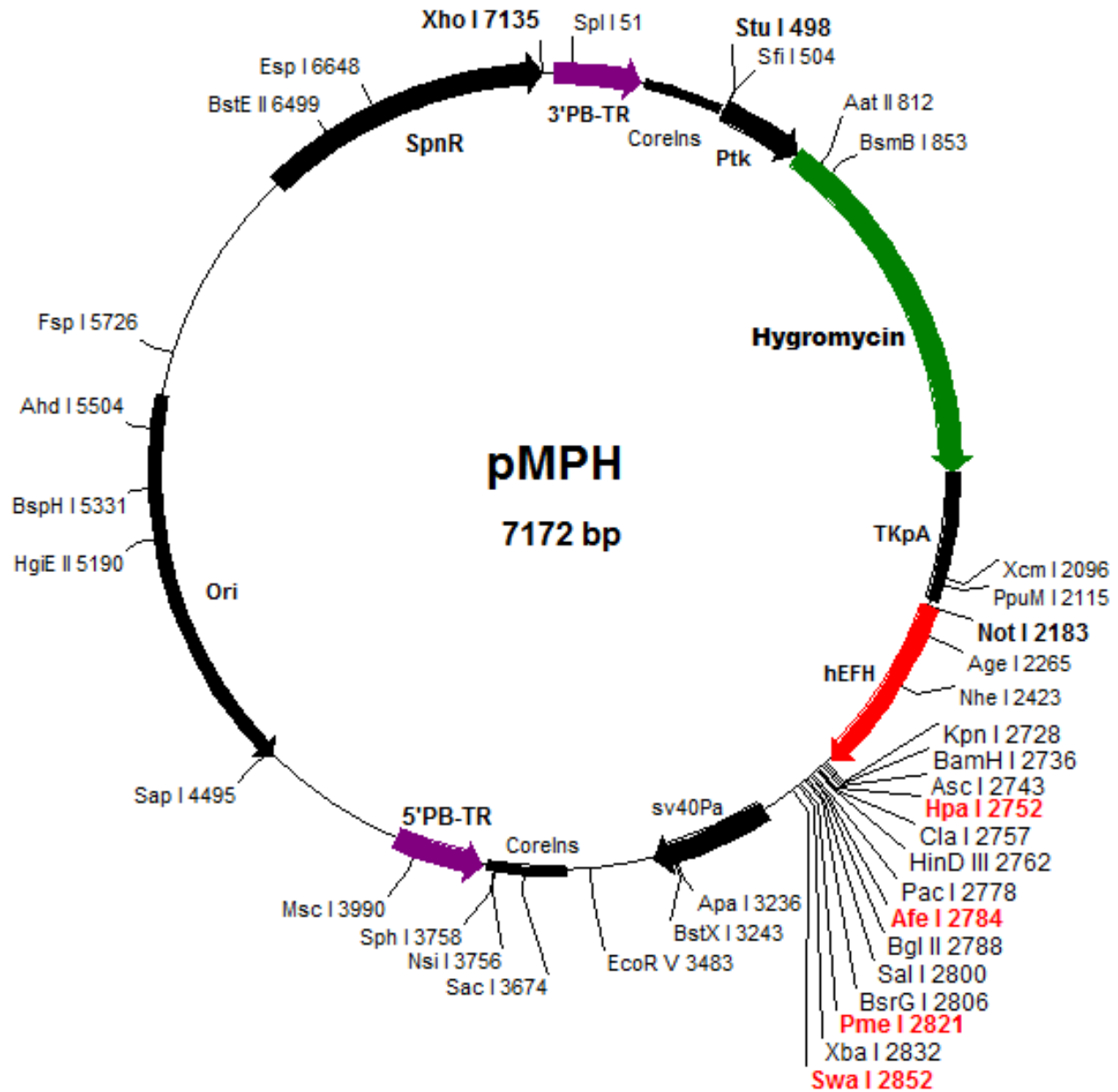


Vector: pMPH (modified piggyBac vector-hygromycin resistance)

Antibiotic Selection: Spectinomycin-resistant

Creator(s): Ning Wang, Molecular Oncology Lab of The University of Chicago Medical Center

Date of Construction: April 2012



pMPH Vector Sequence (Spectinomycin-resistant)

