E V E P P L Y P V A G A  
130 A G P Q G D E D R H G V P D G P E A P L D E L V G A Y P N Y N E E  
701 GAGGAAGAGCGCCGCTACTACCGCCGCAAGCGCCTCGGAGTGGTCAAGAAGCTGCTGGCGCCAGCACGGGTGTACCCTTACTTACGGCGTCTACCTGG  
470 E E E R R Y Y R R K R L G V V K N V L A A S T G V T L T Y G V Y L

**PstI** (805) **ClaI** (880) **BsiBI** (897)  
801 GCCTCCTGCAGATGCAACTGATCCTGCATATGATGAGACCTACAGAGAGGTGAAGTATGGCAACATGGGGCTGCCGGACATCGATAGCAAGATGCTGAT  
800 G L L Q M Q L I L H Y D E T Y R E V K Y G N M G L P D I D S K M L M

**Asp718I** (961) **Acc65I** (961)  
901 GGGTATCAACGTGACGCCATCGCTGCCCTGCTCTACACCTGTGCTCATCAGTTTTTTTGGTACCAAGTGGATGATGTTCTTGGCTGTGGCATCTAT  
113 G I N V T P I A A L L Y T P V L I R F F G T K W M M F L A V G I Y

**NcoI** (1094)  
1001 GCCCTTTTGTCTCTACCAACTACTGGGAACGCTACTACACGCTGGTGCCTCTGCTGTGGCTCTGGGCATGGCCATTGTGCCTCTGTGGGCCTCCATGG  
147 A L F V S T N Y W E R Y Y T L V P S A V A L G M A I V P L W A S M

**ScaI** (1127)  
1101 GAACTATATCACCAGGATGTCCAGAAGTACTATGAATACTCCCACTACAAGGAGCAAGATGAGCAGGGACCTCAGCAGCGCCACCACGAGGTCCCA  
180 G N Y I T R M S Q K Y Y E Y S H Y K E Q D E Q G P Q Q R P P R G S H  
1201 CGCACCTATCTCCTGTTTTCCAGGCCATCTTCTATAGCTTCTTCCACTTGAGCTTCCGCGTGTGCCAGCTGCCCATGATTTACTTCTCAACAACACTAC  
213 A P Y L L V F Q A I F Y S F F H L S F A C A Q L P M I Y F L N N Y

**XmnI** (1365)  
1301 CTGTATGACCTGAACCACACACTGATCAACGTGCAGAGCTGCGGTACTAAGAGCAAGGCATCTGAATGGCTTCAACAAGACGGTCCTTCGGACGCTGC  
247 L Y D L N H T L I N V Q S C G T K S Q G I L N G F N K T V L R T L

**SfiI** (1446)  
1401 CGCGCAGCAAAAACCTTATTGTTGTAGAGAGCGTGCTCATGGCGGTGGCCTTTTGGCCATGCTGATGGTGTGGCCTGTGTGGAGCCGCTTACCGGCC  
280 P R S K N L I V V E S V L M A V A F L A M L M V L G L C G A A Y R P

**FspI** (1517)  
1501 CACGGAAGAGATGACCTGCGCAGCGTGGGCTGGGGCAACATCTTCCAGCTGCCCTTCAAACACGTCGCTGACTTTCGCTTACGCCATCTGGTGCCTT  
313 T E E I D L R S V G W G N I F Q L P F K H V R D F R L R H L V P F

**NcoI** (1667)  
1600 CTTATCTACAGTGGCTTTGAGGTGCTTTTGCCCTGCACTGGTTTTGCCCTGGGCTACGGCGTGTCTCCATGGGCTGGAGCGACTGGCATACTGCTC  
346 F I Y S G F E V L F A C T G F A L G Y G V C S M G L E R L A Y L L

**BsrBI** (1771)  
1700 ATAGCTTACAGCTGGGTGCCTCAGCCTCCTCGTTTCTGGGGTGTGGACTGTGGCTGCCTCGCTGTCCCCTGGCTGGCTGGGGCAGGACTGCACC  
380 I A Y S L G A S A S S V L G L L G L W L P R S V P L V A G A G L H  
1800 TACTGCTACCCCTTAGCCTCTTTTTCTGGGCTCCTGCTCCTGGGTCCTCAGCACAGTTGGATCTTTACTTCTGGTGGCCTCTGGGGTGTGGGCG  
413 L L L T L S L F F W A P A P R V L Q H S W I F Y F V A A L W G V G S  
1900 CGCCTCAAACAAGACCGGACTTAGCACACTCCTGGGCATCCTATGAAGACAAGAGAGGACGAGCTTATCTTACCATCTATCACTGGTGGCAGGCC  
446 A L N K T G L S T L L G I L Y E D K E R Q D F I F T I Y H W W Q A

