

Table S3.1 The average methylation levels of 18 imprinted genes detected in CHD patients and healthy individuals

| Groups  | SampleID | GRB10  | PEG10  | MEST   | NAP1L5 | INPP5F | PLAGL1 |
|---------|----------|--------|--------|--------|--------|--------|--------|
| Control | 1        | 0.4133 | 0.4520 |        | 0.6900 |        | 0.4082 |
|         | 2        | 0.3933 | 0.4880 | 0.4557 | 0.6814 |        |        |
|         | 3        | 0.4433 | 0.4620 | 0.5079 | 0.7029 | 0.7423 | 0.4535 |
|         | 4        | 0.4367 |        | 0.5393 | 0.6700 | 0.7604 | 0.4965 |
|         | 5        | 0.4133 | 0.4380 | 0.5121 | 0.7200 | 0.7252 | 0.4082 |
|         | 6        | 0.4267 | 0.5260 | 0.4936 | 0.6729 | 0.7143 | 0.4441 |
|         | 7        |        |        |        | 0.7129 | 0.7565 | 0.3988 |
|         | 8        | 0.4267 | 0.5460 | 0.5164 | 0.6814 | 0.6874 |        |
|         | 9        |        | 0.4170 | 0.4857 |        | 0.7068 | 0.4088 |
|         | 10       | 0.4400 | 0.4830 | 0.4907 | 0.7129 |        | 0.4171 |
|         | 11       | 0.4367 | 0.4820 |        |        | 0.7014 | 0.4159 |
|         | 12       | 0.3967 |        | 0.5607 | 0.6771 | 0.6622 | 0.4394 |
|         | 13       | 0.4067 | 0.4360 | 0.5486 | 0.7000 |        | 0.4129 |
|         | 14       | 0.3967 | 0.5110 | 0.5650 | 0.6686 | 0.7495 | 0.4706 |
|         | 15       | 0.4000 | 0.6280 | 0.4386 | 0.7129 | 0.7039 | 0.4094 |
|         | 16       | 0.4100 |        | 0.5229 |        | 0.7200 | 0.4582 |
|         | 17       | 0.3833 | 0.5490 | 0.5257 | 0.7257 |        | 0.4041 |
|         | 18       | 0.4800 | 0.4480 | 0.5914 | 0.6600 |        | 0.4135 |
|         | 19       | 0.3867 |        | 0.6114 |        | 0.7574 | 0.3900 |
|         | 20       |        |        |        |        |        |        |
|         | 21       | 0.3767 | 0.4840 | 0.6457 | 0.6500 |        | 0.4606 |
|         | 22       | 0.4233 | 0.5070 | 0.5421 | 0.6714 | 0.7617 | 0.4135 |
|         | 23       | 0.4033 | 0.5570 | 0.5571 | 0.6957 | 0.7600 | 0.4618 |
|         | 24       |        | 0.5570 | 0.5557 | 0.5343 | 0.7622 | 0.4488 |
|         | 25       | 0.5000 | 0.5600 | 0.5079 | 0.7543 |        | 0.4076 |
|         | 26       | 0.4467 | 0.4750 | 0.5336 | 0.6829 |        | 0.3941 |
|         | 27       | 0.7467 | 0.6070 |        | 0.7586 |        | 0.4718 |
|         | 28       |        | 0.5890 |        | 0.7014 | 0.7683 | 0.3918 |
| CHD     | 1        | 0.6133 | 0.4810 | 0.5950 | 0.7129 |        | 0.4059 |
|         | 2        | 0.4500 | 0.3860 | 0.5957 | 0.6343 |        | 0.4153 |
|         | 3        | 0.5733 | 0.3910 |        | 0.6929 |        | 0.4171 |
|         | 4        | 0.4367 | 0.4040 | 0.5529 | 0.4586 | 0.6613 | 0.4024 |
|         | 5        | 0.4367 | 0.4340 | 0.5807 | 0.5543 | 0.6557 | 0.3953 |
|         | 6        | 0.4800 | 0.4670 | 0.5993 |        | 0.6361 | 0.4182 |
|         | 7        | 0.4867 | 0.4960 | 0.5807 | 0.6943 | 0.6630 | 0.4194 |
|         | 8        | 0.4933 | 0.4770 | 0.5379 | 0.6857 | 0.7361 | 0.3876 |
|         | 9        |        | 0.4800 | 0.4779 | 0.5886 | 0.7483 |        |
|         | 10       | 0.5867 |        | 0.5521 | 0.4743 | 0.6804 | 0.4153 |
|         | 11       | 0.5167 |        | 0.5336 |        | 0.7343 | 0.3788 |
|         | 12       | 0.4700 | 0.4060 | 0.5857 |        | 0.6730 | 0.4112 |
|         | 13       | 0.4467 | 0.4070 | 0.5507 | 0.6114 | 0.6030 | 0.4324 |
|         | 14       | 0.6867 | 0.4740 |        |        | 0.6635 | 0.3929 |
|         | 15       | 0.5067 | 0.5090 |        |        |        | 0.4265 |
|         | 16       | 0.5633 | 0.5010 |        | 0.4171 | 0.6109 | 0.4071 |
|         | 17       | 0.4833 | 0.4350 |        | 0.4771 | 0.6596 | 0.4035 |
|         | 18       | 0.4367 | 0.4120 | 0.6186 | 0.6871 | 0.6091 | 0.3382 |
|         | 19       |        | 0.4120 | 0.5679 | 0.6800 |        | 0.4300 |
|         | 20       | 0.5667 | 0.4790 | 0.5521 | 0.7000 | 0.6965 | 0.4259 |
|         | 21       | 0.4700 | 0.4160 | 0.6979 |        | 0.6361 | 0.4300 |

