

pDONR221

4761 bp

Restriction/Methylation Map

Enzyme	# of cuts	Positions
AccI	4	804 852 1754 2749
AccIII	1	2292
Acil	27	43 64 71 114(c) 138 148 204(c) 238 324(c) 337 375 384(c) 1246(c) 1585 1780 1841(c) 1948(c) 2312(c) 3186 4164 4173(c) 4308 4418(c) 4539(c) 4558(c) 4685(c) 4713(c)
Acsl	3	2288 3194 3378
AcyI	1	328
AflII	1	555
AflIII	3	231 4060 4756
AluI	19	57 175 560 663 1324 1687 2263 2392 2511 2520 2892 2994 3033 3047 4030 4199 4456 4502 4592
Alw44I	2	1386 4442
AlwI	8	1409 1828(c) 1841 3443(c) 3838 4110(c) 4112 4198
AlwNI	2	1514 4347
Apal	1	568
ApaLI	2	1386 4442
ApoI	3	2288 3194 3378
Asel	3	167 226 3780
AsnI	3	167 226 3780
Asp700	1	1053
AspEI	3	550 800 2756
AspHI	2	1390 4446
AvaI	2	561 1417
BamHI	1	1833
BanII	2	568 3236
BbsI	1	438(c)
BbvI	11	85 103 184 826(c) 1703(c) 2723(c) 3056 4128(c) 4334(c) 4337(c) 4427
BfaI	4	241 507 1015 4263
BfrI	1	555
BmyI	4	568 1390 3236 4446
Bpml	1	2172(c)
BpuAI	1	438(c)
BsaAI	1	2599

BsaBI	1	1406
BsaHI	1	328
BsaI	1	1277(c)
BsaJI	10	1395 1417 1987 2056 2057 2635 2636 3452 3854 4596
BsaWI	5	1646 2292 3716 4403 4550
BseAI	1	2292
BsiEI	5	85 808 856 3581 4422
BsiHKAI	2	1390 4446
BsiYI	14	154 346 1279 1417 1598 2063 2630 3495 3827 3844 4278 4557 4723 4741
BsII	14	154 346 1279 1417 1598 2063 2630 3495 3827 3844 4278 4557 4723 4741
BsmAI	6	1277(c) 1358(c) 2064(c) 2617 3064 3597
BsmFI	2	2672 4032
BsmI	4	1894(c) 2301(c) 3465(c) 3542(c)
Bsp120I	1	564
Bsp1286I	4	568 1390 3236 4446
BspEI	1	2292
BspHI	2	3105 4032
BspMI	1	1171
BspWI	14	63 130 214 1563 1858 1954 2517 2721 3050 3293 3325 3539 4138 4710
BsrBI	2	66(c) 377(c)
BsrDI	4	633 2275(c) 2924(c) 3079(c)
BsrFI	2	1286 3535
BsrGI	3	652 1442 2899
BsrI	16	201 442(c) 524(c) 550(c) 758(c) 1175 1299 1395 2047 2487(c) 2799 3372 3996 4229 4341(c) 4354(c)
BssHII	1	1792
Bst1107I	1	1755
BstNI	14	246 311 479 1396 2058 2114 2637

		2665 3041 3471 3828 4597 4610 4731
BstUI	13	150 152 233 498 1246 1794 1841 3188 3238 3583 4062 4132 4713
BstXI	1	1306
BstYI	4	1833 3830 4104 4115
CfoI	18	91 124 152 217 1320 1794 1796 2717 3296 3518 3535 3605 4026 4132 4241 4415 4515 4582
Cfr10I	2	1286 3535
Csp6I	7	235 653 1443 1874 2412 2900 3415
DdeI	14	298 398 454 779 847 1253 1562 2068 2516 2744 2773 3598 4073 4482
DpnI	13	1258 1403 1835 2563 2606 2690 3450 3580 3832 4098 4106 4117 4192
DpnII	13	1256 1401 1833 2561 2604 2688 3448 3578 3830 4096 4104 4115 4190
DraI	2	2033 2372
DraII	1	565
DrdI	1	4654
DsaI	1	1987
DsaV	24	244 309 346 379 477 1346 1394 1416 1417 1552 2056 2112 2552 2635 2644 2663 3039 3452 3469 3826 4377 4595 4608 4729
EaeI	5	156 547 1296 1392 2023
Eam1105I	3	550 800 2756
EarI	3	112(c) 244(c) 3394
Eco57I	1	4214(c)
EcoNI	1	3493
EcoO109I	1	565
EcoRI	1	2288
EcoRII	14	244 309 477 1394

		2056 2112 2635 2663 3039 3469 3826 4595 4608 4729
EcoRV	1	2999
Esp3I	3	2064(c) 2617 3597
Fnu4HI	17	71 74 92 173 840 1717 1842 1949 2737 3045 3186 4142 4348 4351 4416 4559 4714
FnuDII	13	150 152 233 498 1246 1794 1841 3188 3238 3583 4062 4132 4713
FokI	11	262(c) 298 527 1315(c) 1394(c) 1432(c) 1554(c) 2308 2974(c) 3219 3825(c)
HaeII	2	125 4516
HaeIII	21	158 274 290 351 440 549 566 1298 1394 2025 2112 2334 2379 2634 3053 3185 3668 4282 4716 4734 4745
HgaI	5	317(c) 2713(c) 4051(c) 4066(c) 4644(c)
HgiAI	2	1390 4446
HhaI	18	91 124 152 217 1320 1794 1796 2717 3296 3518 3535 3605 4026 4132 4241 4415 4515 4582
HinP1I	18	89 122 150 215 1318 1792 1794 2715 3294 3516 3533 3603 4024 4130 4239 4413 4513 4580
HincII	5	502 805 853 1698 2750
HindII	5	502 805 853 1698 2750
Hinfl	14	21 96 161 769 887 1939 2783 3012 3492 3548 3720 3805 3811 4386
HpaI	1	502
HpaII	20	347 381 1287 1347 1418 1553 1647 1831 2165 2293 2335 2554 2646

