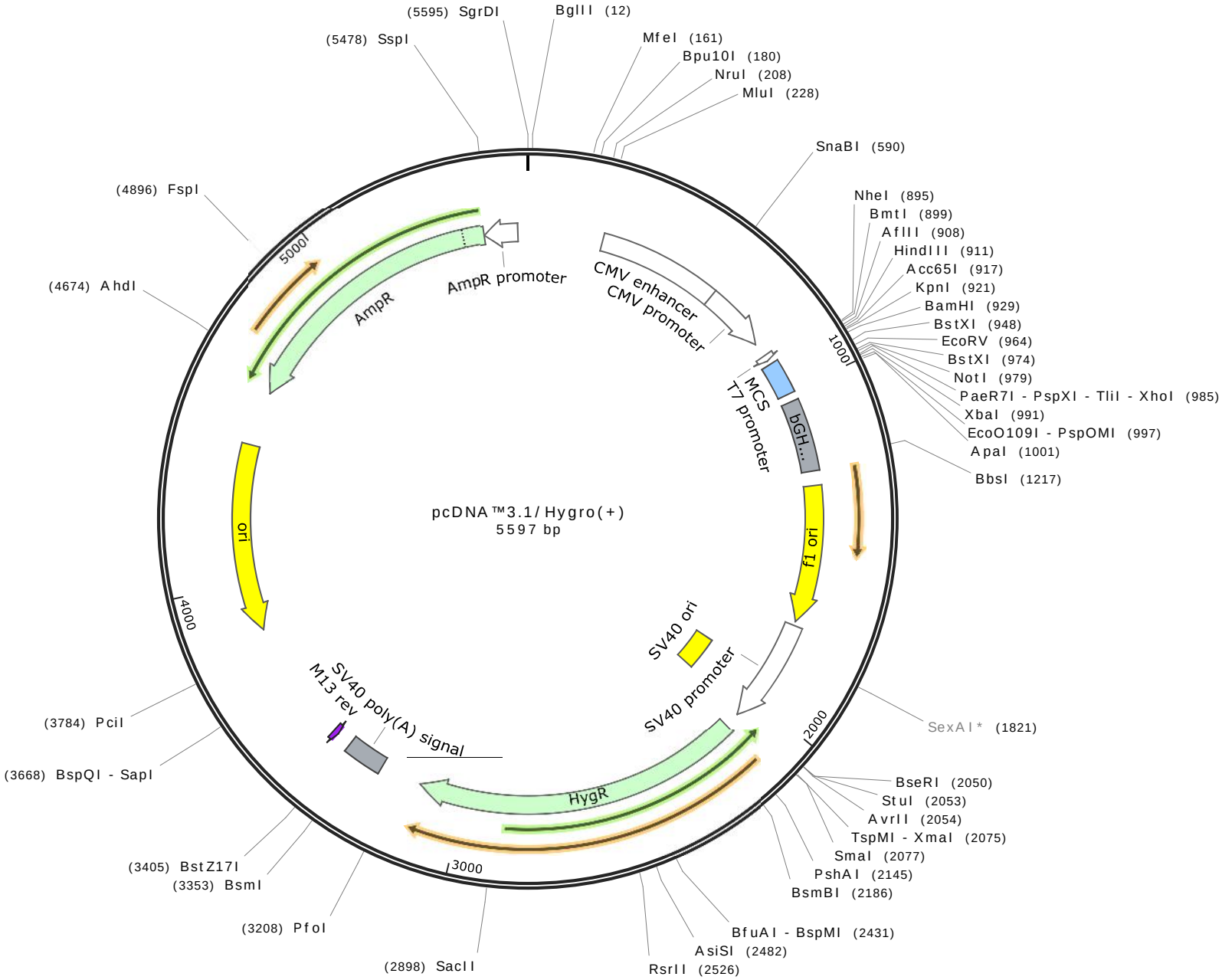
Mammalian expression vector with the CMV promoter. The MCS is in the forward (+) orientation.

