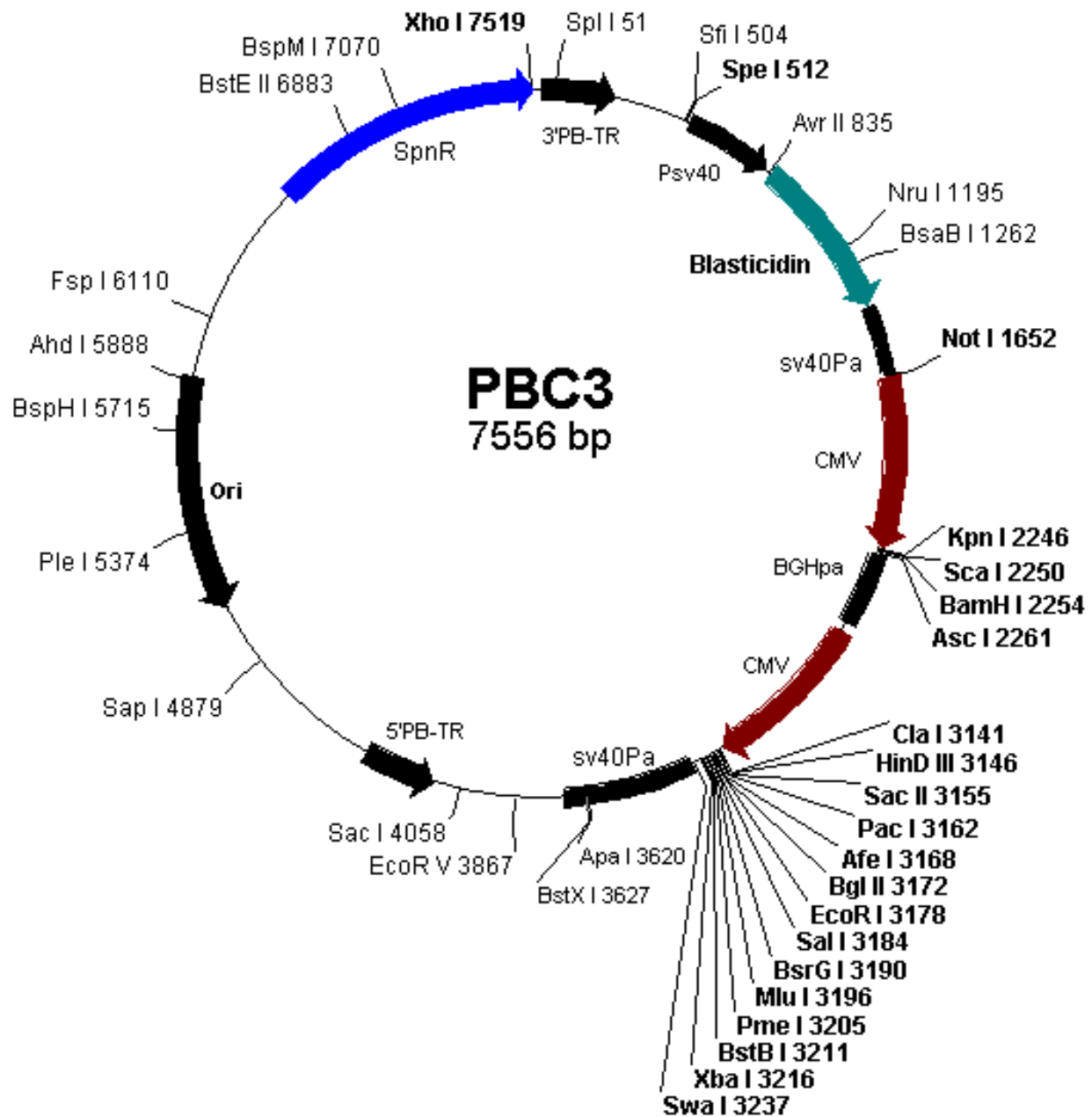


Vector: PBC3 (MOLab modified piggyBac vector with CMV promoter)

Antibiotic Selection: Spectinomycin or Blastidin-resistant

Creator(s): Xian Chen & Palak Shah, Molecular Oncology Lab of The University of Chicago