CTGCAGAACACGCAGCTAGATTAAACCTAGAAAGATAATCATATTTGTGACGTACGTTAAAGATAATCATGCGTAAAATTGACCGCATG
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Unique enzymes in pMPH:

BsiI I	C`GTAC,G	51
Spl I	C`GTAC,G	51
Stu I	AGG CCT	498
Sfi I	GGCCN,NNN`NGGCC	504
Aat II	G,ACGT`C	812
BsmB I	CGTCTC 7/11	853
Xcm I	CCANNNN,N`NNNNTGG2096	
PpuM I	RG`GWC,CY	2115
Not I	GC`GGCC,GC	2183
Mun I	C`AATT,G	2258
Age I	A`CCGG,T	2265
Nhe I	G`CTAG,C	2423
Bsu36 I	CC`TNA,GG	2472
Kas I	G`GCGC,C	2715
Nar I	GG`CG,CC	2716
Ehe I	GGC GCC	2717
Bbe I	G,GCGC`C	2719
Acc65 I	G`GTAC,C	2724
Asp718	G`GTAC,C	2724
Kpn I	G,GTAC`C	2728
BamH I	G`GATC,C	2736
Asc I	GG`CGCG,CC	2743
Hpa I	GTT AAC	2752
Cla I	AT`CG,AT	2757
HinD III	A`AGCT,T	2762
Pac I	TTA,AT`TAA	2778
Afe I	AGC GCT	2784
Eco47 III	AGC GCT	2784
Bgl II	A`GATC,T	2788
Sal I	G`TCGA,C	2800
Acc I	GT`MK,AC	2801
BsrG I	T`GTAC,A	2806
Pme I	CTTT AAAC	2821
Xba I	T`CTAG,A	2832
SnaB I	TAC GTA	2840
Swa I	ATTT AAAT	2853
Bsp120 I	G`GGCC,C	3232
Apa I	G,GGCC`C	3236
BstX I	CCAN,NNNN`NTGG	3243
EcoR V	GAT ATC	3483
Sac I	G,AGCT`C	3674
Nsi I	A,TGCA`T	3756
Sph I	G,CATG`C	3758
Msc I	TGG CCA	3990
Sap I	GCTCTTC 8/11	4495
Ear I	CTCTTC 7/10	4495
HgiE II	ACCNNNNNNGGT -1/135190	
BspH I	T`CATG,A	5331
Ahd I	GACNN,N`NNGTC	5504
Fsp I	TGC GCA	5726
BstE II	G`GTNAC,C	6499

Bcl I	T`GATC,A	6537
Blp I	GC`TNA,GC	6648
Esp I	GC`TNA,GC	6648
PaeR7 I	C`TCGA,G	7135
Xho I	C`TCGA,G	7135

Number of enzymes = 56

The following enzymes do not cut in pMPH:

Afl II	Avr II	Bbs I	Bbv II	BsaB I
BseR I	Bsp1286 I	Bst1107 I	Eco72 I	Fse I
Nru I	PflM I	Pml I	Spe I	Xca I

pMPH: sites sorted by name:

Aat II	(1)	812			
Acc I	(1)	2801			
Acc65 I	(1)	2724			
Aci I	(92)	315	336	348	370
		393	555	612	662
		667	738	762	804
		928	993	1060	1110
		1130	1154	1176	1196
		1373	1411	1421	1534
		1562	1564	1585	1714
		1724	1864	1930	1997
		2070	2182	2186	2287
		2324	2404	2460	2463
		2478	2509	2516	2543
		2768	2770	3350	3373
		3395	3407	3428	3612
		3645	3679	3887	3900
		4049	4156	4161	4209
		4246	4301	4404	4460
		4470	4494	4537	4544
		4565	4656	4684	4811
		4830	4951	5061	5196
		5205	5567	5658	5849
		5895	6162	6182	6350
		6447	6459	6526	6589
		6785	6788	6866	6913
Afe I	(1)	2784			
Afl III	(3)	699	2812	4611	
Age I	(1)	2265			
Aha II	(4)	809	1777	2716	6393
Ahd I	(1)	5504			
Alu I	(33)	16	865	897	939
		1324	1549	1614	1643
		2417	2423	2427	2565
		2706	2764	3038	3672
		3798	3841	4276	4371