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Bpu10I
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MluI
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KpnI
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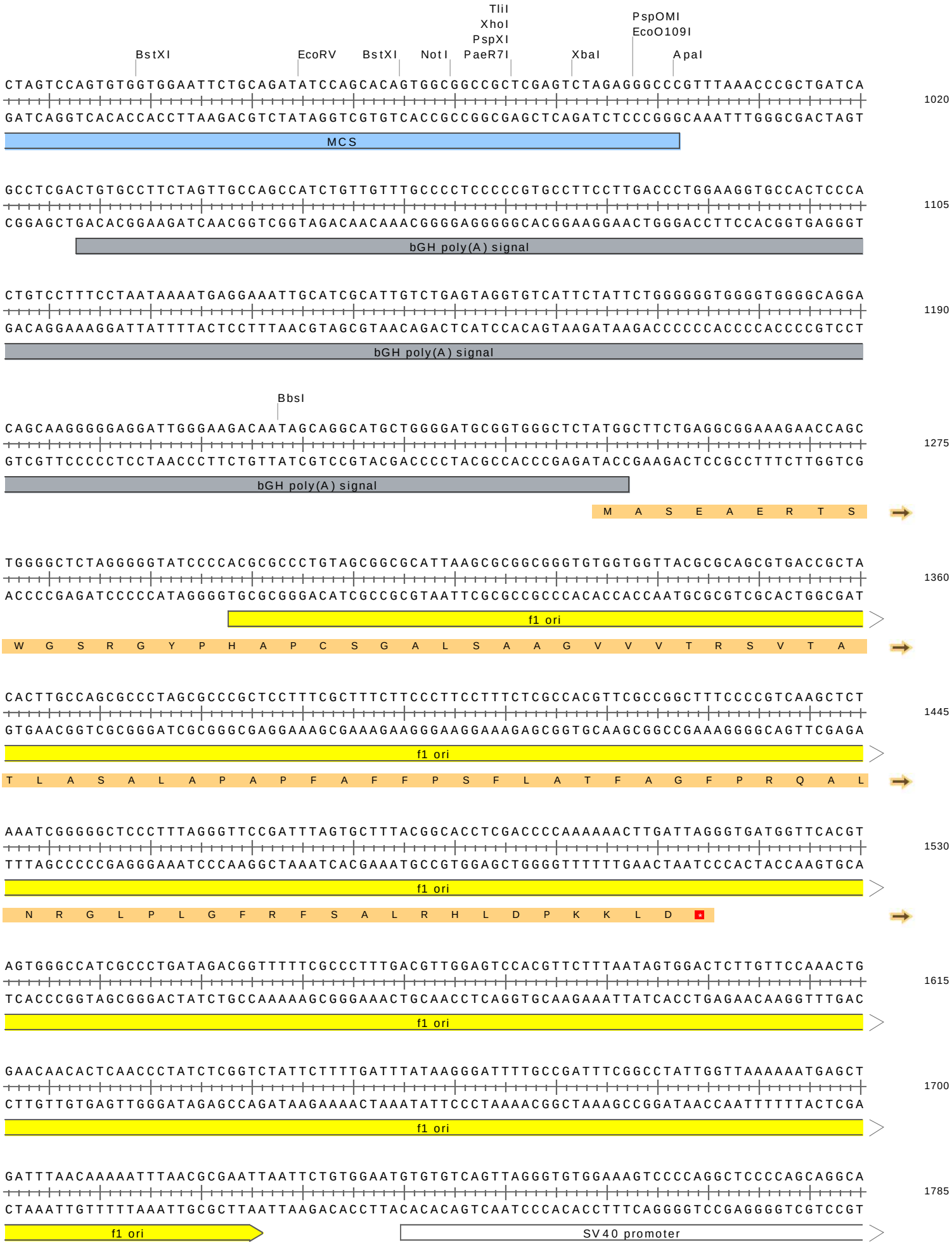
MCS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f1 ori
SV40 promoter


SexA I *
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SV40 ori
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Stu I
Avr I I
Xma I
Tsp M I
Sma I
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2125
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SV40 promoter
HygR
SV40 ori
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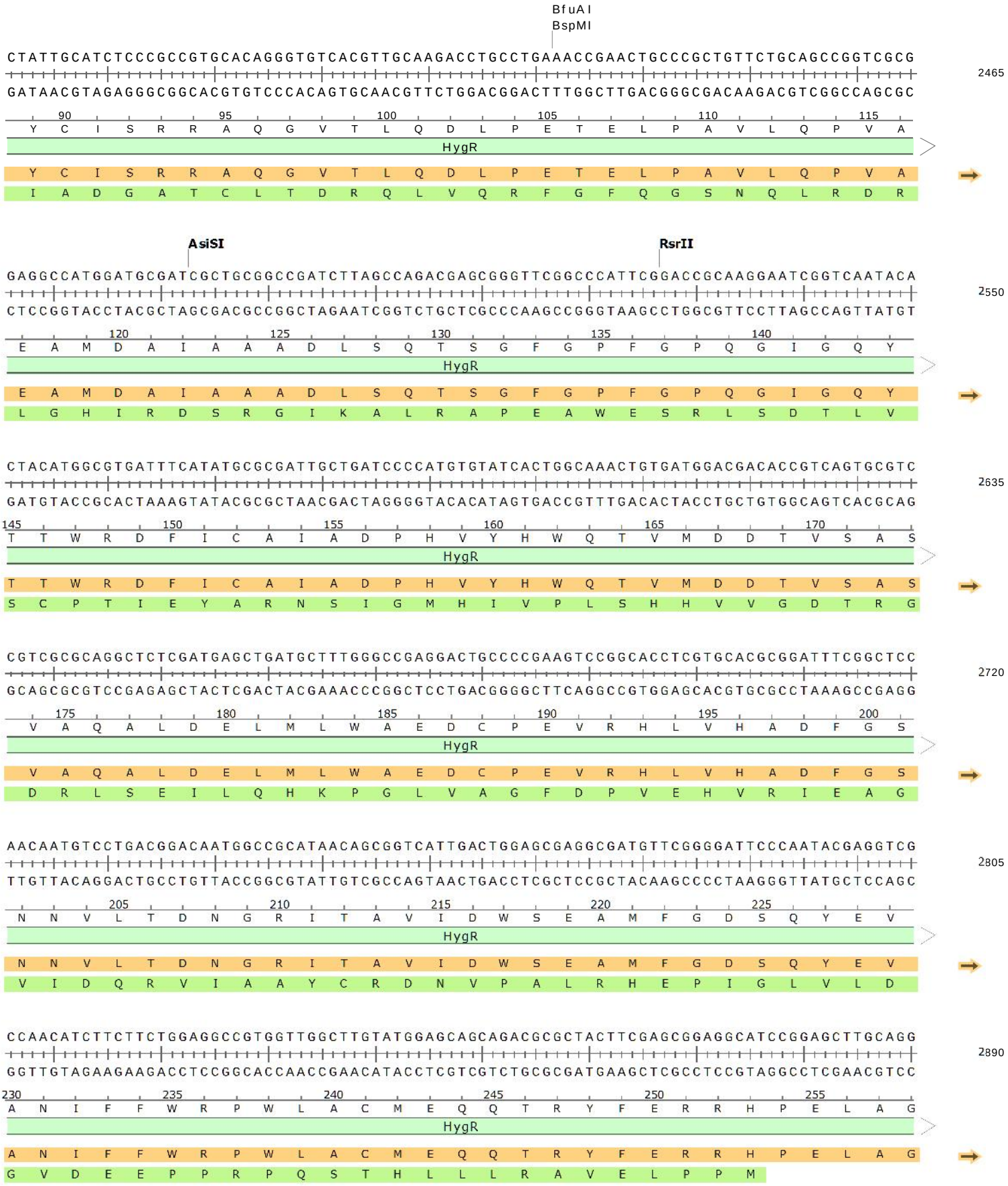
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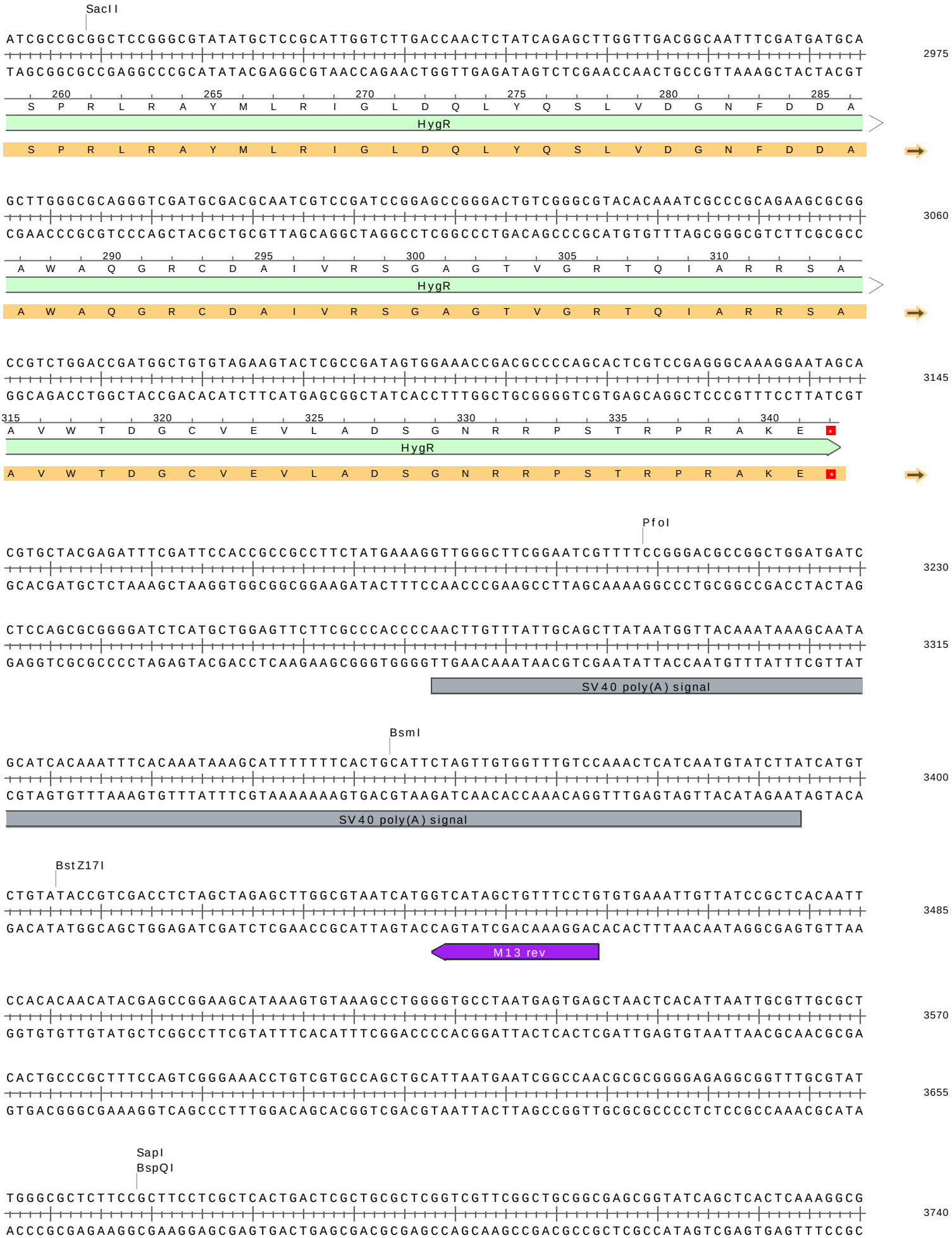
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BspQI
