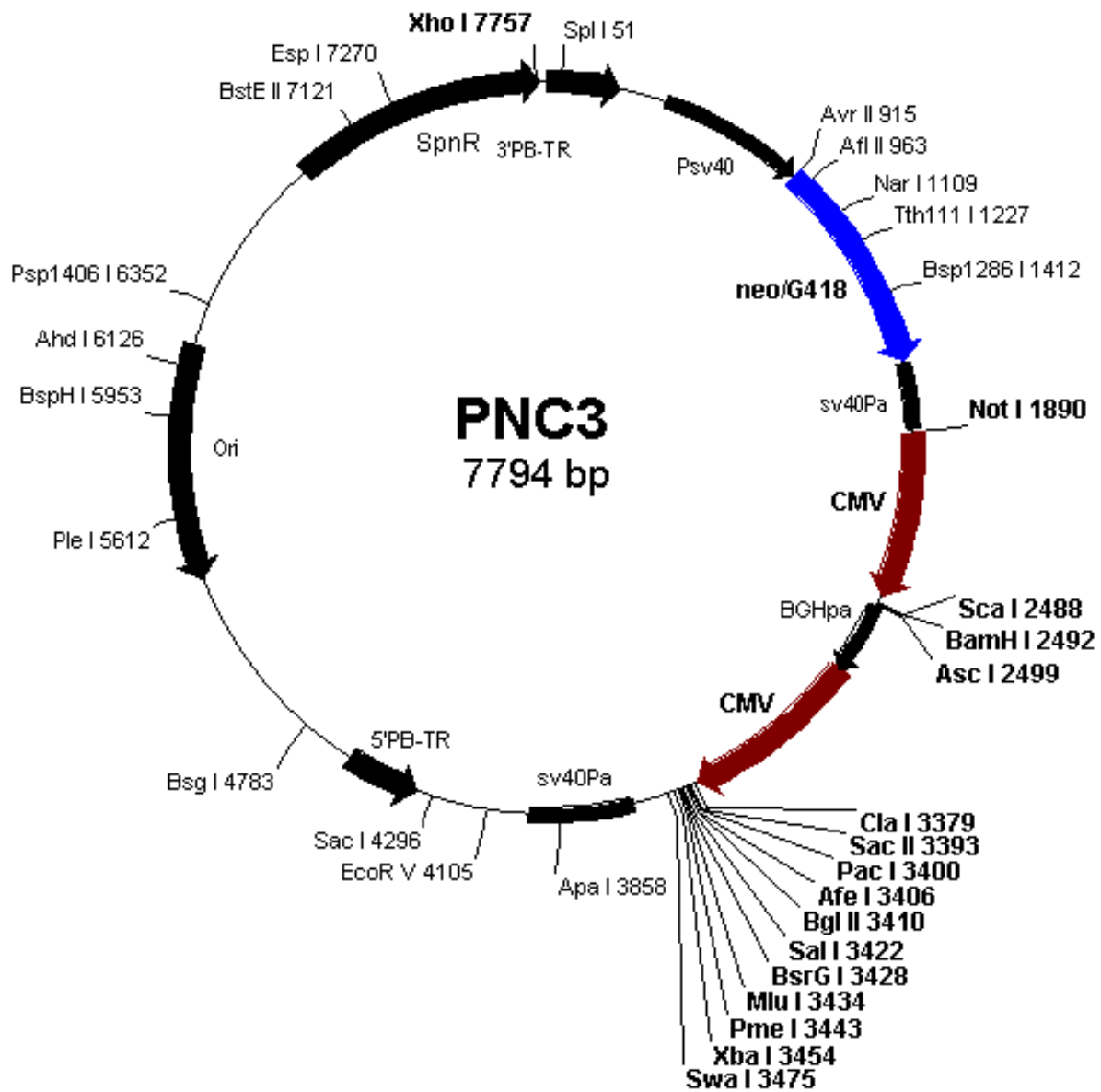


**Vector:** PNC3 (MOLab modified piggyBac vector with CMV promoter)

**Antibiotic Selection:** Spectinomycin-resistant

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

**Date of Construction:** January, 2013



# PNC3 Vector Sequence (Spectinomycin-resistant)

CTGCAGAACACGCAGCTAGATTAACTCTAGAAAAGATAATCATATTGTGACGTACGTTAAAGATAATCATGCGTAAAATTGACGCATG  
TGTTTTATCGGTCTGTATATCGAGGTTTATTTATTAATTTGAATAGATATTAAGTTTTATTATATTTACTTACATACTAATAATA  
AATTCAACAAACAATTTATTTATGTTTATTTATTTATTTAAAAAACAACAACTCAAATTTCTTCTATAAAGTAACAAAACTTTT  
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 TGGACAAGAAGAAGATCGCTTGGCCTCGCGCGCAGATCAGTTGGAAGAATTTGTCCACTACGTGAAAGGCGAGATCACCAAGGTAGT  
 CGGCAATAACCCTCGAGCCACCCATGACCAAAAATCCCTTAACGTGAGTTA

Unique enzymes in PNC3:

BsiW I	C`GTAC,G	51
Spl I	C`GTAC,G	51
BseR I	GAGGAG 16/14	911
Avr II	C`CTAG,G	915
Afl II	C`TTAA,G	963
Kas I	G`GCGC,C	1108
Nar I	GG`CG,CC	1109
Ehe I	GGC GCC	1110
Bbe I	G,GCGC`C	1112
Tth111 I	GACN`N,NGTC	1227
Bsp1286 I	G,DGCH`C	1412
Not I	GC`GGCC,GC	1890
Sca I	AGT ACT	2488
BamH I	G`GATC,C	2492
Asc I	GG`CGCG,CC	2499
Bbv II	GAAGAC 7/11	2725
Bbs I	GAAGAC 8/12	2726
Cla I	AT`CG,AT	3379
Sac II	CC,GC`GG	3393
Pac I	TTA,AT`TAA	3400
Afe I	AGC GCT	3406
Eco47 III	AGC GCT	3406
Bgl II	A`GATC,T	3410
EcoR I	G`AATT,C	3416
Sal I	G`TCGA,C	3422
