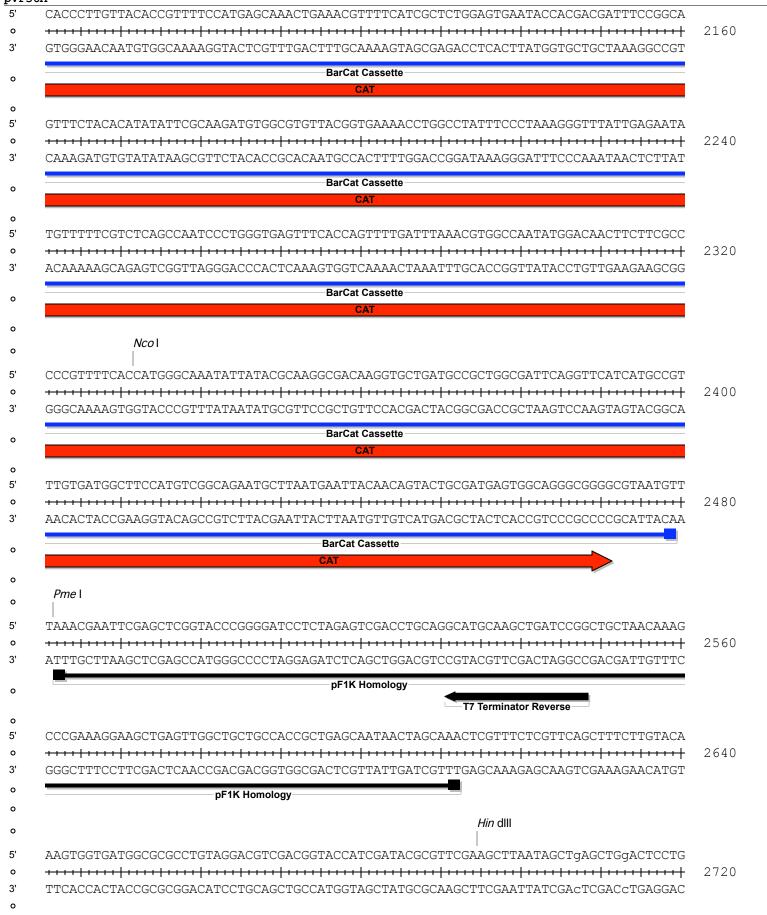


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	MBP	
т	GCAGACACCGATTACTCCATCGCAGAAGCTGCCTTTAATAAAGGCGAAACAGCGATGACCATCAACGGCCCGTGGGCAT	
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	CGTCTGTGGCTAATGAGGTAGCGTCTTCGACGGAAATTATTTCCGCTTTGTCGCTACTGGTAGTTGCCGGGCACCCGTA	
	MBP	
_	GTCCAACATCGACACCAGCAAAGTGAATTATGGTGTAACGGTACTGCCGACCTTCAAGGGTCAACCATCCAAACCGTTC	96
	CAGGTTGTAGCTGTGCGTTTCACTTAATACCACATTGCCATGACGGCTGGAAGTTCCCAGTTGGTAGGTTTGGCAAG  MBP	<i>)</i> (
G	TTGGCGTGCTGAGCGCAGGTATTAACGCCGCCAGTCCGAACAAAGAGCTGGCAAAAGAGTTCCTCGAAAACTATCTGCT	
	AACCGCACGACTCGCGTCCATAATTGCGGCGGTCAGGCTTGTTTCTCGACCGTTTTCTCAAGGAGCTTTTGATAGACGA	1(
_	MBP	
_	ACTGATGAAGGTCTGGAAGCGGTTAATAAAGACAAACCGCTGGGTGCCGTAGCGCTGAAGTCTTACGAGGAAGAGTTGG	11
	TGACTACTTCCAGACCTTCGCCAATTATTTCTGTTTGGCGACCCACGGCATCGCGACTTCAGAATGCTCCTTCTCAACC  MBP	
С	GAAAGATCCACGTATTGCCGCCACTATGGAAAACGCCCAGAAAGGTGAAATCATGCCGAACATCCCGCAGATGTCCGCT	
	*** **** *** *** *** *** *** *** *** *	12
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A	AGACCATACGGCACGCATGACGCCACTAGTTGCGGCGGTCGCCAGCAGTCTGACAGCTACTTCGGGGACTTTCTGCGCGT  MBP	
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G	ACTTTAATTAACGGCGACGGTGCCGGGCTGGAAGTTCTGTTCCAGGGGCCCGAAAACCTGTACTTCCAGGCGATcgCCA	
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	TGAAATTAATTGCCGCTGCCACGGCCCGACCTTCAAGACAAGGTCCCCGGGCTTTTGGACATGAAGGTCCGCTAgcGGT	
	3C Protease Site	
	3C Protease Site  TEV Protease Site	
C	GGAATAAGTAAAGGAATCACATGGCACAGGTTATCAACACGTTTGACGGGGTTGCGGATTATCTTCAGACATATCATAA	
C T	TEV Protease Site	14

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C	GATGGACTATTAATGTAATGTTTTAGTCTTCGTGTTCGGGAGCCGACCCACCGTAGTTTTCCCTTGGAACGTCTGCAGC	
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J	AGGCCCCTTTTCGTAGCCGCCTCTGTAGAAGAGTTTGTCCCTTCCGTTTGAGGGCCCGTTTTCGCCTGCTTGTACCGCA	
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A.	ACGGACCATTATCAGACCTTTACAAAAATCAGATAATTAGGCACCCCAGGCTTTACACTTTATGCTTTCGGCTCGTATA	
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Γ	ACACACCTAAAACTCAATCCTAGGCAGCTCTAAAAGTCCTCGATTCCTTCGATTTTACCTCTTTTTTTT	
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0	<del>       </del>	2880
3'	${\tt ACTCTTAGGTTCGATCGAACCGCTCTAAAAGTCCTCGATTCCTTCGATTTTACCTCTTTTTTTT$	
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5' o	GTTGATATATCCCAATGGCATCGTAAAGAACATTTTGAGGCATTTCAGTCAG	2960
