



**PvuI (7)**  
**SgfI (6)**  
 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGTCGTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)** **Bsu36I (291)**  
 201 GTGAACGTTCTTTTTTCGCAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTCACGCGCCCGCCCTACCTGAGGCC  
 301 GCCATCCACGCCGGTTGAGTCGCGTTTCCGCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**  
 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGCTCAACTCTACGCTTTTGTTCGTTT

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**AgeI (552) SphI (560)**  
 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTGAGCATGCCAAGGATGAAAGACATCAGTTCTGCTCTGTTCT  
 601 CCTCATTCTGATACTATTGACTCTGGTGGAGCCTTACCTTGACTGGCTGGGCATGGACATCCCTGATTGCATCATAGCAGACAGTTTGTATTTCCTAAC  
 13▶ L I L I L L T L V S L T L T G W A W T I P D C I I A D S L L F P N  
 701 CTTTCTACTACATCCCATTCTGACTCCGCCCCAGGACTACACCTTTGGCATCTTGCTCTAATGTTAAAACTTAAATCAGACCCATAAAAGAGTGC  
 47▶ L S Y Y I P F C T S A P G L H L L A S C S N V K N L N Q T L K R V  
 801 CCAGAAATACAGAGTACTCTGCTCCAGGGCATGTTCTACTCTGCCAGCTAAGGCCCTTATTGCTTCCACTCCCTACAGCTTCTAAGGCTGCAATT  
 80▶ P R N T E V L C L Q G M V P T L P A K A F I R F H S L Q L L R L Q L  
 901 GAGTACAACAGTGTACATCTAGGACTTTCAAGGACTGGACCAGCTACAATACCTTTTTTTGATCATCATGCTCCCTGTTGCCTAAGCTTGTTCCTC  
 113▶ S T T S V T S R T F Q G L D Q L Q Y L F F D H H A P C C L S L F L  
 SpeI (1090)  
 1001 TCTCAAATTGTTTTGAGTCTCTTAGATCCCTTAGTAGTCTTCTTTCAAGGATACTGCCTGACTTATAGCCAAAGCATCTACTGCCAACTAGTCTTA  
 147▶ S P N C F E S L R S L S S L S F Q G Y C L T Y S Q S I Y L P T S L  
 1101 GGCATCTAACTCTGAGGAATAGCTGTCTAACAAAGTTTCAGGACCTTCAAAGGCTCTTCCAGACCTTCTGCTGAGTACCTCTACACCCAATACCAA  
 180▶ R H L T L R N S C L T K F Q D L Q R L F P D L L L S T S S T P N T K  
 SspI (1299)  
 1201 ACCAGGGGACCCCTTTTAGAGATGCTGGATTTATCTTACAACCTTACAGTGAACAGGCAGGTGTCAGAGACTTGTATGGCCTCACACTCCATTCCCTA  
 213▶ P G A P F L E M L D L S Y N L Q L K Q A G V R D L Y G L T L H S L  
 1301 ATATTGGATGGTACCCACTAAGAGCACTTGTCTCACAGACTCAGGACTGCTCCACTTGCACTTCTCTCCCTTGTGGGAACAGGAATAGAAAAAGTGC  
 247▶ I L D G T P L R A L D L T D S G L L H L H F L S L V G T G I E K V

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**ApaLI (1430)**  
 1401 CTGCAAGTTTACTGGCTACTCTGAGCTTCTGTGCACTTGCCTTGGGAAAAACCAATCCAAAACATCTTGGAAAATGGAGAAAATCCAGGTTATAAAGC  
 280▶ P A S L T G Y S E L R A L D L G K N Q I Q N I L E N G E I P G Y K A