		4435	4553	4779	4869		1514	1562	1565	1641
		4915	5172	5693	5793		1725	2056	2071	2183
		5856	6103	6533	6647		2186	2404	2463	2478
		7019					2509	3191	3290	3357
Alw I	(18)	434	762	1245	1563		3408	3415	3418	3680
		1672	2694	2732	2743		3799	3901	3932	3935
		3310	3814	5173	5259		4050	4162	4209	4436
		5259	5356	5357	5821		4517	4535	4538	4656
		6798	6827				4811	4954	5019	5022
AlwN I	(2)	2079	5027				5228	5556	5895	5922
Apa I	(1)	3236					6017	6160	6245	6289
ApaL I	(4)	1065	1367	4925	6614		6305	6460	6527	6677
Apo I	(7)	175	233	635	1028		6786	6866	6963	
		2794	2922	7082		Bsp120 I	(1)	3232		
Asc I	(1)	2743				BspH I	(1)	5331		
Ase I	(5)	122	4147	4382	4441	BspM I	(2)	1098	6686	
		5676				BspM II	(5)	1006	1543	1679
Asp718	(1)	2724					4069			4057
Ava I	(11)	339	377	403	770	Bsr I	(23)	1270	1435	2095
		2232	2334	3338	3364		2321	2729	2737	2300
		3402	6231	7135			3219	4040	4412	5018
Ava II	(12)	355	669	676	1193		5031	5145	5551	5669
		1734	1939	2115	3387		5712	5979	6074	6139
		5642	5864	6138	6779		6877	6973	6995	
BamH I	(1)	2736				BsrB I	(7)	350	1176	1534
Ban I	(8)	1359	2193	2268	2524		3395	4303	4544	2188
		2715	2724	4355	5452	BsrD I	(5)	782	5565	5739
Ban II	(6)	347	2053	2439	3236		6981			6688
		3402	3674			BsrG I	(1)	2806		
Bbe I	(1)	2719				BssH II	(3)	2743	4250	7063
Bbv I	(21)	25	337	340	398	BssS I	(3)	885	1364	4784
		742	874	1132	1525	BstB I	(2)	639	2827	
		1652	2067	3202	3301	BstE II	(1)	6499		
		5030	5033	5239	5933	BstN I	(17)	291	477	674
		6171	6256	6300	6316		2047	3137	3195	1944
		6688					3453	4031	4198	4351
Bcl I	(1)	6537					4639	4760	4773	5993
Bcn I	(20)	341	342	405	406		6570			
		565	772	773	1572	BstU I	(38)	545	667	701
		1688	2580	3058	3207		995	1130	1241	806
		3340	3341	3404	3405		1373	1522	1564	1307
		4244	4992	5688	6035		1866	1930	1999	1724
Bfa I	(18)	17	28	318	513		2456	2501	2745	2287
		2273	2424	2550	2612		2814	3612	3718	2770
		2786	2833	2957	3425		4049	4252	4458	3889