Acc I	GT`MK,AC	3423
BsrG I	T`GTAC,A	3428
Mlu I	A`CGCG,T	3434
Pme I	CTTT AAAC	3443
Xba I	T`CTAG,A	3454
Swa I	ATTT AAAT	3475
EcoN I	CCTNN`N,NNAGG	3849
EcoO109 I	RG`GNC,CY	3854
Bsp120 I	G`GGCC,C	3854
Apa I	G,GGCC`C	3858
EcoR V	GAT ATC	4105
Sac I	G,AGCT`C	4296
Bsg I	GTGCAG 22/20	4783
Ple I	GAGTC 9/10	5612
BspH I	T`CATG,A	5953
Ahd I	GACNN,N`NNGTC	6126
Psp1406 I	AA`CG,TT	6352

BstE II	G`GTNAC,C	7121
Blp I	GC`TNA,GC	7270
Esp I	GC`TNA,GC	7270
Paer7 I	C`TCGA,G	7757
Xho I	C`TCGA,G	7757
Number of enzymes = 47		

The following enzymes do not cut in PNC3:

Age I	BsaB I	BsmB I	Bst1107 I	Bsu36 I
Eco72 I	Fse I	Hpa I	Mun I	Nhe I
Nru I	PflM I	Pml I	PpuM I	Spe I

PNC3: sites sorted by name:

Aat II	(8)	2014	2067	2150	2336
		2912	2965	3048	3234
Acc I	(1)	3423			
Acc65 I	(2)	565	2480		
Aci I	(99)	315	336	348	370
		393	578	763	775
		784	796	806	817
		863	1018	1081	1175
		1239	1340	1343	1583
		1623	1628	1678	1694
		1720	1776	1835	1889
		1893	1947	1975	1987
		2001	2168	2259	2292
		2396	2417	2511	2520
		2746	2770	2845	2873
		2885	2899	3066	3157
		3190	3294	3315	3390
		3392	3972	3995	4017
		4029	4050	4234	4267
		4301	4509	4522	4671
		4778	4783	4831	4868
		4923	5026	5082	5092
		5116	5159	5166	5187
		5278	5306	5433	5452
		5573	5683	5818	5827
		6189	6280	6471	6517
		6784	6804	6972	7069
		7081	7148	7211	7407
		7410	7488	7535	