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**BsaBI (1522)**  
**EcoRI (1504) BspHI (1518)**  
 1501 CCTGGAATTCCTTAGCCTTCATGATAACCATCTGCAAAACATTCCTACCAGGTTTCTACATACTTACCCAGCTTCAGAAGCTCAACCTATCTATGAAT  
 313▶ L E F L S L H D N H L Q T L P T R F L H T L P Q L Q K L N L S M N  
**BglII (1659) NcoI (1692)**  
 1601 AAGCTTGGACCAATCTTGAGCTTCCAGAAGGACTCTTAGCACAACTTAAAAGTGTAGATCTATCCATAATCAACTCTGTGATGATCCCATGGGG  
 347▶ K L G P I L E L P E G L F S T N L K V L D L S H N Q L C D V P H G

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**SdaI (1773)**  
 1701 CTTTCTCCCTTTGTACAGCTCCAGGAGCTCTGGTTGAGTGGCAATAACATCTCCAGTTTATCCAATGAAAGCCTGCAGGGACTGAGGCAGCTGAGGAC  
 380▶ A F S L L S Q L Q E L W L S G N N I S S L S N E S L Q G L R Q L R T

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**ScaI (1827)**  
 1801 ACTAGACTTAAGTTGGAATCAAATTAAGTACTCAAACCAGGCTGGCTCTCTCATCTTCTGCTGCTGACTACCTTGAACCTTCTGGGCACCTACTTAGAA  
 413▶ L D L S W N Q I K V L K P G W L S H L P A L T T L N L L G T Y L E

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**SandI (1923)**  
 1901 AATATCTTAGGCATACAACCTCAGGGTCCCAAGATGCTAAGGCATCTACAACCTGGGTTCTTATCCAATGCTGGACATATATCCTCCCTGGCCCCAACAC  
 447▶ N I L G I Q L Q G P K M L R H L Q L G S Y P M L D I Y P P W P P T  
 2001 TCCTTAGCTTAGAAAATACAAGCAGAATCATGTATTGATTTATGATTACAGTGGACAGCCATTCTTATTCTTAGAGAACCTTACCTTAGAGACTTCCAT  
 480▶ L L S L E I Q A E S C I Q F M I H S G Q P F L F L E N L T L E T S I  
 2101 TCTATTACTAAAACCAGACAACATACAATTCATTTCCCTCCCTGCGTCCGCTCACCTTGGCTGGCTACAGCTTCTATCTTCAACCAGTCAACTTCAG  
 513▶ L L L K P D N I T I H F P S L R R L T L R G Y S F I F S T S Q L Q  
 2201 AGATTCTTCCACAACAGCTTCTCTTCTGGAGCACTTCTTATCTGTTGTGAAAACAGCTATGCAGTAGACCTTATCTATTTGGGATGCCCAAGGCTAC  
 547▶ R F F P Q Q L P L L E H F F I W C E N S Y A V D L Y L F G M P R L

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**ScaI (2341)**  
 2301 GTGTGCTAGAGCTGGGGTACCTTAACTTTTTCTATGAGTCAAGTACTATGAAGCTAGAGATGCTATTGAAGGAGGTACCTCAGTTACAGGACTGGCATT  
 580▶ R V L E L G Y L N F F Y E S S T M K L E M L L K E V P Q L Q V L A L  
 2401 GAGCCACTGAATCTCAGGAACCTCTGTGTCCAGCTTAAAGAGCTTGCAGGACCTCAAACCTGCTGCTTCAACTCTGAAAGGGCGCTGGAGATGAAC  
 613▶ S H L N L R N L S V S F K S L Q D L K L L L F N S E R A L L E M N  
 2501 AGCAACCTCCAGGAGTTTATTCCTCAGATGCCTCAGTACGTTTACTTCTGATGTCACCTTTACTTGCCAGTGTGAAGCTTCTGGCTGGAGTCTTGGG  
 647▶ S N L Q E F I P Q M P Q Y V Y F S D V T F T C Q C E A S W L E S W



5301 TCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAG

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ApaI (5424)

5401 GTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGAC

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5501 ACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGG

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5601 CTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCT

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5701 GGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGT

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EagI (5860)

PacI (5840) SwaI (5849) NotI (5859)

5801 GGAACGAAAACACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGT

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5901 GTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGAAGTGCAG

6001 GTGCCAGAACATTTCTCTATCGAA