Date of Construction: January, 2013



PBC3 Vector Sequence

(Spectinomycin or Blastacin-resistant)

CTGCAGAACACGCAGCTAGATTAAACCTAGAAAAGATAATCATATTGTGACGTACGTTAAAGATAATCATCGTAAAATTGACGCATG
TGTTTTATCGGTCTGTATATCGAGGTTTATTTATTAATTTGAATAGATATTAAGTTTTATTATATTTACACTTACATACTAATAATA
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Unique enzymes in PBC3:

BsiW I	C`GTAC,G	51
Spl I	C`GTAC,G	51
Sfi I	GGCCN,NNN`NGGCC	504
Spe I	A`CTAG,T	512
Avr II	C`CTAG,G	835
PpuM I	RG`GWC,CY	1123
Nru I	TCG CGA	1195
BsaB I	GATNN NNATC	1262
Not I	GC`GGCC,GC	1652
Acc65 I	G`GTAC,C	2242
Asp718	G`GTAC,C	2242
Kpn I	G,GTAC`C	2246
Sca I	AGT ACT	2250
BamH I	G`GATC,C	2254
Asc I	GG`CGCG,CC	2261
Cla I	AT`CG,AT	3141
Hind III	A`AGCT,T	3146
Sac II	CC,GC`GG	3155
Pac I	TTA,AT`TAA	3162
Afe I	AGC GCT	3168
Eco47 III	AGC GCT	3168
Bgl II	A`GATC,T	3172
EcoR I	G`AATT,C	3178
Sal I	G`TCGA,C	3184
Acc I	GT`MK,AC	3185
BsrG I	T`GTAC,A	3190
Mlu I	A`CGCG,T	3196
Pme I	CTTT AAAC	3205
BsiC I	TT`CG,AA	3211
BstB I	TT`CG,AA	3211
Xba I	T`CTAG,A	3216
Swa I	ATTT AAAT	3237
EcoN I	CCTNN`N,NNAGG	3611
Bsp120 I	G`GGCC,C	3616
Apa I	G,GGCC`C	3620
BstX I	CCAN,NNNN`NTGG	3627
EcoR V	GAT ATC	3867
Sac I	G,AGCT`C	4058
Sap I	GCTCTTC 8/11	4879
Ear I	CTCTTC 7/10	4879

Ple I	GAGTC 9/10	5374
BspH I	T`CATG,A	5715
Ahd I	GACNN,N`NNGTC	5888
Fsp I	TGC GCA	6110
Psp1406 I	AA`CG,TT	6114
BstE II	G`GTNAC,C	6883
BspM I	ACCTGC 10/14	7070
PaeR7 I	C`TCGA,G	7519
Xho I	C`TCGA,G	7519
Number of enzymes = 49		

The following enzymes do not cut in PBC3:

Afl II	Age I	Bbe I	BsmB I	Bsp1286 I
Bst1107 I	Bsu36 I	Ehe I	Fse I	Hpa I
Kas I	Mun I	Nar I	Nhe I	PflM I

PBC3: sites sorted by name:

Aat II	(8)	1776	1829	1912	2098
Acc I	(1)	3185			
Acc65 I	(1)	2242			
Aci I	(90)	315	336	348	370
		393	683	695	704
		716	726	737	783
		1083	1165	1232	1416
		1419	1485	1651	1655
		1709	1737	1749	1763
		1930	2021	2054	2158
		2179	2273	2282	2508
		2532	2607	2635	2647
		2661	2828	2919	2952
		3056	3077	3152	3154
		3734	3757	3779	3791
		3812	3996	4029	4063
		4271	4284	4433	4540
		4545	4593	4630	4685
		4788	4844	4854	4878
		4921	4928	4949	5040
		5068	5195	5214	5335
		5445	5580	5589	5951