		3454 3536 3717 4188 4378 4404 4551
HphI	18	403(c) 845 1396(c) 1497(c) 2003 2045(c) 2057 2113(c) 2249(c) 2251 2257(c) 2590 2742 3431(c) 3510 3706(c) 3750 3870
ItaI	17	71 74 92 173 840 1717 1842 1949 2737 3045 3186 4142 4348 4351 4416 4559 4714
Ksp632I	3	112(c) 244(c) 3394
MaeI	4	241 507 1015 4263
MaeII	12	365 533 675 1128 1384 2028 2203 2598 2610 2878 3177 4051
MaeIII	21	526 596 760 792 979 1702 2125 2230 2696 2758 2790 2954 3075 3341 3433 3728 3985 4056 4220 4336 4399
MamI	1	1406
MboI	13	1256 1401 1833 2561 2604 2688 3448 3578 3830 4096 4104 4115 4190
MboII	12	129 261 438(c) 819(c) 867(c) 1260(c) 2018 2683(c) 3381(c) 3492 4099(c) 4251(c)
McrI	5	85 808 856 3581 4422
MluI	2	231 4060
MluNI	3	1298 1394 2025
MnII	18	101(c) 151 354 928 951(c) 978 1122 1571 1742 2447 2602 3175(c) 3397 3764(c) 3864 4329 4579(c) 4653
MroI	1	2292
MscI	3	1298 1394 2025
MseI	17	167 226 501 556 702 931 1220 1493 1890 2032 2371 2851 3192 3571 3780 3976 4048
MslI	3	1304 1632 2576

MspA1I	6	175 1948 2392 2994 4173 4418
MspI	20	347 381 1287 1347 1418 1553 1647 1831 2165 2293 2335 2554 2646 3454 3536 3717 4188 4378 4404 4551
MvaI	14	246 311 479 1396 2058 2114 2637 2665 3041 3471 3828 4597 4610 4731
MvnI	13	150 152 233 498 1246 1794 1841 3188 3238 3583 4062 4132 4713
MwoI	14	63 130 214 1563 1858 1954 2517 2721 3050 3293 3325 3539 4138 4710
NciI	10	348 381 1348 1418 1419 1554 2554 2646 3454 4379
NcoI	1	1987
NdeII	13	1256 1401 1833 2561 2604 2688 3448 3578 3830 4096 4104 4115 4190
NheI	2	240 506
NlaIII	15	514 1318 1631 1909 1930 1991 2221 3026 3109 3206 3318 3433 3738 4036 4760
NlaIV	7	566 567 1188 1835 2590 4689 4728
NruI	1	3238
NsiI	2	3431 3697
NspI	1	4760
PfiMI	3	2063 2630 3844
PleI	4	104 3020 3813 4380(c)
Ppu10I	2	3427 3693
Psp1406I	2	365 2203
PstI	1	1168
PvuI	1	3581
PvuII	3	175 2392 2994
RcaI	2	3105 4032
RsaI	7	236 654 1444 1875 2413 2901 3416

Sall	3	803 851 2748
Sapl	1	112(c)
Sau3AI	13	1256 1401 1833 2561 2604 2688 3448 3578 3830 4096 4104 4115 4190
Sau96I	6	349 439 564 565 2633 3052
Scal	1	1875
ScrFI	24	246 311 348 381 479 1348 1396 1418 1419 1554 2058 2114 2554 2637 2646 2665 3041 3454 3471 3828 4379 4597 4610 4731
SfaNI	14	296(c) 464(c) 826(c) 1051 1960 2445(c) 2723(c) 3197(c) 3281(c) 3416(c) 3503(c) 3623(c) 3934(c) 4659(c)
Sfcl	6	798 1164 2753 3005 4300 4491
Smal	1	1419
Snol	2	1386 4442
SspBI	3	652 1442 2899
Sspl	2	1980 3506
Styl	1	1987
TaqI	9	804 852 1159 2533 2749 3180 3546 3949 4658
Tfil	10	21 161 769 887 1939 2783 3492 3548 3720 3811
Thal	13	150 152 233 498 1246 1794 1841 3188 3238 3583 4062 4132 4713
Tru9I	17	167 226 501 556 702 931 1220 1493 1890 2032 2371 2851 3192 3571 3780 3976 4048
Tsp509I	16	223 616 704 1052 1145 1883 2288 2847 2935 3194 3378 3560 3777 3927 3969 3977
Van91I	3	2063 2630 3844
XhoII	4	1833 3830 4104 4115

XmaI	1	1417
XmnI	1	1053

No cuts: AatI, AatII, Acc65I, AgeI, AoiI, AscI, Asp718, Aspl, AsuII, AvaI, AviI, AvrII, BanI, BbrPI, BclI, BclI, BglI, BglII, BlnI, Bpu1102I, BsgI, BsiWI, BspDI, BstBI, BstEII, Bsu36I, ClaI, Csp45I, DraIII, EagI, Ecl136II, EclXI, Eco47III, EspI, FspI, HindIII, Kasi, KpnI, KspI, MfeI, MunI, NaeI, NarI, NdeI, NgoMI, NotI, NspV, PacI, PaeR7I, PinAI, PmaCI, PmeI, PmlI, PpuMI, RsrII, SacI, SacII, SexAI, SfiI, SfuI, SgrAI, SnaBI, SpeI, SphI, StuI, SwaI, Tth111I, XbaI, XcmI, XhoI, XmaII