

	Sites		Fragments			Sites		Fragments	
	Number	Position	Length	Ends		Number	Position	Length	Ends
Acil	23	330	838	1832-2669			1786	13	289-301
CJCGC		397	410	2670-3079			2019	8	1294-1301
GJCGG		407	360	3127-329			2414	2	1195-1196
		431	264	1142-1405			2859	1	1293-1293
		474	254	1578-1831	AlwNI	1	964	3157	964-963
		481	135	998-1132	CAGNNN CTG				
		502	127	621-747	ApaLI	1	862	3157	862-861
		593	121	767-887	G TGCAC				
		621	117	1461-1577	Apol	3	311	2165	311-2475
		748	110	888-997	R AATTY		2476	808	2660-310
		767	91	502-592			2660	184	2476-2659
		888	67	330-396	AseI	3	121	1698	378-2075
		998	47	3080-3126	AT TAAT		378	1202	2076-120
		1133	47	1406-1452			2076	257	121-377
		1142	43	431-473	AvaI	2	2401	2883	2675-2400
		1406	28	593-620	CYCGRG		2675	274	2401-2674
		1453	24	407-430	AvaII	3	14	1707	14-1720
		1461	21	481-501	G WCC		1721	1201	1721-2921
		1578	19	748-766			2922	249	2922-13
		1832	10	397-406	BamHI	1	294	3157	294-293
		2670	9	1133-1141	G GATCC				
		3080	8	1453-1460	BanII	1	2626	3157	2626-2625
		3127	7	474-480	GRGCY C				
Afl III	1	548	3157	548-547	BbvI	6	440	2421	1176-439
A CRYGT					GCAGCNNNNNNN		458	419	458-876
AluI	11	32	782	2157-2938	NNNNNNNNNNNGCT...877		206	970	970-1175
AG CT		306	450	1707-2156			967	90	877-966
		490	369	1109-1477			970	18	440-457
		716	274	32-305			1176	3	967-969
		852	257	852-1108	BfaI	3	1043	1744	1296-3039
		1109	250	2939-31	C TAG		1296	1160	3040-1042
		1478	226	490-715			3040	253	1043-1295
		1585	184	306-489	Bgl II	1	36	3157	36-35
		1707	136	716-851	A GATCT				
		2157	122	1585-1706	BsaAI	1	160	3157	160-159
		2939	107	1478-1584	YAC GTR				
Alw26 I	3	2257	2338	3076-2256	BsaJI	8	708	984	708-1691
GTCTCN		2796	539	2257-2795	C CNGG		1692	915	2950-707
NNNNNGAGAC		3076	280	2796-3075			1753	487	2402-2888
							2000	401	2000-2400
AlwI	14	289	807	302-1108					
GGATCNNNN		302	587	2859-288					
NNNNNGATCC		1109	445	2414-2858					
		1195	395	2019-2413					
		1197	336	1450-1785					
		1293	233	1786-2018					
		1294	96	1197-1292					
		1302	86	1109-1194					
		1377	75	1302-1376					
		1450	73	1377-1449					

		<u>Sites</u>		<u>Fragments</u>				<u>Sites</u>		<u>Fragments</u>	
		Number	Position	Length	Ends			Number	Position	Length	Ends
			2401	247	1753-1999	GDGCH C			2626	1397	2626-865
			2402	61	2889-2949	BspEI		1	297	3157	297-296
			2889	61	1692-1752	T CCGGA					
			2950	1	2401-2401						
BsaWI	4	297	1316	2138-296	BspHI		3	1268	1487	1268-2754	
W CCGGW		754	1237	901-2137	T CATGA			2755	1351	3074-1267	
		901	457	297-753				3074	319	2755-3073	
		2138	147	754-900	BspLU11 I		1	548	3157	548-547	
Bsc4 I	10	395	726	1032-1757	A CATGT						
CCNNNN NNGG		569	663	2889-394	BsrBI		2	481	2599	481-3079	
		587	524	2365-2888	GAG CGG			3080	558	3080-480	
		753	332	2033-2364	CCG CTC						
		1032	279	753-1031	BsrDI		1	2787	3157	2787-2786	
		1758	258	1758-2015	GCAATGNN						
		2016	174	395-568	CATTGC						
		2033	166	587-752	BsrFI		1	2319	3157	2319-2318	
		2365	18	569-586	R CCGGY						
		2889	17	2016-2032	BsrI		7	956	1189	2924-955	
BsiEI	4	464	1342	2279-463	ACTGGN			969	643	1081-1723	
CGRY CG		888	805	1474-2278	C CAGT			1081	624	1864-2487	
		1474	586	888-1473				1724	436	2488-2923	
		2279	424	464-887				1864	140	1724-1863	
BsiHKA I	1	866	3157	866-865				2488	112	969-1080	
GWGCW C								2924	13	956-968	
BsII	10	396	726	1033-1758	BssKI	10	574	738	2993-573		
CCNNNNN NNGG		570	663	2890-395	CCNGG		695	722	926-1647		
		588	524	2366-2889			708	592	2401-2992		
		754	332	2034-2365			926	379	1648-2026		
		1033	279	754-1032			1648	357	2027-2383		
		1759	258	1759-2016			2027	218	708-925		
		2017	174	396-569			2384	121	574-694		
		2034	166	588-753			2400	16	2384-2399		
		2366	18	570-587			2401	13	695-707		
		2890	17	2017-2033			2993	1	2400-2400		
BsmBI	1	2257	3157	2257-2256	BssSI	3	721	1400	1621-3020		
CGTCTCN					C ACGAG		1621	900	721-1620		
NNNNNGAGACG					C TCGTG		3021	857	3021-720		
BsmFI	1	1822	3157	1822-1821	BstBI	1	309	3157	309-308		
GGGACNNNNNNNNNN ...					TT CGAA						
NNNNNNNNNNNNNG...					BstEII	1	1347	3157	1347-1346		
BsmI	2	2318	3080	2395-2317	G GTNACC						
GAATGCN		2395	77	2318-2394	BstF5 I	7	1349	1526	2980-1348		
G CATTC											
Bsp1286 I	2	866	1760	866-2625							

Sites					Fragments			Sites					Fragments		
	Number	Position	Length	Ends		Number	Position	Length	Ends		Number	Position	Length	Ends	
		1653	189	1464-1652			2135	65	383-447			2307	56	2307-2362	
		2190	174	389-562			2363	16	2986-3001			2986	16	1641-1656	
		2673	18	574-591			3002	6	2044-2049						
		2993	11	563-573											
Hgal	2	659	2579	1237-658											
GACGCNNNNN		1237	578	659-1236		HpaII	10	298	1053	2402-297					
NNNNNNNNNNNGCGTC...						C CGG		755	584	1555-2138					
								902	457	298-754					
HhaI	15	397	646	1609-2254				928	241	1314-1554					
GCG C		425	475	2564-3038				1118	196	1118-1313					
		458	431	1178-1608				1314	190	928-1117					
		728	423	3131-396				1555	181	2139-2319					
		795	270	458-727				2139	147	755-901					
		895	222	2342-2563				2320	82	2320-2401					
		1069	174	895-1068				2402	26	902-927					
		1178	109	1069-1177											
		1609	100	795-894		HphI	12	1284	1536	2905-1283					
		2255	92	3039-3130		GGTGANNNNNNN		1359	477	2428-2904					
		2325	70	2255-2324		NNNNNNNTCACC		1361	252	1490-1741					
		2342	67	728-794				1476	247	1742-1988					
		2564	33	425-457				1490	196	2153-2348					
		3039	28	397-424				1742	120	1989-2108					
		3131	17	2325-2341				1989	115	1361-1475					
								2109	79	2349-2427					
HinP1 I	15	395	646	1607-2252				2153	75	1284-1358					
G CGC		423	475	2562-3036				2349	44	2109-2152					
		456	431	1176-1606				2428	14	1476-1489					
		726	423	3129-394				2905	2	1359-1360					
		793	270	456-725											
		893	222	2340-2561											
		1067	174	893-1066		MaeII	6	159	1434	1251-2684					
		1176	109	1067-1175		A CGT		164	1087	164-1250					
		1607	100	793-892				1251	348	2810-3157					
		2253	92	3037-3128				2685	158	3158-158					
		2323	70	2253-2322				2810	125	2685-2809					
		2340	67	726-792				3158	5	159-163					
		2562	33	423-455											
		3037	28	395-422		MaeIII	12	2	665	239-903					
		3129	17	2323-2339		GTNAC		160	521	1347-1867					
								239	375	2784-1					
								904	295	2125-2419					
HindIII	2	304	1851	304-2154				967	272	2512-2783					
A AGCTT		2155	1306	2155-303				1083	264	1083-1346					
								1347	257	1868-2124					
								1868	158	2-159					
HinI	14	68	722	919-1640				2125	116	967-1082					
G ANTC		383	623	2363-2985				2420	92	2420-2511					
		448	396	523-918				2512	79	160-238					
		523	387	1657-2043				2784	63	904-966					
		919	315	68-382											
		1641	223	3002-67											
		1657	172	2135-2306		MboII	11	60	791	419-1209					
		2044	85	2050-2134		GAAGANNNNNNN		419	578	1789-2366					
		2050	75	448-522		NNNNNNNTCTTC		1210	380	2478-2857					

	Sites		Fragments			Sites		Fragments	
	Number	Position	Length	Ends		Number	Position	Length	Ends
RsaI GT AC	3	151 1379 2442	1228 1063 866	151-1378 1379-2441 2442-150					
SapI GCTCTTCN NNNNGAAGAGC	1	432	3157	432-431	SfcI C TRYAG	2	813 1004	2966 191	1004-812 813-1003
Sau3AI GATC	19	36 294 1114 1189 1200 1208 1286 1298 1307 1382 1442 1540 1786 1791 2024 2276 2406 2851 2856	820 445 337 258 252 246 233 130 98 78 75 75 60 12 11 9 8 5 5	294-1113 2406-2850 2856-35 36-293 2024-2275 1540-1785 1791-2023 2276-2405 1442-1539 1208-1285 1307-1381 1114-1188 1382-1441 1286-1297 1189-1199 1298-1306 1200-1207 1786-1790 2851-2855	SgfI GCGAT CGC	1	2279	3157	2279-2278
					SmaI CCC GGG	1	2403	3157	2403-2402
					SspI AAT ATT	1	2352	3157	2352-2351
					StuI AGG CCT	2	1653 2993	1817 1340	2993-1652 1653-2992
					TaiI ACGT	6	162 167 1254 2688 2813 4	1434 1087 348 158 125 5	1254-2687 167-1253 2813-3 4-161 2688-2812 162-166
Sau96 I G GNCC	4	14 53 1721 2922	1668 1201 249 39	53-1720 1721-2921 2922-13 14-52	TaqI T CGA	10	256 309 648 1474 1814 1907 2310 2584 2676 2830	826 583 403 340 339 274 154 93 92 53	648-1473 2830-255 1907-2309 1474-1813 309-647 2310-2583 2676-2829 1814-1906 2584-2675 256-308
ScrFI CC NGG	10	576 697 710 928 1650 2029 2386 2402 2403 2995	738 722 592 379 357 218 121 16 13 1	2995-575 928-1649 2403-2994 1650-2028 2029-2385 710-927 576-696 2386-2401 697-709 2402-2402	TfiI G AWTC	9	68 383 523 1657 2044 2135 2307 2363 2986	1134 623 387 315 239 172 140 91 56	523-1656 2363-2985 1657-2043 68-382 2986-67 2135-2306 2307-522 2044-2134 2307-2362
SfaNI GCATCNNNNN NNNNNNNNNGATGC ...	13	645 1429 1548 1565 1606 1770 1920 2231	930 784 311 215 164 150 135 120	2872-644 645-1428 1920-2230 2657-2871 1606-1769 1770-1919 2438-2572 2231-2350	TseI G CWGC	6	453 471 890 955	2446 419 206 65	1164-452 471-889 958-1163 890-954

	<u>Sites</u>		<u>Fragments</u>	
	Number	Position	Length	Ends
		958	18	453-470
		1164	3	955-957
Tsp45 I	3	160	1192	2125-159
GTSAC		1347	1187	160-1346
		2125	778	1347-2124
Tsp509 I	13	112	1566	311-1876
AATT		118	609	2660-111
		122	217	2077-2293
		177	184	2476-2659
		204	182	2294-2475
		311	150	1927-2076
		1877	107	204-310
		1885	55	122-176
		1927	42	1885-1926
		2077	27	177-203
		2294	8	1877-1884
		2476	6	112-117
		2660	4	118-121
TspRI	7	450	1189	2418-449
CAGTGNN		956	631	1240-1870
CACTGNN		969	506	450-955
		1240	467	1871-2337
		1871	271	969-1239
		2338	80	2338-2417
		2418	13	956-968
XhoI	1	2675	3157	2675-2674
C TCGAG				
XmaI	1	2401	3157	2401-2400
C CCGGG				

The following restriction enzymes do not cut pSIREN-Shuttle:

AatII, AccI, Afl II, AgeI, AhdI, ApaI, AscI, Asp718 I, AvrII, BanI,

EbeI, EbsI, BcgI, BcgI, Bcl I, Bgl I, BlpI, BpmI, BsaBI, BsaHI,

BsaI, BseRI, BsgI, BsiWI, Bsp120 I, BspMI, BsrGI, BssHII, Bst1107 I,
BstXI,

EagI, Ecl136 II, EcoRV, EheI, FseI, FspI, HincII, HpaI, KasI, KpnI,

MfeI, MluI, MscI, NaeI, NarI, NcoI, NgoMI, NheI, NotI, PacI,

PmeI, Pml I, PpuMI, PshAI, Psp1406 I, PstI, PvuII, RsrII, SacI, SacII,

Sal I, ScaI, SexAI, SfiI, SgrAI, SnaBI, SpeI, SphI, SrfI, Sse8387 I,

StyI, SwaI, Tth111 I, XbaI, XcmI, XmnI.