		3784	3795	5106	5359		4658	5239	5569	4460
		5694	7020				6526	6591	6654	6253
Bgl I	(3)	504	5624	6971			7063	7065	6654	6947
Bgl II	(1)	2788				BstX I	(1)	3243		
Blp I	(1)	6648				BstY I	(9)	766	2698	2736
Bpm I	(4)	1453	1507	5574	6591		5252	5263	5349	2788
Bsa I	(4)	1967	2568	3052	5565		6820			5361
BsaA I	(4)	2840	3521	3579	7096	Bsu36 I	(1)	2472		
BsaH I	(4)	809	1777	2716	6393	Cac8 I	(47)	333	384	391
BsaJ I	(45)	289	290	339	340		543	553	759	467
		403	476	502	529		1311	1371	1551	1110
		562	672	770	1137		1950	1997	2053	1714
		1338	1493	1562	1793		2425	2439	2460	2075
		1942	1943	2045	2046		2651	2745	3278	2623
		2098	2121	2335	2599		3361	3412	3659	3354
		2768	3056	3204	3265		3843	3997	4248	3756
		3338	3401	3402	3451		4404	4433	4542	4252
		3452	3919	4030	4350		4665	5225	5616	4628
		4771	6024	6047	6230		6426	6531	6711	6249
		6261	6568	6632	6771		6986	6990	7065	6880
		7113				Cfr10 I	(12)	382	1123	2265
BsaW I	(14)	352	1006	1543	1679		2621	2712	3359	2489
		1852	2190	2265	3389		4134	5584	6935	4110
		4057	4069	4817	4964	Cla I	(1)	2757		6988
		5795	6805			Csp6 I	(13)	52	1701	1754
Bsg I	(2)	2383	4161				2725	2731	2807	2315
BsiC I	(2)	639	2827				5985	6218	6431	2841
BsiE I	(11)	993	1128	1149	1158		6922			6439
		1728	2186	3616	4527	Dde I	(9)	1163	2472	2566
		4951	5874	6720			3686	4886	5295	2617
BsiHKA I	(5)	1069	1371	3674	4929		6648			5461
		6618				Dpn I	(34)	429	768	830
BsiW I	(1)	51					1148	1161	1251	963
Bsm I	(2)	2952	3756				1678	2700	2738	1558
BsmA I	(6)	852	1839	1968	2569		2859	3316	3809	2790
		3051	5566				5254	5265	5273	5179
BsmB I	(1)	853					5363	5468	5809	5351
BsmF I	(16)	281	291	410	545		5873	6356	6539	5827
		655	1702	1925	2101		6729	6804	6822	6719
		2122	2214	3074	3157		7071	7109		7050
		3331	3450	3460	6895	DpnII	(34)	427	766	828
BsoF I	(67)	14	326	329	336		1146	1159	1249	961
		387	454	663	731		1676	2698	2736	1556
		762	863	940	993		2857	3314	3807	2788
		1121	1152	1155	1411		5252	5263	5271	5177

		5361	5466	5807	5825			6405	6593	6654	6681
		5871	6354	6537	6717			6835	6929	6949	6984
		6727	6802	6820	7048			7065	7067		
		7069	7107			HinC II	(5)	752	1621	2752	2802
Dra I	(6)	2561	2821	2853	3086			3133			
		5370	5389			Hind II	(5)	752	1621	2752	2802
Dra III	(5)	1073	1366	6048	6476			3133			
		7096				HinD III	(1)	2762			
Drd I	(4)	1289	1670	3690	4719	Hinf I	(19)	881	1003	1203	1454
Dsa I	(11)	502	529	1137	1493			2496	2615	2829	3007
		1562	2098	2121	2768			3219	3605	3713	3974
		6047	6261	6632				4446	4511	4586	4982
Eae I	(10)	505	990	1155	1408			5499	6370	6583	
		1725	2183	3988	4450	HinI I	(4)	809	1777	2716	6393
		5892	6426			HinP I	(50)	361	665	942	995
Eag I	(4)	990	1155	1725	2183			1239	1307	1522	1649
Ear I	(1)	4495						1722	1866	2213	2285
Eco47 III	(1)	2784						2456	2593	2688	2716
Eco57 I	(3)	2438	5158	6484				2743	2745	2783	3382
EcoN I	(3)	2276	2471	3227				3718	3845	4088	4164
EcoO109 I	(3)	2076	2115	3232				4250	4252	4393	4458
EcoR I	(3)	635	1028	2794				4486	4519	4789	4856
EcoR II	(17)	289	475	672	1942			4956	5130	5239	5632
		2045	3135	3193	3265			5725	6124	6174	6251
		3451	4029	4196	4349			6403	6591	6652	6679
		4637	4758	4771	5991			6833	6927	6947	6982
		6568						7063	7065		
EcoR V	(1)	3483				Hpa I	(1)	2752			
Ehe I	(1)	2717				Hpa II	(49)	340	353	358	383
Esp I	(1)	6648						404	564	771	1007
Fnu4H I	(67)	14	326	329	336			1124	1357	1544	1570
		387	454	663	731			1680	1686	1853	2191
		762	863	940	993			2266	2490	2578	2590
		1121	1152	1155	1411			2622	2713	2740	3056
		1514	1562	1565	1641			3206	3339	3360	3385
		1725	2056	2071	2183			3390	3403	4058	4070
		2186	2404	2463	2478			4111	4121	4135	4243
		2509	3191	3290	3357			4329	4818	4965	4991
		3408	3415	3418	3680			5181	5585	5619	5686
		3799	3901	3932	3935			5796	6033	6806	6936
		4050	4162	4209	4436			6989			
		4517	4535	4538	4656	Hph I	(12)	706	794	2048	4019
		4811	4954	5019	5022			5348	5575	5989	6047
		5228	5556	5895	5922			6363	6510	6596	7103
		6017	6160	6245	6289						
		6305	6460	6527	6677	Kas I	(1)	2715			
		6786	6866	6963		Kpn I	(1)	2728			
Fok I	(19)	307	359	510	1154	Mae I	(18)	17	28	318	513
		1527	2468	3055	3382			2273	2424	2550	2612
		3434	3936	4085	4217			2786	2833	2957	3425
		5470	5651	5938	6070			3784	3795	5106	5359
		6223	6467	6968				5694	7020		
						Mae II	(21)	50	54	304	809
Fsp I	(1)	5726						1079	2062	2380	2663
Gdi II	(13)	506	989	991	1154			2839	3439	3520	3578
		1156	1407	1724	1726			3943	3960	4177	5314
		2182	2184	4451	5891			5730	6419	6905	7095
		6425						7164			
Gsu I	(4)	1452	1506	5575	6590	Mae III	(25)	46	248	695	1075
Hae I	(9)	498	708	1136	3990			2692	2708	2896	3574
		4026	4626	4637	5089			3634	4237	4967	5030
		7058						5146	5429	5760	5818
Hae II	(12)	364	2596	2719	2786			5971	6036	6167	6254
		3385	3848	4167	4489			6298	6493	6499	6601
		4859	6406	6836	6985			6931			
Hae III	(34)	498	507	534	708	Mbo I	(34)	427	766	828	961
		992	1136	1157	1185			1146	1159	1249	1556
		1337	1410	1492	1727			1676	2698	2736	2788
		1987	2044	2077	2095			2857	3314	3807	5177
		2185	2477	2582	3234			5252	5263	5271	5349
		3990	4026	4452	4626			5361	5466	5807	5825
		4637	4655	5089	5547			5871	6354	6537	6717
		5627	5894	6428	6462			6727	6802	6820	7048
		6992	7058					7069	7107		
Hga I	(16)	89	609	706	738	Mbo II	(14)	231	578	889	1472
		836	1288	1527	1672			1475	1997	3878	4483
		1784	2529	3585	3748			5272	5345	6695	7054
		4721	5299	6047	6383			7057	7090		
HgiA I	(5)	1069	1371	3674	4929			699	2812		
		6618				Mlu I	(2)	699	2812		
						Mme I	(5)	875	1409	4825	5009
HgiE II	(1)	5190						7057			
Hha I	(50)	363	667	944	997						
		1241	1309	1524	1651	Mnl I	(48)	103	258	318	446
		1724	1868	2215	2287			508	718	865	902
		2458	2595	2690	2718			1126	1333	1372	1432
		2745	2747	2785	3384			1459	1482	1530	1788
		3720	3847	4090	4166			1815	2241	2330	2425
		4252	4254	4395	4460			2467	2521	2537	3166
		4488	4521	4791	4858			3299	3427	3671	3857
		4958	5132	5241	5634			3884	3914	4178	4460
		5727	6126	6176	6253			4509	4719	4792	5043
								5443	5524	5670	5876

		6015	6239	6336	6376				
		6784	6823	7068	7143	Sal I	(1)	2800	
Msc I	(1)	3990				Sap I	(1)	4495	
Mse I	(32)	22	57	122	138	Sau3A I	(34)	427	766 828 961
		212	691	742	2560			1146	1159 1249 1556
		2751	2774	2778	2820			1676	2698 2736 2788
		2852	3078	3085	3562			2857	3314 3807 5177
		3569	3790	4003	4147			5252	5263 5271 5349
		4382	4441	5317	5369			5361	5466 5807 5825
		5374	5388	5441	5676			5871	6354 6537 6717
		5715	6332	6848	7161			6727	6802 6820 7048
Msl I	(5)	528	3241	5756	5915			7069	7107
		6611				Sau96 I	(25)	355	533 669 676
Msp I	(49)	340	353	358	383			1184	1193 1335 1734
		404	564	771	1007			1939	1985 2043 2076
		1124	1357	1544	1570			2094	2115 2580 3232
		1680	1686	1853	2191			3233	3387 5546 5625
		2266	2490	2578	2590			5642	5864 6138 6779
		2622	2713	2740	3056	Sca I	(2)	6991	
		3206	3339	3360	3385	ScrF I	(37)	291	1755 2732
		3390	3403	4058	4070			340	341 404
		4111	4121	4135	4243			405	477 564 674
		4329	4818	4965	4991			771	772 1571 1687
		5181	5585	5619	5686			1944	2047 2579 3057
		5796	6033	6806	6936			3137	3195 3206 3267
		6989						3339	3340 3403 3404
MspAl I	(11)	1112	1421	1564	2417			3453	4031 4198 4243
		2770	4156	4435	4953			4351	4639 4760 4773
		5198	6162	6785				4991	5687 5993 6034
								6570	
Mun I	(1)	2258				Sec I	(45)	289	290 339 340
Nae I	(4)	384	2623	3361	6990			403	476 502 529
Nar I	(1)	2716						562	672 770 1137
Nci I	(20)	340	341	404	405			1338	1493 1562 1793
		564	771	772	1571			1942	1943 2045 2046
		1687	2579	3057	3206			2098	2121 2335 2599
		3339	3340	3403	3404			2768	3056 3204 3265
		4243	4991	5687	6034			3338	3401 3402 3451
Nco I	(2)	1137	2121					3452	3919 4030 4350
Nde I	(2)	1235	2845					4771	6024 6047 6230
NgoM I	(4)	382	2621	3359	6988			6261	6568 6632 6771
Nhe I	(1)	2423						7113	
Nla III	(24)	71	88	585	1141	SfaN I	(21)	380	641 850 994
		1224	1259	2125	2998			1061	1133 1318 1548
		3535	3595	3758	3907			1628	1650 2449 2923
		3971	3995	4225	4269			3361	3809 3864 4098
		4615	5335	5826	5836			4196	4707 5759 5952
		5914	5950	6193	7149			6244	
Nla IV	(31)	346	671	1361	1384	Sfc I	(9)	2	467 728 1118
		1568	1684	1861	1941			3274	4876 5067 5745
		1986	2096	2116	2117			6594	
		2195	2270	2322	2526	Sfi I	(1)	504	
		2605	2717	2726	2738	Sma I	(5)	341	405 772 3340
		3234	3399	4357	4643			3404	
		4682	5454	5548	5589	SnaB I	(1)	2840	
		5800	6445	6810		Sph I	(1)	3758	
Not I	(1)	2183				Spl I	(1)	51	
Nsi I	(1)	3756				Srf I	(2)	405	3340
Nsp7524 I	(4)	84	581	3754	4611	Ssp I	(2)	3082	3742
NspB II	(11)	1112	1421	1564	2417	Stu I	(1)	498	
		2770	4156	4435	4953	Sty I	(6)	1137	2121 2599 6024
		5198	6162	6785				6771	7113
NspH I	(4)	88	585	3758	4615	Swa I	(1)	2853	
Pac I	(1)	2778				Taq I	(26)	108	639 711 816
PaeR7 I	(1)	7135						831	840 900 1317
Pal I	(34)	498	507	534	708			1530	1632 1657 1960
		992	1136	1157	1185			2430	2572 2757 2801
		1337	1410	1492	1727			2827	4711 6008 6268
		1987	2044	2077	2095			6368	6399 6411 6705
		2185	2477	2582	3234			6720	7136
		3990	4026	4452	4626	Tfi I	(11)	881	1003 1203 1454
		4637	4655	5089	5547			2829	3219 3713 3974
		5627	5894	6428	6462			4446	4586 6583
		6992	7058			Tsp45 I	(11)	46	695 1075 2708
Ple I	(2)	2504	4990					3574	3634 5760 5971
Pme I	(1)	2821						6036	6499 6601
PpuM I	(1)	2115				Tth111 I	(3)	845	1289 2113
Psp1406 I	(2)	2380	5730			Tth111 II	(9)	198	1005 2639 3669
PspA I	(5)	339	403	770	3338			5200	5209 5239 6256
		3402						6263	
Pst I	(5)	6	471	732	1122	Vsp I	(5)	122	4147 4382 4441
		3278						5676	
Pvu I	(3)	1149	5874	6720		Xba I	(1)	2832	
Pvu II	(2)	2417	4435			Xcm I	(1)	2096	
Rsa I	(13)	53	1702	1755	2316	Xho I	(1)	7135	
		2726	2732	2808	2842	Xho II	(9)	766	2698 2736 2788
		5986	6219	6432	6440			5252	5263 5349 5361
		6923						6820	
Rsr II	(3)	355	1193	3387		Xma I	(5)	339	403 770 3338
Sac I	(1)	3674						3402	
Sac II	(2)	1565	2771			Xma III	(4)	990	1155 1725 2183