Afe I	(1)	3406				Bsm I	(2)	3574	4378				
Afl II	(1)	963				BsmA I	(5)	959	2322	3220	3673		
Afl III	(2)	3434	5233					6188					
Aha II	(11)	1109	1811	2011	2064	BsmF I	(20)	281	291	410	609		
		2147	2333	2909	2962			681	745	1260	1792		
		3045	3231	7015				2064	2215	2383	2962		
Ahd I	(1)	6126						3113	3281	3696	3779		
Alu I	(28)	16	591	879	933			3953	4072	4082	7517		
		1215	1673	2455	3353	BsoF I	(64)	14	326	329	336		
		3386	3660	4294	4420			387	454	521	863		
		4463	4898	4993	5057			1018	1070	1081	1171		
		5175	5401	5491	5537			1176	1213	1254	1341		
		5794	6315	6415	6478			1344	1347	1583	1679		
		6725	7155	7269	7641			1720	1734	1835	1890		
Alw I	(19)	434	1287	1354	1533			1893	2511	3813	3912		
		2470	2488	2499	2790			3979	4030	4037	4040		
		3368	3932	4436	5795			4302	4421	4523	4554		
		5881	5881	5978	5979			4557	4672	4784	4831		
		6443	7420	7449				5058	5139	5157	5160		
AlwN I	(2)	2786	5649					5278	5433	5576	5641		
Apa I	(1)	3858						5644	5850	6178	6517		
ApaL I	(2)	5547	7236					6544	6639	6782	6867		
Apo I	(5)	175	233	3416	3544			6911	6927	7082	7149		
		7704						7299	7408	7488	7585		
Asc I	(1)	2499				Bsp120 I	(1)	3854					
Ase I	(5)	122	4769	5004	5063	Bsp1286 I	(1)	1412					
		6298				BspH I	(1)	5953					
Asp718	(2)	565	2480			BspM I	(4)	996	1377	1827	7308		
Ava I	(8)	339	377	403	3960	BspM II	(2)	4679	4691				
		3986	4024	6853	7757	Bsr I	(23)	801	1052	1253	2185		
Ava II	(7)	355	1625	4009	6264			2485	2493	3083	3731		
		6486	6760	7401				3841	4662	5034	5640		
Avr II	(1)	915						5653	5767	6173	6291		
BamH I	(1)	2492						6334	6601	6696	6761		
Ban I	(9)	565	1108	1143	2354			7499	7595	7617			
		2480	2602	3252	4977	BsrB I	(7)	350	1722	1776	1889		
		6074						4017	4925	5166			
Ban II	(6)	347	1474	2755	3858	BsrD I	(5)	1342	6187	6361	7310		
		4024	4296					7603					
Bbe I	(1)	1112				BsrG I	(1)	3428					
Bbs I	(1)	2726				BssH II	(4)	1506	2499	4872	7685		
Bbv I	(19)	25	337	340	398	BssS I	(2)	1701	5406				
		532	1182	1224	1745	BstB I	(2)	1791	3449				
		3824	3923	5652	5655	BstE II	(1)	7121					
		5861	6555	6793	6878	BstN I	(24)	291	477	629	684		