		6042	6233	6279	6546		3440	3588	3649	3722	
		6566	6734	6831	6843		3785	3786	3835	3836	
		6910	6973	7169	7172		4303	4414	4734	5155	
		7250	7297				6408	6431	6614	6645	
Afe I	(1)	3168					6952	7016	7155	7497	
Afl III	(4)	894	1390	3196	4995	BsaW I	(9)	352	2239	3773	4441
Aha II	(10)	1461	1773	1826	1909			4453	5201	5348	6179
		2095	2671	2724	2807			7189			
		2993	6777			BseR I	(2)	831	1391		
Ahd I	(1)	5888				Bsg I	(2)	1151	4545		
Alu I	(29)	16	799	853	863	BsiC I	(1)	3211			
		1066	1171	1535	2217	BsiE I	(8)	1083	1199	1655	4000
		3115	3148	3422	4056			4911	5335	6258	7104
		4182	4225	4660	4755	BsiHKA I	(3)	4058	5313	7002	
		4819	4937	5163	5253	BsiW I	(1)	51			
		5299	5556	6077	6177	Bsm I	(3)	1600	3336	4140	
		6240	6487	6917	7031	BsmA I	(5)	982	2084	2982	3435
		7403						5950			
Alw I	(20)	434	888	1278	1469	BsmF I	(20)	281	291	410	529
		1496	2232	2250	2261			601	665	1136	1472
		2552	3130	3694	4198			1826	1977	2145	2724
		5557	5643	5643	5740			2875	3043	3458	3541
		5741	6205	7182	7211			3715	3834	3844	7279
AlwN I	(2)	2548	5411			BsoF I	(58)	14	326	329	336
Apa I	(1)	3620						387	454	783	1064
ApaL I	(2)	5309	6998					1083	1157	1160	1163
Apo I	(6)	175	233	1570	3178			1166	1169	1333	1419
		3306	7466					1533	1652	1655	2273
Asc I	(1)	2261						3575	3674	3741	3792
Ase I	(6)	122	906	4531	4766			3799	3802	4064	4183
		4825	6060					4285	4316	4319	4434
Asp718	(1)	2242						4546	4593	4820	4901
Ava I	(9)	339	377	403	856			4919	4922	5040	5195
		3722	3748	3786	6615			5338	5403	5406	5612
		7519						5940	6279	6306	6401
Ava II	(7)	355	1123	3771	6026			6544	6629	6673	6689
		6248	6522	7163				6844	6911	7061	7170
Avr II	(1)	835						7250	7347		
BamH I	(1)	2254				Bsp120 I	(1)	3616			
Ban I	(7)	1238	2116	2242	2364	BspH I	(1)	5715			
		3014	4739	5836		BspM I	(1)	7070			
Ban II	(6)	347	1228	2517	3620	BspM II	(2)	4441	4453		
		3786	4058			Bsr I	(23)	721	1097	1121	1947
Bbs I	(2)	1049	2488					2247	2255	2845	3493
Bbv I	(18)	25	337	340	398			3603	4424	4796	5402
		1075	1180	1544	3586			5415	5529	5935	6053
		3685	5414	5417	5623			6096	6363	6458	6523
		6317	6555	6640	6684			7261	7357	7379	
		6700	7072			BsrB I	(4)	350	3779	4687	4928
Bbv II	(2)	1048	2487			BsrD I	(4)	5949	6123	7072	7365
Bcl I	(3)	886	2286	6921		BsrG I	(1)	3190			
Bcn I	(17)	341	342	405	406	BssH II	(3)	2261	4634	7447	
		858	859	1458	3442	BssS I	(2)	1138	5168		
		3591	3724	3725	3788	BstB I	(1)	3211			
		3789	4628	5376	6072	BstE II	(1)	6883			
		6419				BstN I	(24)	291	477	549	604
Bfa I	(19)	17	28	318	513			621	1268	1741	1934
		836	1073	1605	2308			2358	2543	2639	2832
		2552	3170	3217	3341			3521	3579	3651	3837
		3809	4168	4179	5490			4415	4582	4735	5023
		5743	6078	7404				5144	5157	6377	6954
Bgl I	(9)	504	1741	1863	1934	BstU I	(24)	1195	1485	1711	2263
		2639	2761	2832	6008			2609	3154	3198	3996
		7355						4102	4273	4433	4636
Bgl II	(1)	3172						4842	4844	5042	5623
Blp I	(2)	1359	7032					5953	6637	6910	6975
Bpm I	(4)	1463	1520	5958	6975			7038	7331	7447	7449
Bsa I	(2)	3436	5949			BstX I	(1)	3627			
BsaA I	(8)	895	1393	1991	2889	BstY I	(12)	881	1489	2236	2254
		3224	3905	3963	7480			2545	3134	3172	5636
BsaB I	(1)	1262						5647	5733	5745	7204
BsaH I	(10)	1461	1773	1826	1909	Cac8 I	(44)	333	384	391	467
		2095	2671	2724	2807			562	581	634	653
		2993	6777					1059	1173	1465	1737
BsaJ I	(40)	289	290	339	340			1930	2263	2316	2493
		403	476	502	547			2497	2635	2828	3662
		619	742	777	835			3738	3745	3796	4043
		856	962	1267	1374			4140	4227	4381	4632
		2011	2356	2909	3152			4636	4788	4817	4926

		5012	5049	5609	6000	Fsp I	(1)	6110				
		6633	6810	6915	7095	Gdi II	(10)	506	1079	1081	1370	
		7264	7370	7374	7449			1651	1653	2269	4835	
Cfr10 I	(8)	382	1463	3743	4494			6275	6809			
		4518	5968	7319	7372	Gsu I	(4)	1464	1519	5959	6974	
Cla I	(1)	3141				Hae I	(9)	498	834	967	4374	
Csp6 I	(22)	52	1869	1894	1949			4410	5010	5021	5473	
		1982	2033	2190	2243			7442				
		2249	2767	2792	2847	Hae II	(10)	364	3170	3769	4232	
		2880	2931	3088	3191			4551	4873	5243	6790	
		3225	6369	6602	6815			7220	7369			
		6823	7306			Hae III	(29)	498	507	776	782	
Dde I	(9)	795	1359	2418	2527			834	967	1082	1373	
		4070	5270	5679	5845			1654	1735	1928	2272	
		7032						2633	2826	3618	4374	
Dpn I	(36)	429	883	888	1198			4410	4836	5010	5021	
		1259	1273	1475	1491			5039	5473	5931	6011	
		2238	2256	2288	2547			6278	6812	6846	7376	
		3136	3174	3243	3700			7442				
		4193	5563	5638	5649	Hga I	(11)	89	1042	1468	2176	
		5657	5735	5747	5852			3074	3969	4132	5105	
		6193	6211	6257	6740			5683	6431	6767		
		6923	7103	7113	7188	HgiA I	(3)	4058	5313	7002		
		7206	7434	7455	7493	HgiE II	(2)	2353	5574			
DpnII	(36)	427	881	886	1196	Hha I	(37)	363	1063	1485	2263	
		1257	1271	1473	1489			2265	3169	3768	4104	
		2236	2254	2286	2545			4231	4474	4550	4636	
		3134	3172	3241	3698			4638	4779	4844	4872	
		4191	5561	5636	5647			4905	5175	5242	5342	
		5655	5733	5745	5850			5516	5625	6018	6111	
		6191	6209	6255	6738			6510	6560	6637	6789	
		6921	7101	7111	7186			6977	7038	7065	7219	
		7204	7432	7453	7491			7313	7333	7368	7449	
Dra I	(5)	3205	3237	3470	5754			7451				
		5773				HinC II	(3)	900	3186	3517		
Dra III	(4)	1369	6432	6860	7480	Hind II	(3)	900	3186	3517		
Drd I	(3)	1051	4074	5103		HinD III	(1)	3146				
Dsa I	(9)	502	742	962	2011	Hinf I	(19)	988	1320	1409	1446	
		2909	3152	6431	6645			2061	2959	3213	3391	
		7016						3603	3989	4097	4358	
Eae I	(10)	505	965	1080	1371			4830	4895	4970	5366	
		1652	2270	4372	4834			5883	6754	6967		
		6276	6810			HinI I	(10)	1461	1773	1826	1909	
Eag I	(2)	1080	1652					2095	2671	2724	2807	
Ear I	(1)	4879						2993	6777			
Eco47 III	(1)	3168				HinP I	(37)	361	1061	1483	2261	
Eco57 I	(3)	1060	5542	6868				2263	3167	3766	4102	
Eco72 I	(2)	895	1393					4229	4472	4548	4634	
EcoN I	(1)	3611						4636	4777	4842	4870	
EcoO109 I	(2)	1123	3616					4903	5173	5240	5340	
EcoR I	(1)	3178						5514	5623	6016	6109	
EcoR II	(24)	289	475	547	602			6508	6558	6635	6787	
		619	1266	1739	1932			6975	7036	7063	7217	
		2356	2541	2637	2830			7311	7331	7366	7447	
		3519	3577	3649	3835			7449				
		4413	4580	4733	5021	Hpa II	(36)	340	353	358	383	
		5142	5155	6375	6952			404	857	1456	1464	
EcoR V	(1)	3867						2240	2258	3440	3590	
Esp I	(2)	1359	7032					3723	3744	3769	3774	
Fnu4H I	(58)	14	326	329	336			3787	4442	4454	4495	
		387	454	783	1064			4505	4519	4627	4713	
		1083	1157	1160	1163			5202	5349	5375	5565	
		1166	1169	1333	1419			5969	6003	6070	6180	
		1533	1652	1655	2273			6417	7190	7320	7373	
		3575	3674	3741	3792	Hph I	(12)	959	2026	2924	4403	
		3799	3802	4064	4183			5732	5959	6373	6431	
		4285	4316	4319	4434			6747	6894	6980	7487	
		4546	4593	4820	4901	Kpn I	(1)	2246				
		4919	4922	5040	5195	Mae I	(19)	17	28	318	513	
		5338	5403	5406	5612			836	1073	1605	2308	
		5940	6279	6306	6401			2552	3170	3217	3341	
		6544	6629	6673	6689			3809	4168	4179	5490	
		6844	6911	7061	7170			5743	6078	7404		
		7250	7347			Mae II	(30)	50	54	304	894	
Fok I	(20)	307	359	686	1015			1392	1773	1785	1826	
		1250	1483	2517	3439			1909	1990	2095	2671	
		3766	3818	4320	4469			2683	2724	2807	2888	
		4601	5854	6035	6322			2993	3223	3823	3904	
		6454	6607	6851	7352			3962	4327	4344	4561	

		5698	6114	6803	7289		1240	2118	2244	2256	
		7479	7548				2366	3016	3618	3783	
Mae III	(29)	46	248	1544	1712		4741	5027	5066	5838	
		1799	2148	2610	2697		5932	5973	6184	6829	
		3046	3280	3958	4018		7194				
		4621	5351	5414	5530	Not I	(1)	1652			
		5813	6144	6202	6355	Nru I	(1)	1195			
		6420	6551	6638	6682	Nsl I	(3)	585	657	4140	
		6877	6883	6985	7315	Nsp7524 I	(6)	84	579	651	2495
		7553						4138	4995		
Mbo I	(36)	427	881	886	1196	NspB II	(9)	1171	2284	3154	4540
		1257	1271	1473	1489			4819	5337	5582	6546
		2236	2254	2286	2545			7169			
		3134	3172	3241	3698	NspH I	(6)	88	583	655	2499
		4191	5561	5636	5647			4142	4999		
		5655	5733	5745	5850	Pac I	(1)	3162			
		6191	6209	6255	6738	PaeR7 I	(1)	7519			
		6921	7101	7111	7186	Pal I	(29)	498	507	776	782
		7204	7432	7453	7491			834	967	1082	1373
Mbo II	(14)	231	996	1053	1081			1654	1735	1928	2272
		1499	2492	4262	4867			2633	2826	3618	4374
		5656	5729	7079	7438			4410	4836	5010	5021
		7441	7474					5039	5473	5931	6011
Mlu I	(1)	3196						6278	6812	6846	7376
Mme I	(3)	5209	5393	7441				7442			
Mnl I	(50)	103	258	318	446	Ple I	(1)	5374			
		508	766	772	795	Pme I	(1)	3205			
		801	809	812	824	Pml I	(2)	895	1393		
		944	1005	1346	1347	PpuM I	(1)	1123			
		1369	1486	2192	2302	Psp1406 I	(1)	6114			
		2344	2390	2465	2522	PspA I	(5)	339	403	856	3722
		3090	3550	3683	3811			3786			
		4055	4241	4268	4298	Pst I	(3)	6	471	3662	
		4562	4844	4893	5103	Pvu I	(3)	1199	6258	7104	
		5176	5427	5827	5908	Pvu II	(2)	1171	4819		
		6054	6260	6399	6623	Rsa I	(22)	53	1870	1895	1950
		6720	6760	7168	7207			1983	2034	2191	2244
		7452	7527					2250	2768	2793	2848
Msc I	(2)	967	4374					2881	2932	3089	3192
Mse I	(29)	22	57	122	138			3226	6370	6603	6816
		212	906	3158	3162			6824	7307		
		3204	3236	3462	3469	Rsr II	(2)	355	3771		
		3946	3953	4174	4387	Sac I	(1)	4058			
		4531	4766	4825	5701	Sac II	(1)	3155			
		5753	5758	5772	5825	Sal I	(1)	3184			
		6060	6099	6716	7232	Sap I	(1)	4879			
		7545				Sau3A I	(36)	427	881	886	1196
Msl I	(6)	2016	2914	3625	6140			1257	1271	1473	1489
		6299	6995					2236	2254	2286	2545
Msp I	(36)	340	353	358	383			3134	3172	3241	3698
		404	857	1456	1464			4191	5561	5636	5647
		2240	2258	3440	3590			5655	5733	5745	5850
		3723	3744	3769	3774			6191	6209	6255	6738
		3787	4442	4454	4495			6921	7101	7111	7186
		4505	4519	4627	4713			7204	7432	7453	7491
		5202	5349	5375	5565	Sau96 I	(16)	355	1123	1734	1927
		5969	6003	6070	6180			2632	2825	3616	3617
		6417	7190	7320	7373			3771	5930	6009	6026
MspA1 I	(9)	1171	2284	3154	4540			6248	6522	7163	7375
		4819	5337	5582	6546						
		7169				Sca I	(1)	2250			
Nae I	(4)	384	1465	3745	7374	ScrF I	(41)	291	340	341	404
Nci I	(17)	340	341	404	405			405	477	549	604
		857	858	1457	3441			621	857	858	1268
		3590	3723	3724	3787			1457	1741	1934	2358
		3788	4627	5375	6071			2543	2639	2832	3441
		6418						3521	3579	3590	3651
Nco I	(4)	742	962	2011	2909			3723	3724	3787	3788
Nde I	(3)	1885	2783	3229				3837	4415	4582	4627
NgoM I	(4)	382	1463	3743	7372			4735	5023	5144	5157
Nla III	(30)	71	88	583	655			5375	6071	6377	6418
		746	966	1498	1646			6954			
		1955	2015	2499	2853	Sec I	(40)	289	290	339	340
		2913	3382	3919	3979			403	476	502	547
		4142	4291	4355	4379			619	742	777	835
		4609	4653	4999	5719			856	962	1267	1374
		6210	6220	6298	6334			2011	2356	2909	3152
		6577	7533					3440	3588	3649	3722
Nla IV	(21)	346	553	625	1124			3785	3786	3835	3836
								4303	4414	4734	5155

		6408	6431	6614	6645	Taq I	(16)	108	1256	1407	2295
		6952	7016	7155	7497			3141	3185	3211	5095
SfaN I	(22)	380	591	663	1036			6392	6652	6752	6783
		1093	1225	1271	1571			6795	7089	7104	7520
		2009	2414	2496	2907	Tfi I	(11)	988	1320	1409	1446
		3307	3745	4193	4248			3213	3603	4097	4358
		4482	4580	5091	6143			4830	4970	6967	
		6336	6628			Tsp45 I	(8)	46	3958	4018	6144
Sfc I	(8)	2	467	1047	3658			6355	6420	6883	6985
		5260	5451	6129	6978	Tth111 II	(8)	198	2318	4053	5584
Sfi I	(1)	504						5593	5623	6640	6647
Sma I	(5)	341	405	858	3724	Vsp I	(6)	122	906	4531	4766
		3788						4825	6060		
SnaB I	(3)	1991	2889	3224		Xba I	(1)	3216			
Spe I	(1)	512				Xho I	(1)	7519			
Sph I	(4)	583	655	2499	4142	Xho II	(12)	881	1489	2236	2254
Spl I	(1)	51						2545	3134	3172	5636
Srf I	(2)	405	3724					5647	5733	5745	7204
Ssp I	(2)	3466	4126			Xma I	(5)	339	403	856	3722
Stu I	(2)	498	834					3786			
Sty I	(8)	742	835	962	2011	Xma III	(2)	1080	1652		
		2909	6408	7155	7497						
Swa I	(1)	3237									

Site usage in PBC3:

Aat II	G,ACGT`C	8	Acc I	GT`MK,AC	1	Gdi II	`YGGC,CG	10	Gsu I	CTGGAG 21/19	4
Acc65 I	G`GTAC,C	1	Aci I	C`CG,C	90	Hae I	WGG CCW	9	Hae II	R,CGC`Y	10
Afe I	AGC GCT	1	Afl I II	C`TTAA,G	-	Hae III	GG CC	29	Hga I	GACGC 9/14	11
Afl III	A`CRYG,T	4	Age I	A`CCGG,T	-	HgiA I	G,WGCW`C	3	HgiE II	ACCNNNNNNGGT -1/132	
Aha II	GR`CG,YC	10	Ahd I	GACNN,N`NNGTC	1	Hha I	G,CG`C	37	Hinc II	GTY RAC	3
Alu I	AG CT	29	Alw I	GGATC 8/9	20	Hind II	GTY RAC	3	Hind III	A`AGCT,T	1
AlwN I	CAG,NNN`CTG	2	Apa I	G,GGCC`C	6	Hinf I	G`ANT,C	19	HinI I	GR`CG,YC	10
ApaL I	G`TGCA,C	2	Apo I	R`AATT,Y	1	HinP I	G`CG,C	37	Hpa I	GTT AAC	-
Asc I	GG`CGCG,CC	1	Ase I	AT`TA,AT	6	Hpa II	C`CG,G	36	Hph I	GGTGA 12/11	12
Asp718	G`GTAC,C	1	Ava I	C`YCGR,G	9	Kas I	G`GCGC,C	-	Kpn I	G,GTAC`C	1
Ava II	G`GWC,C	7	Avr II	C`CTAG,G	1	Mae I	C`TA,G	19	Mae II	A`CG,T	30
BamH I	G`GATC,C	1	Ban I	G`GYRC,C	7	Mae III	`GTNAC,	29	Mbo I	`GATC,	36
Ban II	G,RGCY`C	6	Bbe I	G,CGCC`C	-	Mbo II	GAAGA 12/11	14	Mlu I	A`CGCG,T	1
Bbs I	GAAGAC 8/12	2	Bbv I	GCAGC 13/17	18	Mme I	TCCRAC 25/23	3	Mnl I	CCTC 10/10	50
Bbv II	GAAGAC 7/11	2	Bcl I	T`GATC,A	3	Msc I	TGG CCA	2	Mse I	T`TA,A	29
Bcn I	CC,S`GG	17	Bfa I	C`TA,G	19	Msl I	CAYNN NNRTG	6	Msp I	C`CG,G	36
Bgl I	GCCN,NNN`NGGC	9	Bgl II	A`GATC,T	1	MspA I	CMG CKG	9	Mun I	C`AATT,G	-
Blp I	GC`TNA,GC	2	Bpm I	CTGGAG 22/20	4	Nae I	GCC GGC	4	Nar I	GG`CG,CC	-
Bsa I	GGTCTC 7/11	2	BsaA I	YAC GTR	10	Nci I	CC`S,GG	17	Nco I	C`CATG,G	4
BsaB I	GATNN NNATC	1	BsaH I	GR`CG,YC	8	Nde I	CA`TA,TG	3	Ngm I	G`CCGG,C	4
BsaJ I	C`CNNG,G	40	BsaW I	W`CCGG,W	9	Nhe I	G`CTAG,C	-	Nla III	,CATG`	30
BseR I	GAGGAG 16/14	2	Bsg I	GTGCG 22/20	2	Nla IV	GGN NCC	21	Not I	GC`GGCC,GC	1
BsiC I	TT`CG,AA	1	BsiE I	CG,RY`CG	8	Nru I	TCG CGA	1	Nsi I	A,TGCA`T	3
BsiHKA I	G,WGCW`C	3	BsiW I	C`GTAC,G	1	Nsp7524 I	R`CATG,Y	6	NspB II	CMG CKG	9
Bsm I	GAATG,C 7	3	BsmA I	GTCTC`/9	5	NspH I	R,CATG`Y	6	Pac I	TTA,AT`TAA	1