3'	CAACTATATAGGGTTACCGTAGCATTTCTTGTAAAACTCCGTAAAGTCAGTC	2900
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	Nco I	
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EUDIY
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GTCAGTGCATCGCTATCGCCTCACATATGACCGAATTGATACGCCGTAGTCTCGTCTAACATGACTCTCACGTGGTATAC

pBR322 Origin

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GEGTCCTTTCTTGTACACTCGTTTTCCGGTCGTTTTCCGGTCCTTTGGCATTTTTCCGGCGCACACGCCAAAAAAGGTA  pBR322 Origin  GGCTCCGCCCCCCTGACGAGGATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATA  CCGAGGCGGGGGGGACTCCTCGTAGTTTTTAGCTGGCAGTTCTCCACCCCTTTGGCCTTTCCGACCCTTCGGCCTTTCCGTCCACAGAGGAGGACTATAAAGATA  pBR322 Origin  CCCTTCGGGAAGCGTGCTCGAGGGAGCACCACAGGAAGGA		GIGICITAGICCCIAI	
GEGTCCTTTCTTGTACACTCGTTTTCCGGTCGTTTTCCGGTCCTTTGGCATTTTTCCGGCGCACACGCCAAAAAAGGTA  pBR322 Origin  GGCTCCGCCCCCCTGACGAGGATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATA  CCGAGGCGGGGGGGACTCCTCGTAGTTTTTAGCTGGCAGTTCTCCACCCCTTTGGCCTTTCCGACCCTTCGGCCTTTCCGTCCACAGAGGAGGACTATAAAGATA  pBR322 Origin  CCCTTCGGGAAGCGTGCTCGAGGGAGCACCACAGGAAGGA	^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^	₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽	
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PBR322 Origin  CAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTTGCCGCTTTCCCGCTTTCCCCCCTTTCCCCCCTTTCCCCCC	<del>·· ··· </del>	<del></del>	552
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GTCCGCAAAGGGGGACCTTCGAGGGAGCACGCGAGAGGACAAGGCTGGGACGGCGAATGGCCTATGGACAGGCGGAAAG  pBR322 Origin  CCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCGCTCCAAGCTG  HITCH HIT	pBR322 Origin		
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PBR322 Origin  CCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCGCTCCAAGCTG  HITTOPHEN	<del>        </del>	<del></del>	560
CCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCGCTCCAAGCTG  HILLIA HILLI	AAAGGGGGACCTTCGAGGGAGCACGCGAGAGGACAAGGCTGGGACGGCGAATGGCC	CTATGGACAGGCGGAAAG	
GGGAAGCCCTTCGCACCGCGAAAGGTATCGAGTGCGACATCCATAGAGTCAAGCCACATCCAGCAAGCGAGGTTCGAC  pBR322 Origin  GCTGTGTGCACGAACCCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAG  +	pBR322 Origin		