		6922	6938	7310				701	1496	1979	2172		
Bbv II	(1)	2725						2596	2781	2877	3070		
Bcl I	(2)	2524	7159					3759	3817	3889	4075		
Bcn I	(16)	341	342	405	406			4653	4820	4973	5261		
		1114	1274	3680	3829			5382	5395	6615	7192		
		3962	3963	4026	4027	BstU I	(25)	1175	1476	1508	1949		
		4866	5614	6310	6657			2501	2847	3392	3436		
Bfa I	(18)	17	28	318	513			4234	4340	4511	4671		
		916	970	2546	2790			4874	5080	5082	5280		
		3408	3455	3579	4047			5861	6191	6875	7148		
		4406	4417	5728	5981			7213	7276	7569	7685		
		6316	7642					7687					
Bgl I	(10)	504	868	1979	2101	BstX I	(2)	1830	3865				
		2172	2877	2999	3070	BstY I	(12)	1280	1526	2474	2492		
		6246	7593					2783	3372	3410	5874		
Bgl II	(1)	3410						5885	5971	5983	7442		
Blp I	(1)	7270				Cac8 I	(51)	333	384	391	467		
Bpm I	(2)	6196	7213					642	661	714	733		
Bsa I	(2)	3674	6187					1003	1189	1408	1474		
BsaA I	(7)	1413	2229	3127	3462			1480	1508	1512	1553		
		4143	4201	7718				1557	1611	1975	2168		
BsaH I	(11)	1109	1811	2011	2064			2501	2554	2731	2735		
		2147	2333	2909	2962			2873	3066	3900	3976		
		3045	3231	7015				3983	4034	4281	4378		
BsaJ I	(40)	289	290	339	340			4465	4619	4870	4874		
		403	476	502	526			5026	5055	5164	5250		
		627	699	822	857			5287	5847	6238	6871		
		866	915	1272	1541			7048	7153	7333	7502		
		2249	2594	3147	3390			7608	7612	7687			
		3678	3826	3887	3960								
		4023	4024	4073	4074	Cfr10 I	(9)	382	1428	1609	3981		
		4541	4652	4972	5393			4732	4756	6206	7557		
		6646	6669	6852	6883			7610					
		7190	7254	7393	7735								
BsaW I	(10)	352	1140	2477	4011	Cla I	(1)	3379					
		4679	4691	5439	5586	Csp6 I	(24)	52	566	1414	2107		
		6417	7427					2132	2187	2220	2271		
BseR I	(1)	911						2428	2481	2487	3005		
Bsg I	(1)	4783						3030	3085	3118	3169		
BsiC I	(2)	1791	3449					3326	3429	3463	6607		
BsiE I	(7)	1018	1893	4238	5149	Dde I	(10)	6840	7053	7061	7544		
		5573	6496	7342				573	875	1772	2656		
BsiHKA I	(5)	1222	1412	4296	5551			2765	4308	5508	5917		
		7240						6083	7270				
BsiW I	(1)	51				Dpn I	(34)	429	1282	1360	1441		
								1450	1528	2476	2494		
								2526	2785	3374	3412		