**BstEII** (2064)  
2000 GTGGCCATCTTGTGTGTACTGGGCTCCAGCTTGCCATGAAGGCAAGCTGTCAGTGTGTGCTGGTGACCCCTGGTAGCAGCAGCCTCATACTGT  
480 V A I F V V Y L G S S L P M K A K L A V L L V T L V A A A A S Y L  
2100 GGATGGAGCAGAAGTTGCAGCAAGGATGGTCCCGCGGCGACCCGCTTCGAAGCCACAGCACAAAGTCCGGCTACCGCTACCTGGAGGAGGACAA  
513 W M E Q K L Q Q G L V P R Q P R I P K P Q H K V R G Y R Y L E E D N

**FspI** (2242) **Bsp120I** (2269)  
2200 CTCGGATGAGAGTGCATGGAGGCGGAGCGGGTCAAGGGGACTGCAGAGAGGACGAAGCACCACAGGCGGGCCCTGGGTGCAGAGCCAGCTGGCCCC  
546 S D E S D M E G E Q G Q G D C A E D E A P Q A G P L G A E P A G P

**Bsu36I** (2344) **NheI** (2372)  
2300 TGCCGCAAGCCCTGTCCCTATGAACAGGCTCTGGTGGCGATGGGCTGAGGAGCAGTGAAGAACCAGGGTGGCTAGCTGGCCAGACATGATAAGATAC  
580 C R K P C P Y E Q A L G G D G P E E Q •

2400 ATTGATGAGTTTGACAACAACCAACTAGAATGCAAGTGAAGTTGATGCTATTGCTTATTGTAACCATTATAAGCT

**HpaI** (2510) **MfeI** (2521)  
2500 GCAATAACAAGTTAACAACAACAATTGCATTATTTATGTTTCAGTTTCAGGGGGAGGTGTTGGGAGTTTTTTAAAGCAAGTAAACCTCTACAAATG

**EcoRI (2606)**  
 2600 TGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAG  
 2700 GGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTTCCAAGGTTTGAAGTCTCTTCATTT

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**SspI (2845)**      **SwaI (2859)**  
 2800 CTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTGTAGAAAATATTAGAAAATATTAAATACATCATTGCAATGAAAATAAATGTTTTTTAT  
 2900 TAGGCAGAATCCAGATGTCTAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTAAATAGAAAATGGACAGCAAGA

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3000 AAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTTCATCTCAATGAGCACAAGCA  
 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  
**SacI (3120)**  
 3100 GTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCC  
 113 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

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**StuI (3284)**  
**Eco147I (3284)**  
 3200 ACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCCAGCAGACAGTACCCTGCAATGTAGGCCTCAATGTGGA  
 79 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 A E I H V  
 3300 CAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCGACATGGTGTCTGTTGCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCAC  
 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

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**BspHI (3434)**  
**XmnI (3426)**  
**VspI (3492)**  
**AseI (3492)**  
 3400 CAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATT  
 13 L E L D Q Q S I N F T K M

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**SacI (3549)**  
 3500 GTCAAACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTCACTAAACGAGCTGCTTATATAGACCTCCACCCTACACGCCACCGCCATTGG

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**SpeI (3647)**  
 3599 CGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTACTAGTCAAAACAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAA

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**SnaBI (3775)**  
**Eco105I (3775)**  
 3698 TCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTA

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**NdeI (3880)**  
 3798 GGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGAT  
 3898 GTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGT

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**PstI (4059)**  
**SdaI (4058)** **PacI (4066)** **BspLU11I (4076)**  
 3998 CAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCA  
 4096 GCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGG  
 4196 TGGCGAAACCCGACAGGACTATAAAGATACCAGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCTGCCGTTACCGGATACCTGT

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**ApaLI (4390)**  
 4296 CCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCA  
 4396 CGAACCCCCGTTTACGCCGACCCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAAACCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACT  
 4496 GGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCT  
 4596 GCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGTATCCGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCA  
 4696 GCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTG

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**EagI (4826)**  
**PacI (4806)** **SwaI (4815)** **NotI (4825)**  
 4796 GTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAA  
 4895 CATACGCTCTCCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA