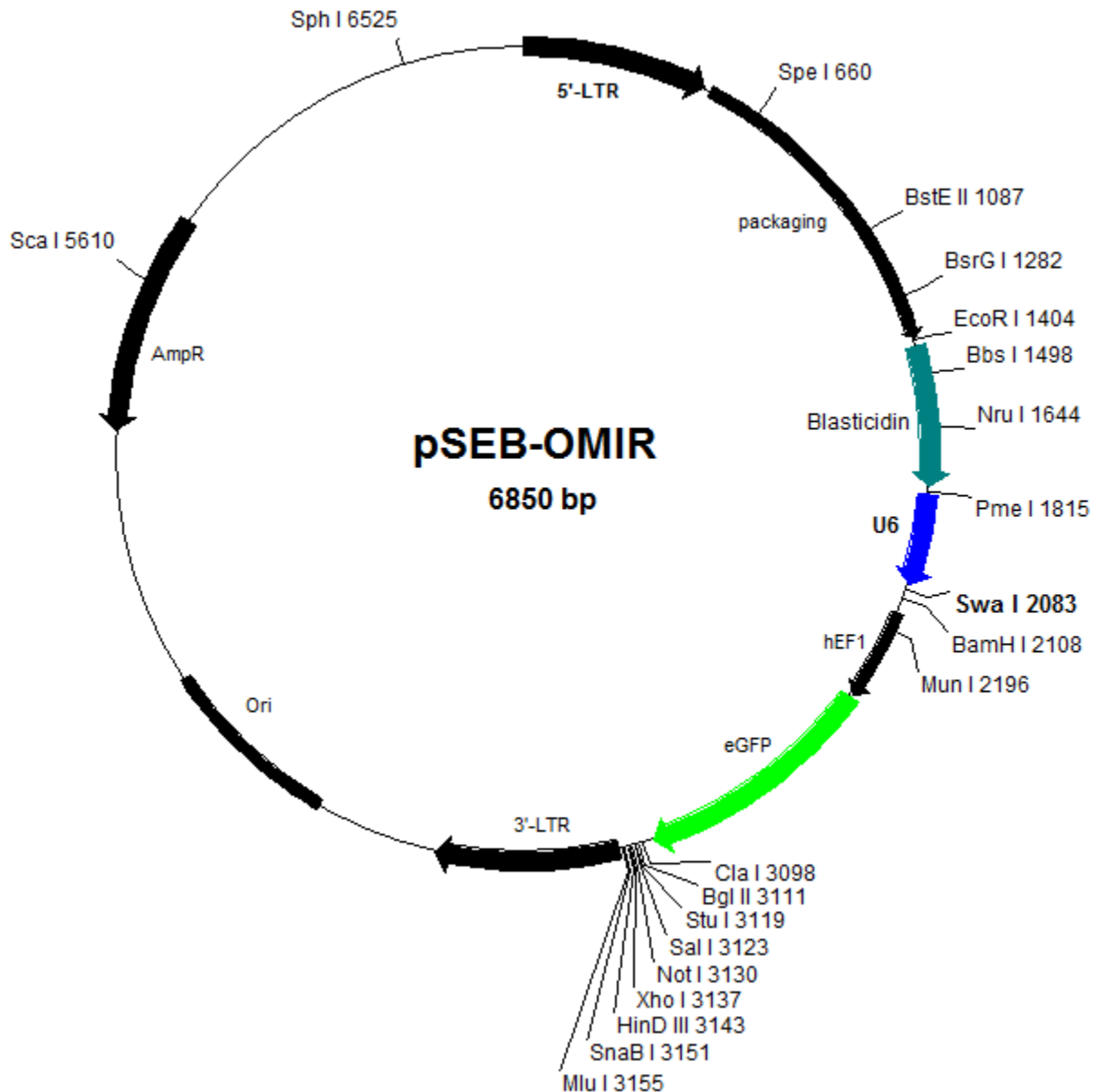


Vector: pSEB-OMIR (one-step mature miRNA retroviral expression vector)

Antibiotic Selection: Amp

Creator(s): Xian Chen, Molecular Oncology Laboratory of The University of Chicago

Date of Construction: May, 2013



Forward (5p) Oligo:

5' -tgtggaagggaaggaATTTxxxxxxxx-5p ttttttaaggtcgggcaggaagagg-3'

Reverse (3p) Oligo:

5' -atcttgtggaagggaCGAAACACCyyyyyyyy-3p ttttttAAATCGCCACATAGGTTTCGT-3'

3p Reverse-Complement

5' -ACGAACCTATGTGGCGATTTaaaaap3-yyyyyyyyGGTGTTCGTcctttccacaagat-3'

pSEB-OMIR Full-Length Sequence

TGAAAGACCCACCTGTAGGTTGGCAAGCTAGCTTAAGTAACGCCATTTTGCAAGGCATGGAAAATACATAACTGAGAATAGAGAAGTTAGATCAAGGTTAGGAA
CAGAGACAGCAGAGAAATGGGCCAAACAGGATATCTGTGGTAAGCAGTTCCTCCCGGCTCAGGGCCAAAGACAGATGGTCCCAGATCGCGTCCCAGGCTCAG
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CGTCTGCTCCCGAGCTCAATAAAAGAGCCACAACCCCTCACTCGGCGGCCAGTCTCCGATAGACTGCGTCCCGGGTACCCGATTCCCAATAAAGCCT
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Unique enzymes in pSEB-OMIR:

Spe I	A`CTAG,T	660
BstE II	G`GTNAC,C	1087
BsrG I	T`GTAC,A	1282
EcoR I	G`AATT,C	1404
Bbv II	GAAGAC 7/11	1497
Bbs I	GAAGAC 8/12	1498
Nru I	TCG CGA	1644
Pme I	CTTT AAAC	1815
Swa I	ATTT AAAT	2083
BamH I	G`GATC,C	2108
BspM II	T`CCGG,A	2111
Mun I	C`AATT,G	2196
Bsp1286 I	G,DGCH`C	2990
Cla I	AT`CG,AT	3098
Bgl II	A`GATC,T	3111
Stu I	AGG CCT	3119
Sal I	G`TCGA,C	3123
Acc I	GT`MK,AC	3124
HinC II	GTY RAC	3125
Hind II	GTY RAC	3125
Not I	GC`GGCC,GC	3130
PaeR7 I	C`TCGA,G	3137
Xho I	C`TCGA,G	3137
HinD III	A`AGCT,T	3143
SnaB I	TAC GTA	3151
Mlu I	A`CGCG,T	3155
Sca I	AGT ACT	5610
Sph I	G,CATG`C	6525

Number of enzymes = 28

The following enzymes do not cut in pSEB-OMIR:

Apa I	Avr II	Bcl I	Blp I	BsiC I
BsiW I	Bsm I	Bsp120 I	BspM I	Bst1107 I
BstB I	BstX I	Dra III	Eco72 I	Esp I
Fse I	Hpa I	Nsi I	PflM I	Pml I
Rsr II	Sac II	Sfi I	Spl I	Srf I

pSEB-OMIR: sites sorted by name:

Aat II	(2)	745	6052		
Acc I	(1)	3124			
Acc65 I	(2)	401	3615		
Aci I	(68)	197	203	566	588
		688	727	860	901
		1042	1133	1199	1298
		1317	1355	1532	1614
		1681	2225	2262	2342
		2599	2640	2707	2746
		2884	2997	3057	3060
		3129	3133	3411	3417
		3713	3927	4030	4086
		4096	4120	4163	4170
		4191	4282	4310	4437
		4456	4577	4687	4822
		4831	5193	5284	5475
		5521	5642	5686	5763
		5872	5971	6018	6192
		6231	6241	6267	6305
		6318	6344	6401	6660
Afe I	(3)	923	2364	6591	
Afl II	(3)	35	1006	3247	
Afl III	(2)	3155	4237		
Age I	(2)	2203	2368		
Aha II	(8)	742	1398	5667	6049
		6353	6536	6650	6671
Ahd I	(4)	1020	3660	3706	5130
Alu I	(37)	30	34	336	580
		668	676	1515	1620
		2355	2401	2434	2506
		2539	2755	2803	2914
		3088	3145	3242	3246
		3550	3869	3902	3997
		4061	4179	4405	4495
		4541	4798	5319	5419
		5482	6161	6180	6425
		6781			
Alw I	(17)	453	1051	1357	1727
		2104	2115	2121	2876
		3073	4799	4885	4885
		4982	4983	5447	5762
		5768			
AlwN I	(2)	3371	4653		
ApaL I	(3)	4551	5797	6294	
Apo I	(3)	872	1404	2078	
Asc I	(2)	368	3582		

Ase I	(5)	1905	3880	4008	4067
		5302			
Asp718	(2)	401	3615		
Ava I	(8)	331	397	498	2170
		2272	3137	3545	3611
Ava II	(14)	186	199	254	551
		690	1219	1572	3037
		3400	3413	3468	5268
		5490	6745		
BamH I	(1)	2108			
Ban I	(16)	244	401	1142	1397
		1687	2131	2206	2416
		3458	3615	3981	5078
		6352	6535	6649	6670
Ban II	(7)	338	351	1677	3552
		3565	6602	6616	
Bbe I	(5)	1401	6356	6539	6653
		6674			
Bbs I	(1)	1498			
Bbv I	(12)	931	939	1524	1629
		2632	2916	2923	4656
		4659	4865	5559	6170
Bbv II	(1)	1497			
Bcn I	(16)	164	399	400	571
		724	2411	3065	3378
		3613	3614	4618	5314
		5665	6166	6201	6552
Bfa I	(15)	31	219	661	673
		1394	1522	2211	2360
		3115	3243	3433	4732
		4985	5320	6755	
Bgl I	(2)	5250	6368		
Bgl II	(1)	3111			
Bpm I	(5)	2825	3065	3180	5200
		6818			
Bsa I	(6)	476	530	1149	3668
		3689	5191		
BsaA I	(2)	1944	3151		
BsaB I	(2)	1711	2113		
BsaH I	(8)	742	1398	5667	6049
		6353	6536	6650	6671
		461	497	546	547
		694	733	734	746
		747	1167	1236	1245
		1265	1266	1411	1716
		2273	2379	2409	2549
		2712	2736	2791	3375
		3454	3464	3611	3674
		3976	4397	6471	6549
		6555			
BsaW I	(7)	2111	2128	2203	2368
		4443	4590	5421	
BseR I	(5)	464	1293	1332	2411
		3677			
Bsg I	(5)	1600	2321	2509	2606
		2930			
BsiE I	(12)	592	727	1532	1648
		2124	2373	3133	4153
		4577	5500	5649	6396
BsiHKA I	(7)	338	2990	3552	4555
		5716	5801	6298	
BsmA I	(21)	107	475	531	609
		734	832	949	1073
		1132	1150	1328	1431
		3197	3320	3667	3688
		5192	5966	6119	6163
		6835			
BsmB I	(7)	733	831	1072	1131
		1329	6120	6162	
BsmF I	(11)	172	185	564	729
		764	1205	1585	2152
		3386	3399	6531	
BsoF I	(45)	727	901	917	920
		925	928	1133	1513
		1532	1606	1609	1612
		1615	1618	1782	2342
		2540	2599	2621	2905
		2912	2963	2966	3060
		3130	3133	4062	4143
		4161	4164	4282	4437
		4580	4645	4648	4854
		5182	5521	5548	5643
		5872	6159	6268	6372
		6445			
Bsp1286 I	(1)	2990			
BspH I	(4)	4957	5965	6070	6594
BspM II	(1)	2111			

Bsr I	(19)	374	1030	1058	1546			3975	4263	4384	4397
		1570	2238	2259	2993			6470	6747		
		3588	4038	4644	4657	EcoR V	(3)	140	3353	6738	
		4771	5177	5295	5338	Ehe I	(5)	1399	6354	6537	6651
		5605	5777	6483				6672			
BsrB I	(4)	1042	3929	4170	5971	Fnu4H I	(45)	727	901	917	920
BsrD I	(2)	5191	5365					925	928	1133	1513
BsrG I	(1)	1282						1532	1606	1609	1612
BssH II	(4)	317	368	3531	3582			1615	1618	1782	2342
BssS I	(5)	1587	2561	4410	5794			2540	2599	2621	2905
		6101						2912	2963	2966	3060
BstE II	(1)	1087						3130	3133	4062	4143
BstN I	(22)	241	548	735	748			4161	4164	4282	4437
		1169	1194	1217	1237			4580	4645	4648	4854
		1267	1717	2426	2551			5182	5521	5548	5643
		2663	2738	2792	3455			5872	6159	6268	6372
		3977	4265	4386	4399			6445			
		6472	6749			Fok I	(13)	423	1140	1300	1464
BstU I	(25)	317	319	370	903			1699	2408	2774	3636
		905	1135	1644	2225			5096	5277	5564	6207
		2709	3027	3129	3157			6451			
		3531	3533	3584	4084	Fsp I	(2)	5352	6375		
		4086	4284	4865	5195	Gdi II	(13)	723	725	1129	1528
		5688	6020	6120	6122			1530	2453	2840	3129
		6225						3131	4077	5517	6553
BstY I	(10)	2108	2114	2880	3111			6685			
		4878	4889	4975	4987	Gsu I	(5)	2824	3064	3181	5201
		5755	5772					6819			
Bsu36 I	(2)	781	1018			Hae I	(7)	584	1111	1416	3119
Cac8 I	(36)	28	32	319	370			4252	4263	4715	
		582	586	631	650	Hae II	(10)	925	1401	2366	4115
		1199	1508	1622	2504			4485	6356	6539	6593
		2537	2585	2909	2916			6653	6674		
		3240	3244	3533	3584	Hae III	(34)	129	173	584	726
		4030	4059	4168	4254			762	774	987	1111
		4291	4851	5242	6255			1132	1197	1416	1531
		6403	6423	6427	6523			1839	2454	2554	2843
		6564	6612	6654	6684			2955	3119	3132	3342
Cfr10 I	(7)	629	2203	2368	2531			3387	4078	4252	4263
		5210	6673	6682				4281	4715	5173	5253
								5520	6107	6405	6554
Cla I	(1)	3098						6562	6686		
Csp6 I	(11)	402	658	1283	1934	Hga I	(11)	381	642	895	1491
		2253	2809	3091	3616			3134	3595	4347	4925
		5609	6285	6796				5657	6215	6684	
Dde I	(21)	75	167	208	476	HgiA I	(7)	338	2990	3552	4555
		781	1018	1290	1808			5716	5801	6298	
		2984	3002	3287	3381	HgiE II	(2)	4816	6296		
		3422	3691	3762	4512	Hha I	(42)	319	321	370	372
		4921	5087	5627	6053			648	905	924	1400
		6288						1512	2253	2225	2365
Dpn I	(31)	94	459	1046	1178			2670	2711	3027	3533
		1363	1647	1708	1722			3535	3584	3586	3861
		2110	2116	2123	2882			4021	4086	4114	4147
		3030	3068	3113	3307			4417	4484	4584	4758
		4805	4880	4891	4899			4867	5260	5353	5690
		4977	4989	5094	5435			6022	6122	6225	6355
		5453	5499	5757	5774			6376	6509	6538	6592
		5810	6395	6619				6652	6673		
DpnII	(31)	92	457	1044	1176	HinC II	(1)	3125			
		1361	1645	1706	1720	Hind II	(1)	3125			
		2108	2114	2121	2880	HinD III	(1)	3143			
		3028	3066	3111	3305	Hinf I	(16)	442	450	791	802
		4803	4878	4889	4897			1437	1769	1852	3772
		4975	4987	5092	5433			3794	3815	4072	4137
		5451	5497	5755	5772			4212	4608	5125	6763
		5808	6393	6617				742	1398	5667	6049
Dra I	(7)	1815	1986	1999	2083	HinI I	(8)	6353	6536	6650	6671
		4996	5015	5707				317	319	368	370
Drd I	(3)	1500	4345	6214		HinP I	(42)	646	903	922	1398
Dsa I	(4)	694	1411	2379	6555			1510	2151	2223	2363
Eae I	(13)	582	724	1109	1130			2668	2709	3025	3531
		1414	1529	2452	2841			3533	3582	3584	3859
		3130	4076	5518	6552			4019	4084	4112	4145
		6684						4415	4482	4582	4756
Eag I	(3)	724	1529	3130				4865	5258	5351	5688
Ear I	(7)	1070	1311	1827	3859			6020	6120	6223	6353
		4121	5925	6413				6374	6507	6536	6590
Eco47 III	(3)	923	2364	6591				6650	6671		
Eco57 I	(7)	1509	2533	2579	2776	Hpa II	(32)	163	398	569	630
		4784	5798	6802				723	1401	2112	2129
EcoN I	(3)	784	1392	2214				2204	2369	2409	2472
EcoO109 I	(7)	254	1219	1572	1837			2532	3063	3377	3612
		3468	6106	6560				3955	4444	4591	4617
EcoR I	(1)	1404						4807	5211	5245	5312
EcoR II	(22)	239	546	733	746			5422	5664	6165	6199
		1167	1192	1215	1235			6551	6674	6683	6698
		1265	1715	2424	2549			1157	1183	1401	2394
		2661	2736	2790	3453	Hph I	(18)				

		2399	2727	2751	2880			3895	4241	4961	5452
		4974	5201	5615	5823			5462	5540	5576	5969
		5856	6140	6149	6642			6074	6158	6525	6598
		6687	6768			Nla IV	(37)	188	201	246	403
Kas I	(5)	1397	6352	6535	6649			521	552	692	761
		6670						893	1144	1221	1399
Kpn I	(2)	405	3619					1573	1689	2110	2133
Mae I	(15)	31	219	661	673			2208	2260	2418	2956
		1394	1522	2211	2360			3402	3415	3460	3617
		3115	3243	3433	4732			3983	4269	4308	5080
		4985	5320	6755				5174	5215	5426	6016
Mae II	(15)	742	1081	1122	1943			6354	6537	6561	6651
		1948	2318	2445	2658			6672			
		2829	3150	4940	5356	Not I	(1)	3130			
		5729	6049	6491		Nru I	(1)	1644			
Mae III	(23)	39	994	1022	1087	Nsp7524 I	(3)	4237	6154	6521	
		1231	1944	2023	2563	NspB II	(11)	588	1620	2355	3713
		3052	3151	3251	3729			4061	4579	4824	5765
		4593	4656	4772	5055			6231	6425	6781	
		5386	5444	5597	5785	NspH I	(3)	4241	6158	6525	
		6173	6464	6484		Pac I	(2)	3107	3165		
Mbo I	(31)	92	457	1044	1176	PaeR7 I	(1)	3137			
		1361	1645	1706	1720	Pal I	(34)	129	173	584	726
		2108	2114	2121	2880			762	774	987	1111
		3028	3066	3111	3305			1132	1197	1416	1531
		4803	4878	4889	4897			1839	2454	2554	2843
		4975	4987	5092	5433			2955	3119	3132	3342
		5451	5497	5755	5772			3387	4078	4252	4263
		5808	6393	6617				4281	4715	5173	5253
Mbo II	(19)	1086	1299	1445	1502			5520	6107	6405	6554
		1530	1843	2624	2669			6562	6686		
		2672	2865	3875	4109	Ple I	(3)	799	3780	4616	
		4898	4971	5726	5804	Pme I	(1)	1815			
		5913	6401	6613		PpuM I	(4)	254	1219	1572	3468
Mlu I	(1)	3155				Psp1406 I	(3)	2318	5356	5729	
Mme I	(6)	829	1106	3676	3728	PspA I	(2)	397	3611		
		4451	4635			Pst I	(3)	921	929	1105	
Mnl I	(58)	167	216	368	387	Pvu I	(4)	1648	2124	5500	6396
		432	460	484	506	Pvu II	(5)	1620	2355	4061	6425
		510	566	776	872			6781			
		1168	1271	1304	1310	Rsa I	(11)	403	659	1284	1935
		1313	1319	1349	1352			2254	2810	3092	3617
		1367	1374	1390	1454			5610	6286	6797	
		1795	1796	1828	2179	Sac I	(2)	338	3552		
		2268	2389	2470	2476	Sal I	(1)	3123			
		2569	2707	2719	2770	Sap I	(2)	3859	4121		
		2890	3145	3430	3582	Sau3A I	(31)	92	457	1044	1176
		3601	3646	3673	3697			1361	1645	1706	1720
		3757	4086	4135	4345			2108	2114	2121	2880
		4418	4669	5069	5150			3028	3066	3111	3305
		5296	5502	6097	6155			4803	4878	4889	4897
		6415	6699					4975	4987	5092	5433
Msc I	(3)	584	1111	1416				5451	5497	5755	5772
Mse I	(31)	36	1007	1119	1149			5808	6393	6617	
		1173	1814	1905	1985	Sau96 I	(30)	127	171	186	199
		1998	2082	3103	3107			254	551	690	760
		3161	3165	3248	3782			773	985	1196	1219
		3880	4008	4067	4943			1572	1837	2553	2954
		4995	5000	5014	5067			3037	3340	3385	3400
		5302	5341	5706	6078			3413	3468	5172	5251
		6259	6456	6726				5268	5490	6106	6403
Msl I	(3)	2867	5382	5541				6560	6745		
Msp I	(32)	163	398	569	630	Sca I	(1)	5610			
		723	1401	2112	2129	ScrF I	(38)	163	241	398	399
		2204	2369	2409	2472			548	570	723	735
		2532	3063	3377	3612			748	1169	1194	1217
		3955	4444	4591	4617			1237	1267	1717	2410
		4807	5211	5245	5312			2426	2551	2663	2738
		5422	5664	6165	6199			2792	3064	3377	3455
		6551	6674	6683	6698			3612	3613	3977	4265
MspAl I	(11)	588	1620	2355	3713			4386	4399	4617	5313
		4061	4579	4824	5765			5664	6165	6200	6472
		6231	6425	6781				6551	6749		
Mun I	(1)	2196				Sec I	(37)	161	240	250	397
Nae I	(2)	631	6684					461	497	546	547
Nar I	(5)	1398	6353	6536	6650			694	733	734	746
		6671						747	1167	1236	1245
Nci I	(16)	163	398	399	570			1265	1266	1411	1716
		723	2410	3064	3377			2273	2379	2409	2549
		3612	3613	4617	5313			2712	2736	2791	3375
		5664	6165	6200	6551			3454	3464	3611	3674
Nco I	(2)	1411	2379					3976	4397	6471	6549
Nde I	(2)	2013	6301					6555			
Ngom I	(2)	629	6682			SfaN I	(24)	185	444	641	938
Nhe I	(2)	30	3242					1485	1542	1674	1720
Nla III	(24)	62	1205	1415	1852			2480	2756	2771	2870
		2383	2617	2647	2842			3399	3657	4333	5385
		3037	3082	3274	3728			5578	5825	6186	6278

		6316	6354	6670	6682	HinP I	G`CG,C	42	Hpa I	GTT AAC	-
Sfc I	(10)	15	917	925	1101	Hpa II	C`CG,G	32	Hph I	GGTGA 12/11	18
		1496	3227	4502	4693	Kas I	G`CGGC,C	5	Kpn I	G,GTAC`C	2
		5371	6789			Mae I	C`TA,G	15	Mae II	A`CG,T	15
Sma I	(2)	399	3613			Mae III	`GTNAC,	23	Mbo I	`GATC,	31
SnaB I	(1)	3151				Mbo II	GAAGA 12/11	19	Mlu I	A`CGCG,T	1
Spe I	(1)	660				Mme I	TCCRAC 25/23	6	Mnl I	CCTC 10/10	58
Sph I	(1)	6525				Msc I	TGG CCA	3	Mse I	T`TA,A	31
Ssp I	(2)	3780	5934			Msl I	CAYNN NNRTG	3	Msp I	C`CG,G	32
Stu I	(1)	3119				MspA1 I	CMG CKG	11	Mun I	C`AATT,G	1
Sty I	(7)	250	461	1245	1411	Nae I	GCC GGC	2	Nar I	GG`CG,CC	5
		2379	3464	3674		Nci I	CC`S,GG	16	Nco I	C`CATG,G	2
SwA I	(1)	2083				Nde I	CA`TA,TG	2	NgoM I	G`CCGG,C	2
Taq I	(17)	794	1038	1349	1360	Nhe I	G`CTAG,C	2	Nla III	,CATG`	24
		1705	2040	2430	2724	Nla IV	GGN NCC	37	Not I	GC`GGCC,GC	1
		2751	2766	2895	3098	Nru I	TCG CGA	1	Nsi I	A,TGCA`T	-
		3124	3138	3775	4337	Nsp7524 I	R`CATG,Y	3	NspB II	CMG CKG	11
		5781				NspH I	R,CATG`Y	3	Pac I	TTA,AT`TAA	2
Tfi I	(8)	442	802	1437	1769	Paer7 I	C`TCGA,G	1	Pal I	GG CC	34
		1852	3815	4072	4212	Pf1M I	CCAN,NNN`NTGG	-	Ple I	GAGTC 9/10	3
Tsp45 I	(9)	1022	1231	1944	2563	Pme I	CTTT AAAC	1	Pml I	CAC GTG	-
		3052	5386	5597	6173	PpuM I	RG`GWC,CY	4	Psp1406 I	AA`CG,TT	3
		6484				PspA I	C`CCGG,G	2	Pst I	C,TGCA`G	3
Tth111 I	(4)	390	811	1217	3604	Pvu I	CG,AT`CG	4	Pvu II	CAG CTG	5
Tth111 II	(9)	146	422	613	632	Rsa I	GT AC	11	Rsr II	CG`GWC,CG	-
		2863	3359	4826	4835	Sac I	G,AGCT`C	2	Sac II	CC,GC`GG	-
		4865				Sal I	G`TCGA,C	1	Sap I	GCTCTTC 8/11	2
Vsp I	(5)	1905	3880	4008	4067	Sau3A I	`GATC,	31	Sau96 I	G`GNC,C	30
		5302				Sca I	AGT ACT	1	ScrF I	CC`N,GG	38
Xba I	(2)	218	3432			Sec I	C`CNNG,G	37	SfaN I	GCATC 9/13	24
Xho I	(1)	3137				Sfc I	C`TRYA,G	10	Sfi I	GGCCN,NNN`NGGCC	-
Xho II	(10)	2108	2114	2880	3111	Sma I	CCC GGG	2	SnaB I	TAC GTA	1
		4878	4889	4975	4987	Spe I	A`CTAG,T	1	Sph I	G,CATG`C	1
		5755	5772			Spl I	C`GTAC,G	-	Srf I	GCCC GGGC	-
Xma I	(2)	397	3611			Ssp I	AAT ATT	2	Stu I	AGG CCT	1
Xma III	(3)	724	1529	3130		Sty I	C`CWWG,G	7	Swa I	ATTT AAAT	1
Xmn I	(3)	3843	3881	5729		Taq I	T`CG,A	17	Tfi I	G`AWT,C	8
						Tsp45 I	`GTSAC,	9	Tth111 I	GACN`N,NGTC	4
						Tth111 II	CAARCA 16/14	9	Vsp I	AT`TA,AT	5
						Xba I	T`CTAG,A	2	Xca I	GTA TAC	-
						Xcm I	CCANNNN,N`NNNNTGG-	-	Xho I	C`TCGA,G	1
						Xho II	R`GATC,Y	10	Xma I	C`CCGG,G	2
						Xma III	C`GGCC,G	3	Xmn I	GAANN NNTTC	3