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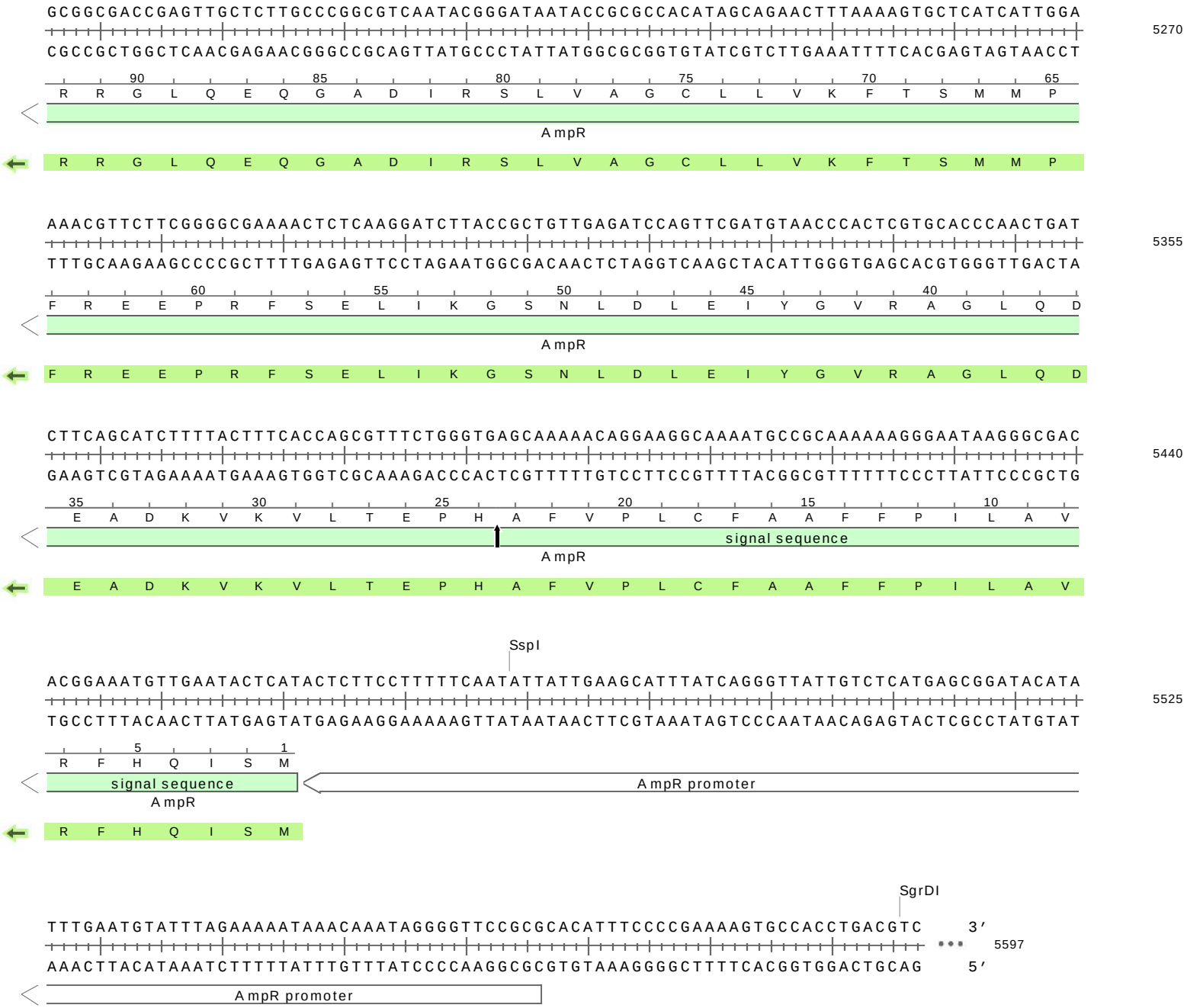
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signal sequence
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R F H Q I S M
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AmpR promoter

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AflII	1	908
AhdI	1	4674
ApaI	1	1001
AsiSI	1	2482
AvrII	1	2054
BamHI	1	929
BbsI	1	1217
BfuAI	1	2431
BglII	1	12
BmtI	1	899
Bpu10I	1	180
BseRI	1	2050
BsmI	1	3353
BsmBI	1	2186
BspMI	1	2431
BspQI	1	3668
BstXI	2	948 974
BstZ17I	1	3405
EcoO109I	1	997
EcoRV	1	964
FspI	1	4896
HindIII	1	911
KpnI	1	921
MfeI	1	161
MluI	1	228
NheI	1	895
NotI	1	979
NruI	1	208
PaeR7I	1	985
PciI	1	3784
PfoI	1	3208
PshAI	1	2145
PspOMI	1	997
PspXI	1	985
RsrII	1	2526
SacII	1	2898
SapI	1	3668
SexAI	1*	1821*
SgrDI	1	5595
SmaI	1	2077
SnaBI	1	590
SspI	1	5478
StuI	1	2053
TliI	1	985
TspMI	1	2075
XbaI	1	991
XhoI	1	985
XmaI	1	2075