BsmB I	CGTCTC 7/11	-	BsmF I	GGGAC 15/19	20	Paer7 I	C`TCGA,G	1	Pal I	GG CC	29
BsoF I	GC`N,GC	58	Bsp120 I	G`GGCC,C	1	Pflm I	CCAN,NNN`NTGG	-	Ple I	GAGTC 9/10	1
Bsp1286 I	G,DGCH`C	-	BspH I	T`CATG,A	1	Pme I	CTTT AAAC	1	Pml I	CAC GTG	2
BspM I	ACCTGC 10/14	1	BspM II	T`CCGG,A	2	PpuM I	RG`GWC,CY	1	Psp1406 I	AA`CG,TT	1
Bsr I	ACT,GG`	23	BsrB I	GAG CGG	4	PspA I	C`CCGG,G	5	Pst I	C,TGCA`G	3
BsrD I	GCAATG, 8	4	BsrG I	T`GTAC,A	1	Pvu I	CG,AT`CG	3	Pvu II	CAG CTG	2
Bssh II	G`CGCG,C	3	BssS I	C`TCGT,G	2	Rsa I	GT AC	22	Rsr II	CG`GWC,CG	2
Bst1107 I	GTA TAC	-	BstB I	TT`CG,AA	1	Sac I	G,AGCT`C	1	Sac II	CC,GC`GG	1
BstE II	G`GTNAC,C	1	BstN I	CC`W,GG	24	Sal I	G`TCGA,C	1	Sap I	GCTCTTC 8/11	1
BstU I	CG CG	24	BstX I	CCAN,NNNN`NTGG	1	Sau3A I	`GATC,	36	Sau96 I	G`GNC,C	16
BstY I	R`GATC,Y	12	Bsu36 I	CC`TNA,GG	-	Sca I	AGT ACT	1	ScrF I	CC`N,GG	41
Cac8 I	GCN NGC	44	Cfr10 I	R`CCGG,Y	8	Sec I	C`CNNG,G	40	SfaN I	GCATC 9/13	22
Cla I	AT`CG,AT	1	Csp6 I	G`TA,C	22	Sfc I	C`TRYA,G	8	Sfi I	GGCCN,NNN`NGGCC	1
Dde I	C`TNA,G	9	Dpn I	GA TC	36	Sma I	CCC GGG	5	SnaB I	TAC GTA	3
DpnII	`GATC,	36	Dra I	TTT AAA	5	Spe I	A`CTAG,T	1	Sph I	G,CATG`C	4
Dra III	CAC,NNN`GTG	4	Drd I	GACNN,NN`NNGTC	3	Spl I	C`GTAC,G	1	Srf I	GCCC GGGC	2
Dsa I	C`CRYG,G	9	Eae I	Y`GGCC,R	10	Ssp I	AAT ATT	2	Stu I	AGG CCT	2
Eag I	C`GGCC,G	2	Ear I	CTCTTC 7/10	1	Sty I	C`CWWG,G	8	Swa I	ATTT AAAT	1
Eco47 III	AGC GCT	1	Eco57 I	CTGAAG 21/19	3	Taq I	T`CG,A	16	Tfi I	G`AWT,C	11
Eco72 I	CAC GTG	2	EcoN I	CCTNN`N,NNAGG	1	Tsp45 I	`GTSAC,	8	Tth111 I	GACN`N,NGTC	-
Eco109 I	RG`GNC,CY	2	EcoR I	G`AATT,C	1	Tth111 II	CAARCA 16/14	8	Vsp I	AT`TA,AT	6
EcoR II	`CWGG,	24	EcoR V	GAT ATC	1	Xba I	T`CTAG,A	1	Xca I	GTA TAC	-
Ehe I	GGC GCC	-	Esp I	GC`TNA,GC	2	Xcm I	CCANNNN,N`NNNNTGG-	-	Xho I	C`TCGA,G	1
Fnu4H I	GC`N,GC	58	Fok I	GGATG 14/18	20	Xho II	R`GATC,Y	12	Xma I	C`CCGG,G	5
Fse I	GG,CCGG`CC	-	Fsp I	TGC GCA	1	Xma III	C`GGCC,G	2	Xmn I	GAAANN NNTTC	-