		3481	3938	4431	5801		1510	1738	2501	2503
		5876	5887	5895	5973		3407	4006	4342	4469
		5985	6090	6431	6449		4712	4788	4874	4876
		6495	6978	7161	7341		5017	5082	5110	5143
		7351	7426	7444	7672		5413	5480	5580	5754
		7693	7731				5863	6256	6349	6748
DpnII	(34)	427	1280	1358	1439		6798	6875	7027	7215
		1448	1526	2474	2492		7276	7303	7457	7551
		2524	2783	3372	3410		7571	7606	7687	7689
		3479	3936	4429	5799	HinC II	(2)	3424	3755	
		5874	5885	5893	5971	Hind II	(2)	3424	3755	
		5983	6088	6429	6447	Hind III	(2)	931	3384	
		6493	6976	7159	7339	Hinf I	(19)	937	1594	1728
		7349	7424	7442	7670		2299	3197	3451	3629
		7691	7729				3841	4227	4335	4596
Dra I	(5)	3443	3475	3708	5992		5068	5133	5208	5604
		6011					6121	6992	7205	
Dra III	(3)	6670	7098	7718		HinI I	(11)	1109	1811	2011
Drd I	(4)	952	1136	4312	5341		2147	2333	2909	2962
Dsa I	(10)	502	526	822	1541		3045	3231	7015	
		2249	3147	3390	6669	HinP I	(44)	361	518	1101
		6883	7254				1173	1210	1476	1506
Eae I	(12)	505	1015	1189	1580		1508	1736	2499	2501
		1607	1832	1890	2508		3405	4004	4340	4467
		4610	5072	6514	7048		4710	4786	4872	4874
Eag I	(2)	1015	1890				5015	5080	5108	5141
Ear I	(3)	1453	1663	5117			5411	5478	5578	5752
Eco47 III	(1)	3406					5861	6254	6347	6746
Eco57 I	(4)	1254	1686	5780	7106		6796	6873	7025	7213
EcoN I	(1)	3849					7274	7301	7455	7549
EcoO109 I	(1)	3854					7569	7604	7685	7687
EcoR I	(1)	3416				Hpa II	(41)	340	353	358
EcoR II	(24)	289	475	627	682		404	1014	1091	1113
		699	1494	1977	2170		1141	1272	1362	1429
		2594	2779	2875	3068		1610	2478	2496	3678
		3757	3815	3887	4073		3828	3961	3982	4007
		4651	4818	4971	5259		4012	4025	4680	4692
		5380	5393	6613	7190		4733	4743	4757	4865
EcoR V	(1)	4105					4951	5440	5587	5613
Ehe I	(1)	1110					5803	6207	6241	6308
Esp I	(1)	7270					6418	6655	7428	7558
Fnu4H I	(64)	14	326	329	336		7611			
		387	454	521	863	Hph I	(12)	1288	2264	3162
		1018	1070	1081	1171		5970	6197	6611	6669
		1176	1213	1254	1341		6985	7132	7218	7725
		1344	1347	1583	1679	Kas I	(1)	1108		
		1720	1734	1835	1890	Kpn I	(2)	569	2484	
		1893	2511	3813	3912	Mae I	(18)	17	28	318
		3979	4030	4037	4040		916	970	2546	2790
		4302	4421	4523	4554		3408	3455	3579	4047
		4557	4672	4784	4831		4406	4417	5728	5981
		5058	5139	5157	5160		6316	7642		
		5278	5433	5576	5641	Mae II	(30)	50	54	304
		5644	5850	6178	6517		1412	2011	2023	2064
		6544	6639	6782	6867		2147	2228	2333	2909
		6911	6927	7082	7149		2921	2962	3045	3126
		7299	7408	7488	7585		3231	3461	4061	4142
Fok I	(19)	307	359	766	1433		4200	4565	4582	4799
		1458	2755	3677	4004		5936	6352	7041	7527
		4056	4558	4707	4839		7717	7786		
		6092	6273	6560	6692	Mae III	(30)	46	248	1229
		6845	7089	7590			1950	2037	2386	2848
Fsp I	(2)	1211	6348				2935	3284	3518	4196
Gdi II	(12)	506	1014	1016	1579		4256	4859	5589	5652
		1606	1831	1889	1891		5768	6051	6382	6440
		2507	5073	6513	7047		6593	6658	6789	6876
Gsu I	(2)	6197	7212				6920	7115	7121	7223
Hae I	(10)	498	531	914	1191		7553	7791		
		4612	4648	5248	5259	Mbo I	(34)	427	1280	1358
		5711	7680				1448	1526	2474	2492
Hae II	(11)	364	1112	3408	4007		2524	2783	3372	3410
		4470	4789	5111	5481		3479	3936	4429	5799
		7028	7458	7607			5874	5885	5893	5971
Hae III	(33)	498	507	531	856		5983	6088	6429	6447
		862	871	914	1017		6493	6976	7159	7339
		1191	1582	1609	1834		7349	7424	7442	7670
		1892	1973	2166	2510		7691	7729		
		2871	3064	3856	4612	Mbo II	(14)	231	933	1469
		4648	5074	5248	5259		1761	2730	4500	5105
		5277	5711	6169	6249		5894	5967	7317	7676
		6516	7050	7084	7614		7679	7712		
		7680				Mlu I	(1)	3434		
Hga I	(10)	89	1818	2414	3312	Mme I	(3)	5447	5631	7679
		4207	4370	5343	5921	Mnl I	(51)	103	258	318
		6669	7005				508	544	551	568
HgiA I	(5)	1222	1412	4296	5551		846	852	875	881
		7240					889	892	904	1024
HgiE II	(2)	2591	5812				1160	1517	1709	2430
Hha I	(44)	363	520	1103	1111		2540	2582	2628	2703
		1175	1212	1478	1508		2760	3328	3788	3921