	Feature	Location	Size (bp)	Type
✓	CMV enhancer	235 .. 614	380	enhancer
	/note = human cytomegalovirus immediate early enhancer			
✓	CMV promoter	615 .. 818	204	promoter
	/note = human cytomegalovirus (CMV) immediate early promoter			
✓	T7 promoter	863 .. 881	19	promoter
	/note = promoter for bacteriophage T7 RNA polymerase			
✓	MCS	895 .. 1002	108	misc_feature
	/note = multiple cloning site			
✓	bGH poly(A) signal	1028 .. 1252	225	polyA_signal
	/note = bovine growth hormone polyadenylation signal			
✓	f1 ori	1298 .. 1726	429	rep_origin
	/direction = RIGHT			
	/note = f1 bacteriophage origin of replication; arrow indicates direction of (+) strand synthesis			
✓	SV40 promoter	1740 .. 2069	330	promoter
	/note = SV40 enhancer and early promoter			
✓	SV40 ori	1920 .. 2055	136	rep_origin
	/note = SV40 origin of replication			
✓	HygR	2118 .. 3143	1026	CDS
	/gene = aph(4)-Ia			
	/product = aminoglycoside phosphotransferase from E. coli			
	/note = confers resistance to hygromycin			
	/translation = MKKPELTATSVEKFLIEKFDSVSDLMQLSEGEESRAFSFDVGGRGYVLRVNSCADGFYKDRYVYRHFASAALPIPEVLDIGEFSESLT YCISRRAQGVTLQDLPETELPAVLQPVAEAMDAIAAADLSQTSGFGPFGPQGIGQYTTWRDFICAIADPHVYHWQTVMDDTVSA SVAQALDELMLWAEDCPEVRHLVHADFGSNNVLTDNGRITAVIDWSEAMFGDSQYEVANIFFWRPWLACMEQQTRYFERRHPEL AGSPRLRAYMLRIGLDQLYQSLVDGNFDDAAWAQGRCDAIVRSGAGTVGRTQIARRSAAVWTDGCVEVLADSGNRRPSTRPRAK F* 341 amino acids = 38.0 kDa			
✓	SV40 poly(A) signal	3273 .. 3394	122	polyA_signal
	/note = SV40 polyadenylation signal			
✓	M13 rev	3443 .. 3459	17	primer_bind
	/note = common sequencing primer, one of multiple similar variants			
✓	ori	3845 .. 4430	586	rep_origin
	/direction = LEFT			
	/note = high-copy-number ColE1/pMB1/pBR322/pUC origin of replication			
✓	AmpR	4601 .. 5461	861	CDS
	▶ 2 segments			
	/gene = bla			
	/product = β-lactamase			
	/note = confers resistance to ampicillin, carbenicillin, and related antibiotics			