Site usage in PMPH.TXT:

Aat II	G,ACGT`C	1	Acc I	GT`MK,AC	1	Fse I	GG,CCGG`CC	-	Fsp I	TGC GCA	1
Acc65 I	G`GTAC,C	1	Aci I	C`CG,C	92	Gdi III	`YGGC,CG	13	Gsu I	CTGGAG 21/19	4
Afe I	AGC GCT	1	Afl II	C`TTAA,G	-	Hae I	WGG CCW	9	Hae II	R,CGC`Y	12
Afl III	A`CRYG,T	3	Age I	A`CCGG,T	1	Hae III	GG CC	34	Hga I	GACGC 9/14	16
Aha II	GR`CG,YC	4	Ahd I	GACNN,N`NNGTC	1	HgiA I	G,WGCW`C	5	HgiE II	ACCNNNNNNGGT -1/131	131
Alu I	AG CT	33	Alw I	GGATC 8/9	18	Hha I	G,CG`C	50	Hinc II	GTY RAC	5
AlwN I	CAG,NNN`CTG	2	Apa I	G,GGCC`C	1	Hind II	GTY RAC	5	Hind III	A`AGCT,T	1
Apal I	G`TGCA,C	4	Apo I	R`AATT,Y	7	Hinf I	G`ANT,C	19	HinI I	GR`CG,YC	4
Asc I	GG`CGCG,CC	1	Ase I	AT`TA,AT	5	HinP I	G`CG,C	50	Hpa I	GTT AAC	1
Asp718	G`GTAC,C	1	Ava I	C`YCGR,G	11	Hpa II	C`CG,G	49	Hph I	GGTGA 12/11	12
Ava II	G`GWC,C	12	Avr II	C`CTAG,G	-	Kas I	G`CGCC,C	1	Kpn I	G,GTAC`C	1
BamH I	G`GATC,C	1	Ban I	G`GYRC,C	8	Mae I	C`TA,G	18	Mae II	A`CG,T	21
Ban II	G,RCGY`C	6	Bbe I	G,CGCC`C	1	Mae III	`GTNAC,	25	Mbo I	`GATC,	34
Bbs I	GAAGAC 8/12	-	Bbv I	GCAGC 13/17	21	Mbo II	GAAGA 12/11	14	Mlu I	A`CGCG,T	2
Bbv II	GAAGAC 7/11	-	Bcl I	T`GATC,A	1	Mme I	TCCRAC 25/23	5	Mnl I	CCTC 10/10	48
Bcn I	CC,S`GG	20	Bfa I	C`TA,G	18	Msc I	TGG CCA	1	Mse I	T`TA,A	32
Bgl I	CCCN,NNN`NGGC	3	Bgl II	A`GATC,T	1	Msl I	CAYNN NNRTG	5	Msp I	C`CG,G	49
Blp I	GC`TNA,GC	1	Bpm I	CTGGAG 22/20	4	MspAl I	CMG CKG	11	Mun I	C`AATT,G	1
Bsa I	GGTCTC 7/11	4	BsaA I	YAC GTR	4	Nae I	GCC GGC	4	Nar I	GG`CG,CC	1
BsaB I	GATNN NNATC	45	BsaH I	GR`CG,YC	4	Nci I	CC`S,GG	20	Nco I	C`CATG,G	2
BsaJ I	C`CNNG,G	-	BsaW I	W`CCGG,W	14	Nde I	CA`TA,TG	2	NgoM I	G`CGCG,C	4
BseI I	GAGGAG 16/14	-	Bsg I	GTGCAG 22/20	2	Nhe I	G`CTAG,C	1	Nla III	,CATG`	24
BsiC I	TT`CG,AA	2	BsiE I	CG,RY`CG	11	Nla IV	GGN NCC	31	Not I	GC`GGCC,GC	1
BsiHKA I	G,WGCW`C	5	BsiW I	C`GTAC,G	1	Nru I	TCG CGA	-	Nsi I	A,TGCA`T	1
Bsm I	GAATG,C 7	2	BsmA I	GTCTC`/9	6	Nsp7524 I	R`CATG,Y	4	NspB II	CMG CKG	11