|    |        |        |        |        |        |        |
|----|--------|--------|--------|--------|--------|--------|
| 22 | 0.5633 | 0.6820 |        | 0.5100 |        | 0.4171 |
| 23 | 0.5033 | 0.4600 | 0.5171 | 0.7243 | 0.7074 | 0.4329 |
| 24 | 0.4767 | 0.4230 | 0.5414 |        | 0.7039 | 0.4612 |
| 25 | 0.3767 | 0.4170 | 0.5086 | 0.6800 | 0.6870 | 0.4141 |
| 26 | 0.6300 | 0.4390 | 0.5743 | 0.6914 | 0.6091 | 0.3894 |
| 27 | 0.5267 | 0.4050 |        | 0.7500 | 0.6996 | 0.3853 |

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Table S3.2 The average methylation levels of 18 imprinted genes detected in CHD patients and healthy individuals

| Groups  | SampleID | NESP   | MEG3   | MCST2  | NNAT   | NESPAS | GNAS   |
|---------|----------|--------|--------|--------|--------|--------|--------|
| Control | 1        | 0.3829 |        | 0.3171 | 0.7900 |        |        |
|         | 2        | 0.4136 | 0.5283 | 0.3257 | 0.9667 | 0.3150 |        |
|         | 3        | 0.4157 | 0.4167 | 0.2857 |        | 0.3875 | 0.4079 |
|         | 4        | 0.3643 | 0.4983 | 0.3400 | 0.9367 | 0.3842 | 0.4593 |
|         | 5        |        | 0.4450 | 0.2757 | 0.9467 | 0.3125 |        |
|         | 6        |        | 0.4667 | 0.3214 | 0.9300 | 0.3233 | 0.4200 |
|         | 7        |        | 0.4950 | 0.3114 | 0.7933 |        | 0.3962 |
|         | 8        | 0.3729 | 0.5117 | 0.3029 | 0.6967 | 0.3833 | 0.4371 |
|         | 9        | 0.3771 | 0.4200 |        |        |        | 0.3700 |
|         | 10       | 0.4150 | 0.4200 | 0.3400 | 0.9433 | 0.3675 | 0.4350 |
|         | 11       |        |        | 0.3214 |        |        |        |
|         | 12       | 0.4386 | 0.3900 | 0.3271 | 0.9200 | 0.3633 | 0.4400 |
|         | 13       | 0.3543 | 0.4083 | 0.2829 | 0.7433 |        | 0.3679 |
|         | 14       | 0.4207 | 0.4933 | 0.3157 | 0.9367 |        | 0.3800 |
|         | 15       | 0.4007 | 0.4700 | 0.2829 |        | 0.3675 | 0.4200 |
|         | 16       | 0.3707 | 0.4617 | 0.3743 |        |        | 0.4536 |
|         | 17       | 0.4200 | 0.3933 |        | 0.9533 | 0.3775 | 0.3964 |
|         | 18       | 0.4429 | 0.4183 | 0.3386 |        |        | 0.3743 |
|         | 19       | 0.4550 | 0.4533 | 0.3186 |        | 0.3658 | 0.4893 |
|         | 20       |        |        |        |        |        |        |
|         | 21       | 0.4621 | 0.4983 | 0.3414 | 0.9267 | 0.3925 | 0.3964 |
|         | 22       | 0.3600 | 0.4800 | 0.3486 | 0.9533 | 0.3742 | 0.3964 |
|         | 23       | 0.4543 | 0.4050 | 0.3114 | 0.9567 | 0.3775 | 0.4664 |
|         | 24       | 0.4193 | 0.4417 | 0.3500 | 0.5833 | 0.3867 | 0.4700 |
|         | 25       | 0.4629 | 0.4567 | 0.2929 | 0.8700 | 0.3867 | 0.3786 |
|         | 26       | 0.3993 | 0.4483 | 0.3371 | 0.9300 | 0.3575 | 0.4236 |
|         | 27       | 0.4371 | 0.4550 | 0.3686 | 0.9800 | 0.4083 | 0.4193 |
|         | 28       | 0.4179 |        | 0.3757 | 0.9633 | 0.3983 | 0.3979 |
| CHD     | 1        |        |        | 0.3243 | 0.8860 |        | 0.4172 |
|         | 2        |        | 0.4717 | 0.0280 | 0.1076 | 0.3583 | 0.0346 |
|         | 3        |        | 0.4033 | 0.3392 | 0.9194 | 0.3458 | 0.6768 |
|         | 4        |        | 0.4067 | 0.0337 | 0.1383 | 0.3400 | 0.0609 |
|         | 5        |        | 0.3650 | 0.3327 | 0.8899 | 0.3533 | 0.4111 |
|         | 6        | 0.3079 | 0.3783 | 0.3443 | 0.9133 | 0.3842 | 0.3679 |
|         | 7        |        | 0.4200 | 0.3343 | 0.9433 |        |        |
|         | 8        | 0.3492 |        | 0.3243 | 0.9333 | 0.3775 | 0.4400 |
|         | 9        |        | 0.3483 | 0.4443 |        | 0.3492 | 0.3800 |
|         | 10       |        | 0.4483 | 0.3329 | 0.7500 |        | 0.3693 |
|         | 11       |        | 0.3933 | 0.3443 | 0.3167 | 0.3617 | 0.2871 |
|         | 12       |        | 0.3717 | 0.3629 | 0.9567 |        | 0.4250 |
|         | 13       | 0.2979 | 0.3650 | 0.3671 | 0.9533 | 0.3567 | 0.3721 |
|         | 14       |        | 0.4017 | 0.3229 | 0.9167 |        | 0.4021 |
|         | 15       |        | 0.3600 | 0.3600 | 0.9700 | 0.4150 | 0.4736 |
|         | 16       |        |        | 0.2929 | 0.9267 |        | 0.4036 |
|         | 17       | 0.3486 |        | 0.3057 | 0.8933 | 0.3408 | 0.4043 |
|         | 18       | 0.2900 | 0.4167 | 0.3271 | 0.9467 | 0.3658 | 0.4329 |
|         | 19       |        | 0.4467 |        | 0.7600 | 0.3400 |        |
|         | 20       | 0.2815 |        | 0.3414 |        | 0.3183 | 0.4000 |
|         | 21       |        |        | 0.3429 | 0.9433 |        | 0.5207 |