GGGAAGCCCTTCGCACCGCGAAAGAGTATCGAGTGCGACATCCATAGAGTCAAGCCACATCCAGCAAGCGAGGTTCGAC  pBR322 Origin  GCTGTGTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAG  GCTGTGTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAG  GCACACACGTGCTTGGGGGGCAAGTCGGGCTGGCGACGCGGAATAGGCCATTGATAGCAGAACTCAGGTTGGGCCATTC  pBR322 Origin  GACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCT  HILLIAN HIL	GGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGG	GTCGTTCGCTCCAAGCTG	
PBR322 Origin  GCTGTGTGCACGAACCCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAG			568
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PBR322 Origin  CACGACTTATCGCCACTGGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCT	<del>        </del>	<del></del>	576
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			608
GCGTCTTTTTTCCTAGAGTTCTTCTAGGAAACTAGAAAAGATGCCCCAGACTGCGAGTCACCTTGCTTTTGAGTGCAA	·		

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TAAAGTATATATGAGTAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATT	
++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++	62
ATTTCATATATACTCATTTGAACCAGACTGTCAATGGTTACGAATTAGTCACTCCGTGGATAGAGTCGCTAGACAGATAA	0.2
pBR322 Origin Amp Resistance	
TCGTTCATCCATAGTTGCCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTG	
$\frac{1}{1} \frac{1}{1} \frac{1}$	632
${\tt AGCAAGTAGGTATCAACGGACTGAGGGGCAGCACATCTATTGATGCTATGCCCTCCCGAATGGTAGACCGGGGTCACGAC}$	
Amp Resistance	
CAATGATACCGCGAGACCCACGCTCACCGGCTCCAGATTTATCAGCAATAAACCAGCCAG	
	64
GTTACTATGGCGCTCTGGGTGCGAGTGGCCGAGGTCTAAATAGTCGTTATTTGGTCGGTC	
Amp Resistance	
AGTGGTCCTGCAACTTTATCCGCCTCCATCCAGTCTATTAATTGTTGCCGGGAAGCTAGAGTAAGTA	648
TCACCAGGACGTTGAAATAGGCGGAGGTAGGTCAGATAATTAACAACGGCCCTTCGATCTCATCATCAAGCGGTCAATT	040
Amp Resistance	
Amp resistance	
TAGTTTGCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTCACGCTCGTCGTTTGGTATGGCTTCATTCA	
<del>++++ ++++ ++++ ++++ ++++ ++++ ++++ ++</del>	65
ATCAAACGCGTTGCAACAACGGTAACGATGTCCGTAGCACCACAGTGCGAGCAAACCATACCGAAGTAAGT	
Amp Resistance	
GTTCCCAACGATCAAGGCGAGTTACATGATCCCCCATGTTGTGCAAAAAAGCGGTTAGCTCCTTCGGTCCTCCGATCGTT	
<del></del>	66
CAAGGGTTGCTAGTTCCGCTCAATGTACTAGGGGGTACAACACGTTTTTTCGCCAATCGAGGAAGCCAGGAGGCTAGCAA	
Amp Resistance	
GTCAGAAGTAAGTTGGCCGCAGTGTTATCACTCATGGTTATGGCAGCACTGCATAATTCTCTTACTGTCATGCCATCCGT	
++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++	672
CAGTCTTCATTCAACCGGCGTCACAATAGTGAGTACCAATACCGTCGTGACGTATTAAGAGAATGACAGTACGGTAGGCA	0 7 .