		4049	4293	4479	4506		Rsr II	(3)	355	1625	4009	
		4536	4800	5082	5131		Sac I	(1)	4296			
		5341	5414	5665	6065		Sac II	(1)	3393			
		6146	6292	6498	6637		Sal I	(1)	3422			
		6861	6958	6998	7406		Sap I	(3)	1453	1663	5117	
		7445	7690	7765			Sau3A I	(34)	427	1280	1358	1439
Msc I	(2)	1191	4612						1448	1526	2474	2492
Mse I	(29)	22	57	122	138				2524	2783	3372	3410
		212	964	3396	3400				3479	3936	4429	5799
		3442	3474	3700	3707				5874	5885	5893	5971
		4184	4191	4412	4625				5983	6088	6429	6447
		4769	5004	5063	5939				6493	6976	7159	7339
		5991	5996	6010	6063				7349	7424	7442	7670
		6298	6337	6954	7470				7691	7729		
		7783					Sau96 I	(16)	355	1625	1972	2165
Msl I	(9)	1546	1828	1867	2254				2870	3063	3854	3855
		3152	3863	6378	6537				4009	6168	6247	6264
		7233							6486	6760	7401	7613
Msp I	(41)	340	353	358	383		Sca I	(1)	2488			
		404	1014	1091	1113		ScrF I	(40)	291	340	341	404
		1141	1272	1362	1429				405	477	629	684
		1610	2478	2496	3678				701	1113	1273	1496
		3828	3961	3982	4007				1979	2172	2596	2781
		4012	4025	4680	4692				2877	3070	3679	3759
		4733	4743	4757	4865				3817	3828	3889	3961
		4951	5440	5587	5613				3962	4025	4026	4075
		5803	6207	6241	6308				4653	4820	4865	4973
		6418	6655	7428	7558				5261	5382	5395	5613
		7611							6309	6615	6656	7192
MspAl I	(10)	591	1215	2522	3392		Sec I	(40)	289	290	339	340
		4778	5057	5575	5820				403	476	502	526
		6784	7407						627	699	822	857
Nae I	(4)	384	1611	3983	7612				866	915	1272	1541
Nar I	(1)	1109							2249	2594	3147	3390
Nci I	(16)	340	341	404	405				3678	3826	3887	3960
		1113	1273	3679	3828				4023	4024	4073	4074
		3961	3962	4025	4026				4541	4652	4972	5393
		4865	5613	6309	6656				6646	6669	6852	6883
Nco I	(5)	526	822	1541	2249				7190	7254	7393	7735
		3147					SfaN I	(23)	380	671	743	1068
Nde I	(3)	2123	3021	3467					1323	1407	1471	1539
NgoM I	(4)	382	1609	3981	7610				1746	2247	2652	2734
Nla III	(33)	71	88	530	663				3145	3545	3983	4431
		735	826	983	1328				4486	4720	4818	5329
		1514	1545	1571	2193				6381	6574	6866	
		2253	2737	3091	3151		Sfc I	(8)	2	467	1158	3896
		3620	4157	4217	4380				5498	5689	6367	7216
		4529	4593	4617	4847		Sfi I	(2)	504	868		
		4891	5237	5957	6448		Sma I	(4)	341	405	3962	4026
		6458	6536	6572	6815		SnaB I	(3)	2229	3127	3462	
		7771					Sph I	(5)	663	735	1514	2737
Nla IV	(22)	346	567	633	705				4380			
		1110	1145	2356	2482		Spl I	(1)	51			
		2494	2604	3254	3856		Srf I	(2)	405	3962		
		4021	4979	5265	5304		Ssp I	(2)	3704	4364		
		6076	6170	6211	6422		Stu I	(2)	498	914		
		7067	7432				Sty I	(9)	526	822	915	1541
Not I	(1)	1890							2249	3147	6646	7393
Nsi I	(3)	665	737	4378					7735			
Nsp7524 I	(7)	84	659	731	1510		Swa I	(1)	3475			
		2733	4376	5233			Taq I	(21)	108	958	1222	1378
NspB II	(10)	591	1215	2522	3392				1402	1438	1600	1791
		4778	5057	5575	5820				2533	3379	3423	3449
		6784	7407						5333	6630	6890	6990
NspH I	(7)	88	663	735	1514				7021	7033	7327	7342
		2737	4380	5237					7758			
Pac I	(1)	3400					Tfi I	(10)	937	1594	1728	3451
PaeR7 I	(1)	7757							3841	4335	4596	5068
Pal I	(33)	498	507	531	856				5208	7205		
		862	871	914	1017		Tsp45 I	(10)	46	1229	1535	4196
		1191	1582	1609	1834				4256	6382	6593	6658
		1892	1973	2166	2510				7121	7223		
		2871	3064	3856	4612		Tth111 I	(1)	1227			
		4648	5074	5248	5259		Tth111 II	(9)	198	1545	2556	4291
		5277	5711	6169	6249				5822	5831	5861	6878
		6516	7050	7084	7614				6885			
		7680					Vsp I	(5)	122	4769	5004	5063
Ple I	(1)	5612							6298			
Pme I	(1)	3443					Xba I	(1)	3454			
Psp1406 I	(1)	6352					Xho I	(1)	7757			
PspA I	(4)	339	403	3960	4024		Xho II	(12)	1280	1526	2474	2492
Pst I	(4)	6	471	1162	3900				2783	3372	3410	5874
Pvu I	(2)	6496	7342						5885	5971	5983	7442
Pvu II	(3)	591	1215	5057			Xma I	(4)	339	403	3960	4024
Rsa I	(24)	53	567	1415	2108		Xma III	(2)	1015	1890		
		2133	2188	2221	2272							
		2429	2482	2488	3006							
		3031	3086	3119	3170							
		3327	3430	3464	6608							
		6841	7054	7062	7545							