|    |        |        |        |        |        |
|----|--------|--------|--------|--------|--------|
| 22 | 0.3164 | 0.3900 | 0.3429 | 0.9367 | 0.3821 |
| 23 |        | 0.3733 | 0.2843 | 0.9600 | 0.4486 |
| 24 |        |        | 0.2900 | 0.7667 | 0.4364 |
| 25 |        | 0.3950 | 0.3200 | 0.8667 | 0.3700 |
| 26 |        | 0.4083 | 0.3429 | 0.9533 | 0.3877 |
| 27 |        | 0.3433 |        | 0.9600 | 0.5914 |

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Table S3.3 The average methylation levels of 18 imprinted genes detected in CHD patients and healthy individuals

| Groups  | SampleID | IGF2   | H19    | IG     | KCNQ1OT1 | SNRPN  | ZIM2   |
|---------|----------|--------|--------|--------|----------|--------|--------|
| Control | 1        | 0.5925 |        |        | 0.3900   | 0.3050 | 0.3650 |
|         | 2        | 0.5425 | 0.3275 | 0.5700 | 0.3800   | 0.3692 | 0.3175 |
|         | 3        |        | 0.4475 |        | 0.3540   |        | 0.3675 |
|         | 4        |        |        | 0.5870 | 0.3920   | 0.3275 | 0.3100 |
|         | 5        | 0.6165 | 0.4958 | 0.5430 | 0.3840   |        | 0.2925 |
|         | 6        |        | 0.5725 | 0.5070 | 0.3380   | 0.3464 | 0.3575 |
|         | 7        | 0.5740 | 0.4858 | 0.5445 | 0.3960   | 0.2909 | 0.3525 |
|         | 8        | 0.5665 |        |        | 0.4080   | 0.4175 | 0.4000 |
|         | 9        | 0.5985 | 0.4575 |        | 0.3600   | 0.3350 |        |
|         | 10       |        | 0.4925 | 0.5700 | 0.3860   | 0.3542 | 0.3750 |
|         | 11       |        | 0.4858 |        | 0.4020   | 0.3991 | 0.4325 |
|         | 12       | 0.5490 | 0.4736 | 0.5495 | 0.3780   | 0.3108 | 0.3900 |
|         | 13       |        | 0.5083 | 0.5400 | 0.3780   | 0.3750 | 0.3675 |
|         | 14       | 0.5870 |        |        |          | 0.2818 | 0.3850 |
|         | 15       |        | 0.4717 |        | 0.4375   | 0.3925 | 0.3825 |
|         | 16       | 0.6040 |        |        | 0.3680   | 0.3255 | 0.5200 |
|         | 17       | 0.6210 | 0.4442 | 0.5370 |          | 0.3392 | 0.3775 |
|         | 18       | 0.6025 | 0.4408 | 0.5675 | 0.4200   | 0.3733 | 0.3350 |
|         | 19       |        |        | 0.5325 | 0.3480   | 0.3025 | 0.3825 |
|         | 20       |        | 0.4483 |        |          |        |        |
|         | 21       | 0.6180 |        | 0.5450 | 0.3660   | 0.3058 | 0.3600 |
|         | 22       |        | 0.4050 | 0.6160 | 0.3660   | 0.3658 | 0.3550 |
|         | 23       | 0.5645 |        | 0.4815 | 0.3960   | 0.3317 | 0.3150 |