	/translation = MSIQHFRVALIPFFAAFCLPVFA,HPETLVKVKDAEDQLGARVGYIELDLNSGKILESFRPEERFPMMSTFKVLLCGAVLSRIDAGQE QLGRRIHYSQNDLVEYSPVTEKHLTDGMTVRELCSAAITMSDNTAANLLLTTIGGPKELTAFLHNMGDHVTRLDRWEPELNEAIPN DERDTTMPVAMATTLRKLLTGELLTLASRQQLIDWMEADKVAGPLLRSALPAGWFIADKSGAGERGSRGIIAALGPDGKPSRIVVIY TTGSQATMDERNRQIAEIGASLIKHW* 286 amino acids = 31.6 kDa			

	Feature	Location	Size (bp)			Type
✓	AmpR promoter	5462 .. 5566	105	☐	←	promoter
	/gene = bla					

Description:	Mammalian expression vector with the CMV promoter. The MCS is in the forward (+) orientation.
Created:	Tuesday, Jul 31, 2012
Last Modified:	Saturday, Jan 5, 2013
Accession Number:	
Code Number:	
Sequence Author:	Invitrogen (Life Technologies)
DNA Type:	Synthetic DNA
Laboratory Host Organism:	Mammalian Cells
Bacterial Transformation Strain:	Unspecified Dam^+ Dcm^+ $EcoKI^+$
Comments:	The cloned gene must include a Kozak sequence and start codon.
References:	