Site usage in PNC3:

Aat II	G,ACGT`C	8	Acc I	GT`MK,AC	1	Gdi II	`YGGC,CG	12	Gsu I	CTGGAG 21/19	2
Acc65 I	G`GTAC,C	2	Aci I	C`CG,C	99	Hae I	WGG CCW	10	Hae II	R,GCC`Y	11
Afe I	AGC GCT	1	Afl II	C`TTAA,G	1	Hae III	GG CC	33	Hga I	GACGC 9/14	10
Afl III	A`CRYG,T	2	Age I	A`CCGG,T	-	HgiA I	G,WGCW`C	5	HgiE II	ACCNNNNNGGT -1/132	-
Aha II	GR`CG,YC	11	Ahd I	GACNN,N`NNGTC	1	Hha I	G,CG`C	44	Hinc II	GTY RAC	2
Alu I	AG CT	28	Alw I	GGATC 8/9	19	Hind II	GTY RAC	2	Hind III	A`AGCT,T	2
AlwN I	CAG,NNN`CTG	2	Apa I	G,GGCC`C	1	Hinf I	G`ANT,C	19	HinI I	GR`CG,YC	11
Apal I	G`TGCA,C	2	Apo I	R`AATT,Y	5	HinP I	G`CG,C	44	Hpa I	GTT AAC	-
Asc I	GG`CGCG,CC	1	Ase I	AT`TA,AT	5	Hpa II	C`CG,G	41	Hph I	GGTGA 12/11	12
Asp718	G`GTAC,C	2	Ava I	C`YCGR,G	8	Kas I	G`GCGC,C	1	Kpn I	G,GTAC`C	2
Ava II	G`GWC,C	7	Avr II	C`CTAG,G	1	Mae I	C`TA,G	18	Mae II	A`CG,T	30
BamH I	G`GATC,C	1	Ban I	G`GYRC,C	9	Mae III	`GTNAC,	30	Mbo I	`GATC,	34
Ban II	G,RGCY`C	6	Bbe I	G,GCCG`C	1	Mbo II	GAAGA 12/11	14	Mlu I	A`CGCG,T	1
Bbs I	GAAGAC 8/12	1	Bbv I	GCAGC 13/17	19	Mme I	TCCRAC 25/23	3	Mnl I	CCTC 10/10	51
Bbv II	GAAGAC 7/11	1	Bcl I	T`GATC,A	2	Msc I	TGG CCA	2	Mse I	T`TA,A	29
Bcn I	CC,S`GG	16	Bfa I	C`TA,G	18	Msl I	CAYNN NNRTG	9	Msp I	C`CG,G	41
Bgl I	GCCN,NNN`NGGC	10	Bgl II	A`GATC,T	1	MspA1 I	CMG CKG	10	Mun I	C`AATT,G	-
Blp I	GC`TNA,GC	1	Bpm I	CTGGAG 22/20	2	Nae I	GCC GGC	4	Nar I	GG`CG,CC	29
Bsa I	GGTCTC 7/11	2	BsaA I	YAC GTR	7	Nci I	CC`S,GG	16	Nco I	C`CATG,G	5
BsaB I	GATNN NNATC	-	BsaH I	GR`CG,YC	11	Nde I	CA`TA,TG	3	Ngo I	G`CCGC,C	4
BsaJ I	C`CNNG,G	40	Bsaw I	W`CCGG,W	10	Nhe I	G`CTAG,C	-	Nla III	,CATG`	33
BseR I	GAGGAG 16/14	1	Bsg I	GTGCAG 22/20	1	Nla IV	GGN NCC	22	Not I	GC`GGCC,GC	1
BsiC I	TT`CG,AA	2	BsiE I	CG,RY`CG	7	Nru I	TCG CGA	-	Nsi I	A,TGCA`T	3
BsiHKA I	G,WGCW`C	5	BsiW I	C`GTAC,G	1	Nsp7524 I	R`CATG,Y	7	NspB II	CMG CKG	10