|         | 24       | 0.5825 | 0.4508 | 0.5025 | 0.3700   | 0.3658 | 0.3875 |
|         | 25       | 0.5325 | 0.5650 | 0.4995 | 0.4380   | 0.4217 | 0.4450 |
|         | 26       | 0.5340 | 0.4492 | 0.4920 |          | 0.3592 | 0.3375 |
|         | 27       | 0.6170 | 0.5033 |        | 0.3900   |        | 0.3900 |
|         | 28       |        | 0.4760 | 0.4720 | 0.3560   | 0.3683 |        |
| CHD     | 1        | 0.5825 | 0.4701 | 0.5365 | 0.3834   | 0.3485 | 0.3720 |
|         | 2        | 0.0302 | 0.0522 | 0.0384 | 0.0258   | 0.0385 | 0.0470 |
|         | 3        | 0.9932 | 0.1667 | 0.1492 | 0.7139   | 0.4575 | 0.8633 |
|         | 4        | 0.0416 | 0.0552 | 0.0413 | 0.0387   | 0.0546 | 0.0507 |
|         | 5        | 0.5826 | 0.4437 | 0.5169 | 0.3799   | 0.3383 | 0.3696 |
|         | 6        | 0.6680 | 0.4983 | 0.4990 | 0.3980   | 0.2883 | 0.3750 |
|         | 7        | 0.5875 | 0.4042 | 0.4825 | 0.3900   | 0.4442 | 0.3050 |
|         | 8        |        | 0.5258 | 0.6055 | 0.3360   | 0.3842 | 0.4075 |
|         | 9        | 0.5650 | 0.4333 | 0.5370 | 0.3420   | 0.3475 | 0.2525 |
|         | 10       | 0.5915 | 0.4183 | 0.5480 | 0.4100   | 0.3300 | 0.3450 |
|         | 11       | 0.5425 | 0.4508 | 0.4920 | 0.2820   | 0.2633 | 0.3025 |
|         | 12       | 0.5400 |        | 0.5145 | 0.4040   | 0.4792 |        |
|         | 13       | 0.5775 | 0.3725 | 0.4835 | 0.3820   | 0.3492 | 0.3250 |
|         | 14       | 0.6755 |        | 0.5645 |          | 0.3300 | 0.3425 |
|         | 15       |        |        | 0.4800 | 0.3700   | 0.3158 | 0.3825 |
|         | 16       |        | 0.4836 | 0.5655 | 0.4360   | 0.3692 | 0.3950 |
|         | 17       | 0.5910 | 0.4583 | 0.5195 | 0.3380   | 0.2608 | 0.3500 |
|         | 18       | 0.5765 | 0.4900 |        | 0.3940   | 0.3425 | 0.4000 |
|         | 19       | 0.5840 |        |        | 0.4100   |        | 0.3575 |
|         | 20       | 0.5845 | 0.4008 | 0.5140 | 0.3300   | 0.3242 | 0.4100 |
|         | 21       | 0.5645 |        |        | 0.3480   | 0.3267 | 0.3925 |

|    |        |        |        |        |        |        |
|----|--------|--------|--------|--------|--------|--------|
| 22 | 0.5420 | 0.4208 | 0.5280 | 0.3900 | 0.2750 | 0.4775 |
| 23 | 0.5680 |        |        | 0.3440 | 0.3358 | 0.3700 |
| 24 | 0.6435 |        | 0.5265 | 0.3820 | 0.3408 | 0.3550 |
| 25 |        |        | 0.5390 | 0.3800 | 0.3542 | 0.4075 |
| 26 |        | 0.3391 | 0.4250 | 0.4275 | 0.3033 |        |
| 27 |        |        |        |        | 0.4208 | 0.4275 |

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