Site usage in pSEB-OMIR:

Aat II	G,ACGT`C	2	Acc I	GT`MK,AC	1
Acc65 I	G`GTAC,C	2	Aci I	C`CG,C	68
Afe I	AGC GCT	3	Afl II	C`TTAA,G	3
Afl III	A`CRYG,T	2	Age I	A`CCGG,T	2
Aha II	GR`CG,YC	8	Ahd I	GACNN,N`NNGTC	4
Alu I	AG CT	37	Alw I	GGATC 8/9	17
AlwN I	CAG,NNN`CTG	2	Apa I	G,GGCC`C	-
ApaL I	G`TGCA,C	3	Apo I	R`AATT,Y	3
Asc I	GG`CGCG,CC	2	Ase I	AT`TA,AT	5
Asp718	G`GTAC,C	2	Ava I	C`YCGR,G	8
Ava II	G`GWC,C	14	Avr II	C`CTAG,G	-
BamH I	G`GATC,C	1	Ban I	G`GYRC,C	16
Ban II	G,RCYC`C	7	Bbe I	G,GCGC`C	5
Bbs I	GAAAGAC 8/12	1	Bbv I	GCAGC 13/17	12
Bbv II	GAAAGAC 7/11	1	Bcl I	T`GATC,A	-
Bcn I	CC,S`GG	16	Bfa I	C`TA,G	15
Bgl I	GCCN,NNN`NGGC	2	Bgl II	A`GATC,T	1
Blp I	GC`TNA,GC	-	Bpm I	CTGGAG 22/20	5
Bsa I	GGTCTC 7/11	6	BsaA I	YAC GTR	2
BsaB I	GATNN NNATC	2	BsaH I	GR`CG,YC	8
BsaJ I	C`CNNG,G	37	BsaW I	W`CCGG,W	7
BseR I	GAGGAG 16/14	5	Bsg I	GTGCAG 22/20	5
BsiC I	TT`CG,AA	-	BsiE I	CG,RY`CG	12
BsiHKA I	G,WGCW`C	7	BsiW I	C`GTAC,G	-
Bsm I	GAATG,C 7	-	BsmA I	GTCTC`/9	21
BsmB I	CGTCTC 7/11	7	BsmF I	GGGAC 15/19	11
BsoF I	GC`N,GC	45	Bsp120 I	G`GGCC,C	-
Bsp1286 I	G,DGCH`C	1	BspH I	T`CATG,A	4
BspM I	ACCTGC 10/14	-	BspM II	T`CCGG,A	1
Bsr I	ACT,GG`	19	BsrB I	GAG CGG	4
BsrD I	GCAATG, 8	2	BsrG I	T`GTAC,A	1
BssH II	G`CGCG,C	4	BssS I	C`TCGT,G	5
Bst1107 I	GTA TAC	-	BstB I	TT`CG,AA	-
BstE II	G`GTNAC,C	1	BstN I	CC`W,GG	22
BstU I	CG CG	25	BstX I	CCAN,NNNN`NTGG	-
BstY I	R`GATC,Y	10	Bsu36 I	CC`TNA,GG	2
Cac8 I	GCN NGC	36	Cfr10 I	R`CCGG,Y	7
Cla I	AT`CG,AT	1	Csp6 I	G`TA,C	11
Dde I	C`TNA,G	21	Dpn I	GA TC	31
DpnII	`GATC,	31	Dra I	TTT AAA	7
Dra III	CAC,NNN`GTG	-	Drd I	GACNN,NN`NNGTC	3
Dsa I	C`CRYG,G	4	Eae I	Y`GGCC,R	13
Eag I	C`GGCC,G	3	Ear I	CTCTTC 7/10	7
Eco47 III	AGC GCT	3	Eco57 I	CTGAAG 21/19	7
Eco72 I	CAC GTG	-	EcoN I	CC`TNN`N,NNAGG	3
EcoO109 I	RG`GNC,CY	7	EcoR I	G`AATT,C	1
EcoR II	`CCWGG,	22	EcoR V	GAT ATC	3
Ehe I	GGC GCC	5	Esp I	GC`TNA,GC	-
Fnu4H I	GC`N,GC	45	Fok I	GGATG 14/18	13
Fse I	GG,CCGG`CC	-	Fsp I	TGC GCA	2
Gdi II	`YGGC,CG	13	Gsu I	CTGGAG 21/19	5
Hae I	WGG CCW	7	Hae II	R,GCGC`Y	10
Hae III	GG CC	34	Hga I	GACGC 9/14	11
HqiA I	G,WGCW`C	7	HqiE II	ACCNNNNNNGGT -1/132	-
Hha I	G,CG`C	42	Hinc II	GTY RAC	1
Hind II	GTY RAC	1	Hind III	A`AGCT,T	1
Hinf I	G`ANT,C	16	HinI I	GR`CG,YC	8