**Supplementary Table 1. The LD analysis for five SNPs (rs4712524, rs10946398, rs7754840, rs9460546 and rs7756992) located in *CDKAL1***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| D' | rs10946398 | rs7754840 | rs9460546 | rs7756992 |
| rs4712524 | 0.983 | 0.976 | 0.940 | 0.831 |
| rs10946398 | - | 0.978 | 0.954 | 0.856 |
| rs7754840 | - | - | 0.946 | 0.856 |
| rs9460546 | - | - | - | 0.817 |

**Supplementary Table 2. The LD analysis for three SNPs (****rs1111875, rs5015480 and rs7923837)**

**located in *HHEX***

|  |  |  |
| --- | --- | --- |
| D | rs5015480 | rs7923837 |
| rs1111875 | 0.938 | 0.490 |
| rs5015480 | - | 0.729 |

**Supplementary Table 3. Different inheritance models analysis of the SNP rs9460546 in *CDKAL1* between the NDM and T2DM group.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Genotype | NDM | T2DM | OR (95% CI) | *P* | AIC | BIC |
| Codominant | T/T | 471 (36.9%) | 392 (33.5%) | 1 | 0.1 | 3377.1 | 3411.9 |
| G/T | 600 (47%) | 557 (47.6%) | 1.13 (0.95-1.35) |
| G/G | 206 (16.1%) | 220 (18.8%) | 1.28 (1.01-1.62) |
| Dominant | T/T | 471 (36.9%) | 392 (33.5%) | 1 | 0.066 | 3376.3 | 3405.3 |
| G/T-G/G | 806 (63.1%) | 777 (66.5%) | 1.17 (0.99-1.38) |
| Recessive | T/T-G/T | 1071 (83.9%) | 949 (81.2%) | 1 | 0.099 | 3376.9 | 3405.9 |
| G/G | 206 (16.1%) | 220 (18.8%) | 1.19 (0.97-1.47) |
| Overdominant | T/T-G/G | 677 (53%) | 612 (52.4%) | 1 | 0.62 | 3379.4 | 3408.4 |
| G/T | 600 (47%) | 557 (47.6%) | 1.04 (0.89-1.22) |
| Log-additive | --- | --- | --- | 1.13 (1.01-1.27) | 0.033 | 3375.1 | 3404.1 |

**Supplementary Table 4. Different inheritance models analysis of the** **SNP rs7756992** **in *CDKAL1* between the NDM and T2DM group.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Genotype | NDM | T2DM | OR (95% CI) | *P* | AIC | BIC |
| Codominant | G/G | 294 (23%) | 319 (27.3%) | 1 | 0.037 | 3375.1 | 3409.9 |
| G/A | 658 (51.5%) | 583 (49.9%) | 0.82 (0.67-0.99) |
| A/A | 325 (25.4%) | 267 (22.8%) | 0.75 (0.60-0.95) |
| Dominant | G/G | 294 (23%) | 319 (27.3%) | 1 | 0.015 | 3373.7 | 3402.7 |
| G/A-A/A | 983 (77%) | 850 (72.7%) | 0.80 (0.66-0.96) |
| Recessive | G/G-G/A | 952 (74.5%) | 902 (77.2%) | 1 | 0.120 | 3377.2 | 3406.2 |
| A/A | 325 (25.4%) | 267 (22.8%) | 0.86 (0.71-1.04) |
| Overdominant | G/G-A/A | 619 (48.5%) | 586 (50.1%) | 1 | 0.440 | 3379 | 3408.1 |
| G/A | 658 (51.5%) | 583 (49.9%) | 0.94 (0.80-1.10) |
| Log-additive | --- | --- | --- | 0.87 (0.77-0.97) | 0.014 | 3373.6 | 3402.6 |

**Supplementary Table 5. Different inheritance models analysis of the SNP rs1111875 in *HHEX* between the** **NDM and T2DM group.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Genotype | NDM | T2DM | OR (95% CI) | *P* | AIC | BIC |
| Codominant | T/T | 669 (52.4%) | 577 (49.4%) | 1 | 0.044 | 3388.3 | 3417.4 |
| C/T | 525 (41.1%) | 486 (41.6%) | 1.07 (0.91-1.27) |
| C/C | 83 (6.5%) | 106 (9.1%) | 1.48 (1.09-2.01) |
| Dominant | T/T | 669 (52.4%) | 577 (49.4%) | 1 | 0.130 | 3390.3 | 3413.6 |
| C/T-C/C | 608 (47.6%) | 592 (50.6%) | 1.13 (0.96-1.32) |
| Recessive | T/T-C/T | 1194 (93.5%) | 1063 (90.9%) | 1 | 0.019 | 3387.1 | 3410.3 |
| C/C | 83 (6.5%) | 106 (9.1%) | 1.43 (1.06-1.93) |
| Overdominant | T/T-C/C | 752 (58.9%) | 683 (58.4%) | 1 | 0.800 | 3392.5 | 3415.7 |
| C/T | 525 (41.1%) | 486 (41.6%) | 1.02 (0.87-1.20) |
| Log-additive | --- | --- | --- | 1.15 (1.01-1.30) | 0.029 | 3387.8 | 3411 |

**Supplementary Table 6. Different inheritance models analysis of the rs7923837 in *HHEX* between the NDM and T2DM group.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | Genotype | NDM | T2DM | OR (95% CI) | *P* | AIC | BIC |
| Codominant | A/A | 740 (58%) | 656 (56.1%) | 1 | 0.250 | 3391.8 | 3420.8 |
| G/A | 479 (37.5%) | 443 (37.9%) | 1.05 (0.88-1.23) |
| G/G | 58 (4.5%) | 70 (6%) | 1.36 (0.94-1.96) |
| Dominant | A/A | 740 (58%) | 656 (56.1%) | 1 | 0.350 | 3391.7 | 3414.9 |
| G/A-G/G | 537 (42%) | 513 (43.9%) | 1.08 (0.92-1.27) |
| Recessive | A/A-G/A | 1219 (95.5%) | 1099 (94%) | 1 | 0.110 | 3390.1 | 3413.3 |
| G/G | 58 (4.5%) | 70 (6%) | 1.34 (0.93-1.91) |
| Overdominant | A/A-G/G | 798 (62.5%) | 726 (62.1%) | 1 | 0.830 | 3392.6 | 3415.8 |
| G/A | 479 (37.5%) | 443 (37.9%) | 1.02 (0.86-1.20) |
| Log-additive | --- | --- | --- | 1.10 (0.96-1.25) | 0.170 | 3390.7 | 3413.9 |