BsmB I	CGTCTC 7/11	1	BsmF I	GGGAC 15/19	16	NspH I	R,CATG`Y	4	Pac I	TTA,AT`TAA	1
BsoF I	GC`N,GC	67	Bsp120 I	G`GGCC,C	1	Paer7 I	C`TCGA,G	1	Pal I	GG CC	34
Bspl286 I	G,DCGH`C	-	BspH I	T`CATG,A	1	PflM I	CCAN,NNN`NTGG	-	Ple I	GAGTC 9/10	2
BspM I	ACCTGC 10/14	2	BspM II	T`CCGG,A	5	Pme I	CTTT AAAC	1	Pml I	CAC GTG	-
Bsr I	ACT,GG`	23	BsrB I	GAG CGG	7	PpuM I	RG`GWC,CY	1	Psp1406 I	AA`CG,TT	2
BsrD I	GCAATG, 8	5	BsrG I	T`GTAC,A	1	PspA I	C`CCGG,G	5	Pst I	C,TGCA`G	5
Bssh II	G`CGCG,C	3	BssS I	C`TCGT,G	3	Pvu I	CG,AT`CG	3	Pvu II	CAG CTG	2
Bst1107 I	GTA TAC	-	BstB I	TT`CG,AA	2	Rsa I	GT AC	13	Rsr II	CG`GWC,CG	3
BstE II	G`GTNAC,C	1	BstN I	CC`W,GG	17	Sac I	G,AGCT`C	1	Sac II	CC,GC`GG	2
BstU I	CG CG	38	BstX I	CCAN,NNNN`NTGG	1	Sal I	G`TCGA,C	1	Sap I	GCTCTTC 8/11	1
BstY I	R`GATC,Y	9	Bsu36 I	CC`TNA,GG	1	Sau3A I	`GATC,	34	Sau96 I	G`GNC,C	25
Cac8 I	GCN NGC	47	Cfr10 I	R`CCGG,Y	12	Sca I	AGT ACT	2	ScrF I	CC`N,GG	37
Cla I	AT`CG,AT	1	Csp6 I	G`TA,C	13	Sec I	C`CNNG,G	45	SfaN I	GCATC 9/13	21
Dde I	C`TNA,G	9	Dpn I	GA TC	34	Sfc I	C`TRYA,G	9	Sfi I	GGCCN,NNN`NGGCC	1
DpnII	`GATC,	34	Dra I	TTT AAA	6	Sma I	CCC GGG	5	SnaB I	TAC GTA	1
Dra III	CAC,NNN`GTG	5	Drd I	GACNN,NN`NNGTC	4	Spe I	A`CTAG,T	-	Sph I	G,CATG`C	1
Dsa I	C`CRYG,G	11	Eae I	Y`GGCC,R	10	Spl I	C`GTAC,G	1	Srf I	GCCC GGGC	2
Eag I	C`GGCC,G	4	Ear I	CTCTTC 7/10	1	Ssp I	AAT ATT	2	Stu I	AGG CCT	1
Eco47 III	AGC GCT	1	Eco57 I	CTGAAG 21/19	3	Sty I	C`CWWG,G	6	Swa I	ATTT AAAT	1
Eco72 I	CAC GTG	-	EcoN I	CCTNN`N,NNAGG	3	Taq I	T`CG,A	26	Tfi I	G`AWT,C	11
EcoO109 I	RG`GNC,CY	3	EcoR I	G`AATT,C	3	Tsp45 I	`GTSAC,	11	Tth111 I	GACN`N,NGTC	3
EcoR II	`CWGG,	17	EcoR V	GAT ATC	1	Tth111 II	CAARCA 16/14	9	Vsp I	AT`TA,AT	5
Ehe I	GGC GCC	1	Esp I	GC`TNA,GC	1	Xba I	T`CTAG,A	1	Xca I	GTA TAC	-
Fnu4H I	GC`N,GC	67	Fok I	GGATG 14/18	19	Xcm I	CCANNNN,N`NNNNTGG1	1	Xho I	C`TCGA,G	1
						Xho II	R`GATC,Y	9	Xma I	C`CCGG,G	5
						Xma III	C`GGCC,G	4	Xmn I	GAANN NNTTC	-