**Supporting information**

**S12 Table.** **HLA matches within each region of China**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Group | No. of individuals | No. of Matches | Match Rate (95%CI) | Odds Ratio (95% CI) |
| NW | 14409 | 2066 | 1.99 x 10-5 (1.91x10-5-2.08x10-5) | 1 |
| NC | 27819 | 8402 | 2.17 x 10-5 (2.13x10-5-2.22x10-5) | 1.09 (1.04-1.14)\* |
| NE | 12493 | 2242 | 2.87 x10-5 (2.76x10-5-2.99x10-5) | 1.44 (1.36-1.53)\* |
| SW | 21053 | 7091 | 3.20 x 10-5 (3.13x10-5-3.28x10-5) | 1.61 (1.53-1.69)\* |
| CC | 24432 | 14177 | 4.75 x 10-5 (4.67x10-5-4.83x10-5) | 2.39 (2.28-2.50)\* |
| EC | 51132 | 70878 | 5.42 x 10-5 (5.38x10-5-5.46x10-5) | 2.72 (2.61-2.85)\* |
| SC | 18657 | 13598 | 7.81 x 10-5 (7.68x10-5-7.95x10-5) | 3.93 (3.75-4.11)\* |

\* P< 0.05 (chi-square test)