

|        | Gene     | Correlation coefficient | One-sided significance |
|--------|----------|-------------------------|------------------------|
| MHC I  | HLA-A    | 0.129                   | 1.9E-05                |
|        | HLA-B    | 0.119                   | 7.1E-05                |
|        | HLA-C    | 0.052                   | 0.047                  |
|        | HLA-H    | 0.113                   | 1.5E-04                |
| MHC II | HLA-J    | -0.111                  | 1.9E-04                |
|        | HLA-DRA  | 0.092                   | 0.0015                 |
|        | HLA-DQA1 | 0.092                   | 0.0016                 |
|        | HLA-E    | 0.087                   | 0.0025                 |
|        | HLA-DOB  | 0.087                   | 0.0026                 |
|        | HLA-F    | 0.085                   | 0.0033                 |
|        | HLA-DMA  | 0.078                   | 0.0063                 |
|        | HLA-DQA2 | 0.078                   | 0.0064                 |
|        | HLA-DMB  | 0.074                   | 0.0088                 |
|        | HLA-DQB1 | 0.073                   | 0.0093                 |
|        | HLA-DRB1 | 0.073                   | 0.0100                 |
|        | HLA-DPB2 | 0.072                   | 0.011                  |
|        | HLA-L    | 0.071                   | 0.011                  |
|        | HLA-G    | 0.061                   | 0.025                  |
|        | HLA-DRB6 | 0.057                   | 0.034                  |
|        | HLA-DRB5 | 0.052                   | 0.047                  |
|        | HLA-DPA1 | 0.046                   | 0.069                  |
|        | HLA-DPB1 | 0.030                   | 0.169                  |
|        | HLA-DQB2 | 0.028                   | 0.183                  |
|        | HLA-DOA  | -0.006                  | 0.429                  |

Supplementary Figure 1