Amp Resistance	
<u> </u>	
AAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCC	
	681
$\frac{1}{1} \frac{1}{1} \frac{1}$	001
$\frac{1}{1}$ TTCTACGAAAAGACACTGACCACTCATGAGTTGGTTCAGTAAGACTCTTATCACATACGCCGCTGGCTCAACGAGAACGG	001
	001
TTCTACGAAAAGACACTGACCACTCATGAGTTGGTTCAGTAAGACTCTTATCACATACGCCGCTGGCTCAACGAGAACGG	001
TTCTACGAAAAGACACTGACCACTCATGAGTTGGTTCAGTAAGACTCTTATCACATACGCCGCTGGCTCAACGAGAACGG  Amp Resistance  CGGCGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTGCTCATCATTGGAAAACGTTCTTCGGGGCGA	
TTCTACGAAAAGACACTGACCACTCATGAGTTGGTTCAGTAAGACTCTTATCACATACGCCGCTGGCTCAACGAGAACGG  Amp Resistance	688

AAACTCTCAAGGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCAGCATCTTT	
<del>       </del>	6960
$\tt TTTGAGAGTTCCTAGAATGGCGACAACTCTAGGTCAAGCTACATTGGGTGAGCACGTGGGTTGACTAGAAGTCGTAGAAA$	
Amp Resistance	
TACTTTCACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAAGGGAATAAGGGCGACACGGAAAT	
<del></del>	7040
$\tt ATGAAAGTGGTCGCAAAGACCCACTCGTTTTTGTCCTTCCGTTTTACGGCGTTTTTTCCCTTATTCCCGCTGTGCCTTTA$	
Amp Resistance	
GTTGAATACTCATACTCTTTTTCAATATTATTGAAGCATTTATCAGGGTTATTGTCTCATGAGCGGATACATATTT	
<del>       </del>	7120
CAACTTATGAGTATGAGAAGGAAAAAGTTATAATAACTTCGTAAATAGTCCCAATAACAGAGTACTCGCCTATGTATAAA	
Amp Resistance	
GAATGTATTTAGAAAAATAAACAAATAGGGGTTCCGCGCACATTTCCCCGAAAAGTGCCACCTGACGTCTAAGAAACCAT	
<del>       </del>	7200
$\tt CTTACATAAATCTTTTTATTTGTTTATCCCCAAGGCGCGTGTAAAGGGGGCTTTTCACGGTGGACTGCAGATTCTTTGGTA$	
TATTATCATGACATTAACCTAT	
<del></del>	7222
ATAATAGTACTGTAATTGGATA	
	TTTGAGAGTTCCTAGAATGCCGACAACTCTAGGTCAAGCTACATTGGGTGAGCACGTGGGTTGACTAGAAGTCGTAGAAA  Amp Resistance  TACTTTCACCAGCGTTTCTGGGTGAGCAAAAACAGGAAAGCCGCAAAAAAAGGGGAATAAGGGCGACACGGAAAT  ATGAAAAGTGGTCGCAAAGACCCACTCGTTTTTGTCCTTCCGTTTTTACGGCGTTTTTTCCCGTTGTCCTTTA  Amp Resistance  GTTGAATACTCATACTCTTCCTTTTTCAATATTATTGAAGCATTTATCAGGGTTATTGTCTCATGAGCGGATACATATTT  CAACTTATGAGATATGAGAAAGAAGAAGAAAAAATAAACTTCGTAAAATAGTCCCAATAACAGAGTACTCGCCTATGTATAAA  Amp Resistance  GAATGTATTTAGAAAAAATAAACAAATAGGGGTTCCGCCGCACATTTCCCCGAAAAGTGCCACCTGACGTCTAAGAAACCAT  CTTACATAAAATCTTTTTATTTGTTTATCCCCAAGGCGCGTGTAAAGGGGCTTTTCACGGTGGACTGCAGATTCTTTGGTA  TATTATCATGACATTAACCTAT  TATTATCATGACATTAACCTAT