Bsm I	GAATG,C 7	2	BsmA I	GTCTC`/9	5	NspH I	R,CATG`Y	7	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	33
BsoF I	GC`N,GC	64	Bsp120 I	G`GGCC,C	1	PflM I	CCAN,NNN`NTGG	-	Ple I	GAGTC 9/10	1
Bsp1286 I	G,DGCH`C	1	BspH I	T`CATG,A	1	Pme I	CTTT AAAC	1	Pml I	CAC GTG	-
BspM I	ACCTGC 10/14	4	BspM II	T`CCGG,A	2	PpuM I	RG`GWC,CY	-	Psp1406 I	AA`CG,TT	1
Bsr I	ACT,GG`	23	BsrB I	GAG CGG	7	PspA I	C`CCGG,G	4	Pst I	C,TGCA`G	4
BsrD I	GCAATG, 8	5	BsrG I	T`GTAC,A	1	Pvu I	CG,AT`CG	2	Pvu II	CAG CTG	3
Bssh II	G`GCGC,C	4	BssS I	C`TCGT,G	2	Rsa I	GT AC	24	Rsr II	CG`GWC,CG	3
Bst1107 I	GTA TAC	-	BstB I	TT`CG,AA	2	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	GCTTTC 8/11	3
BstU I	CG CG	25	BstX I	CCAN,NNNN`NTGG	2	Sau3A I	`GATC,	34	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	40
Cac8 I	GCN NGC	51	Cfr10 I	R`CCGG,Y	9	Sec I	C`CNNG,G	40	SfaN I	GCATC 9/13	23
Cla I	AT`CG,AT	1	Csp6 I	G`TA,C	24	Sfc I	C`TRYA,G	8	Sfi I	GGCCN,NNN`NGGCC	2
Dde I	C`TNA,G	10	Dpn I	GA TC	34	Sma I	CCC GGG	4	SnaB I	TAC GTA	3
DpnII	`GATC,	34	Dra I	TTT AAA	5	Spe I	A`CTAG,T	-	Sph I	G,CATG`C	5
Dra III	CAC,NNN`GTG	3	Drd I	GACNN,NN`NNGTC	4	Spl I	C`GTAC,G	1	Srf I	GGCC GGGC	2
Dsa I	C`CRYG,G	10	Eae I	Y`GGCC,R	12	Ssp I	AAT ATT	2	Stu I	AGG CCT	2
Eag I	C`GGCC,G	2	Ear I	CTCTTC 7/10	3	Sty I	C`CWWG,G	9	Swa I	ATTT AAAT	1
Eco47 III	AGC GCT	1	Eco57 I	CTGAAG 21/19	4	Taq I	T`CG,A	21	Tfi I	G`AWT,C	10
Eco72 I	CAC GTG	-	EcoN I	CCTNN`N,NNAGG	1	Tsp45 I	`GTSAC,	10	Tth111 I	GACN`N,NGTC	1
Eco109 I	RG`GNC,CY	1	EcoR I	G`AATT,C	1	Tth111 II	CAARCA 16/14	9	Vsp I	AT`TA,AT	5
EcoR II	`CCWGG,	24	EcoR V	GAT ATC	1	Xba I	T`CTAG,A	1	Xca I	GTA TAC	-
Ehe I	GGC GCC	1	Esp I	GC`TNA,GC	1	Xcm I	CCANNNN,N`NNNNTGG-	-	Xho I	C`TCGA,G	1
Fnu4H I	GC`N,GC	64	Fok I	GGATG 14/18	19	Xho II	R`GATC,Y	12	Xma I	C`CCGG,G	4
Fse I	GG,CCGG`CC	-	Fsp I	TGC GCA	2	Xma III	C`GGCC,G	2	Xmn I	GAANN NNNTC	-