Table A3. Genetic model analysis for complete blood count parameters.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Complete blood count (CBC) parameter | Rs polymorphism | CBC parameter median (min, max) | | | Genetic model statistical significance (p) | | | |
| Wilde type (WT) | Heterozygous  (HT) | Minor genotype  (MT) | C1 | C2 | D | R |
| WT vs HT | WT vs MT | WT vs  HT+MT | MT vs  WT+HT |
| BASO (%) | rs1800566 | 0.40  (0.00-2.10) | 0.40  (0.00-1.40) | 0.60  (0.10-2.00) |  |  |  | 0.045 |
|  | rs7787362 | 0.50  (0.00-2.10) | 0.40  (0.00-1.80) | 0.40  (0.10-2.00) |  | 0.015 | 0.046 | 0.035 |
| EOZ (%) | rs1143634 | 2.40  (0.00-13.20) | 2.30  (0.40-7.30) | 2.80  (1.00-7.00) |  |  |  | 0.046 |
| LYMPH (%) | rs1001179 | 35.00  (13.90-54.20) | 34.10  (17.10-50.90) | 38.95  (22.40-65.40) |  | 0.038 |  | 0.031 |
|  | rs1143634 | 35.10  (13.90-65.40) | 33.90  (17.70-54.20) | 37.20  (27.30-49.90) |  | 0.043 |  | 0.026 |
|  | rs1800012 | 34.9  (13.9-65.4) | 35.1  (19.9-50.9) | 41.6  (35-45.1) |  | 0.042 |  | 0.042 |
|  | rs1800629 | 35.4  (13.9-54.2) | 33.00  (17.10-65.40) | 36.40  (29.40-51.50) | 0.029 |  |  |  |
|  | rs4880 | 34.00  (13.90-65.40) | 34.90  (16.00-54.20) | 36.30  (17.70-50.90) |  | 0.046 |  |  |
| MONO (%) | rs1050450 | 8.95  (4.90-23.30) | 9.30  (4.50-26.50) | 9.80  (4.10-15.10) | 0.018 |  | 0.014 |  |
|  | rs2066853 | 9.20  (4.90-26.50) | 8.55  (4.10-14.50) | 13.80  (13.80-13.80 | 0.037 |  |  |  |
| NEUT (%) | rs1001179 | 52.20  (23.90-78.20) | 52.30  (36.50-73.10) | 45.55  (23.50-66.70) |  | 0.027 |  | 0.022 |
|  | rs1050450 | 52.65  (23.90-76.90) | 49.60  (23.50-78.20) | 52.70  (38.50-69.40) | 0.049 |  |  |  |
|  | rs1143634 | 51.80  (23.50-78.20) | 53.00  (23.90-70.60) | 48.20  (36.50-58.70) |  | 0.009 |  | 0.004 |
| LYMPH (N) | rs17553719 | 1.98  (0.93-3.87) | 1.96  (0.96-3.69) | 2.21  (1.22-4.25) |  | 0.016 |  | 0.019 |
| NEUT (N) | rs1001179 | 2.89  (1.01-8.27) | 3.06  (0.95-7.49) | 2.29  (1.32-5.22) |  | 0.017 |  | 0.009 |
|  | rs1050450 | 3.12  0.95-8.24) | 2.73  (1.29-8.27) | 3.18  (1.74-6.21) | 0.028 |  |  |  |
|  | rs1800629 | 2.89  (1.01-8.27) | 3.38  0.95-7.49) | 2.79  (1.27-3.55) | 0.016 |  |  |  |
|  | rs1800795 | 3.23  (1.01-8.27) | 2.90  (0.95-7.05) | 2.91  (1.29-7.08) | 0.047 |  |  |  |
| RBC | rs1800629 | 4.59  (3.66-5.85) | 4.63  (3.55-5.74) | 4.29  (3.94-4.72) |  |  | 0.023 |  |
|  | rs1800795 | 4.63  (3.55-5.85) | 4.59  (3.84-5.61) | 4.59  (3.66-5.74) | 0.020 |  |  | 0.023 |
| WBC | rs1001179 | 5.83  (2.54-11.77) | 5.92  (2.5-10.75) | 5.11  (2.48-8.23) |  |  |  | 0.050 |
|  | rs1800629 | 5.69  (2.8-11.77) | 6.12  (2.47-10.45) | 5.15  (4.08-6.56) | 0.044 |  |  |  |
| MONO (N) | rs1800795 | 6.06  (2.87-11.78) | 5.64  (2.47-10.75) | 5.79  (3.41-11.19) | 0.048 |  |  |  |

RBC – red blood cell, WBC – white blood cell, N – absolute count, % - relative count, LYMPH – lymphocyte, EO – eosinophil, Baso – basophil, MONO – monocyte, NEUT – neutrophil, HT – heterozygous genotype, MT – minor genotype, WT – wild type, C1 and C2 – codominant 1 and 2, D – dominant, R - recessive.

Table A4. Genetic model analysis for immunohistochemistry parameters.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Immunochemistry parameter | Rs polymorphism | Immunochemistry parameter median (min, max) | | | Genetic model statistical significance (p) | | | |
| Wilde type (WT) | Heterozygous  (HT) | Minor genotype  (MT) | C1 | C2 | D | R |
| WT vs HT | WT vs MT | WT vs  HT+MT | MT vs  WT+HT |
| ALT | rs1001179 | 18.10  (4.40-71.90) | 17.50  (4.30-116.40) | 14.85  (9.10-34.90) |  | 0.05 |  |  |
|  | rs1050450 | 18.00  (4.30-71.90) | 16.40  (4.40-116.40) | 19.30  (10.30-60.00) |  |  |  | 0.046 |
|  | rs1799750 | 16.30  (4.30-48.10) | 18.15  (4.40-116.40) | 17.10  (4.60-71.90) | 0.04 |  | 0.049 | 0.046 |
|  | rs1800566 | 17.80  (4.30-116.40) | 17.10  (4.40-66.30) | 12.70  (7.80-34.90) |  | 0.036 |  | 0.041 |
|  | rs1126809 | 18.30  (4.60-66.30) | 16.10  (4.30-71.90) | 18.05  (7.80-116.40) | 0.03 |  | 0.037 |  |
| AST | rs1143634 | 17.90  (10.10-73.10) | 18.30  (9.90-124.60) | 20.45  (13.40-67.50) |  | 0.011 |  | 0.014 |
|  | rs16891982 | 17.95  (9.9-124.6) | 21.1  (12.9-34.7) | - | 0.01 |  |  |  |
|  | rs26722 | 18.00  (9.90-124.60) | 21.60  (14.10-34.70) | - | 0.019 |  |  |  |
|  | rs1799750 | 17.60  (9.90-45.50) | 18.40  (10.20-67.50) | 18.10  (10.30-124.60) |  |  | 0.049 |  |
| Chlorine | rs1800012 | 102.90  (91.90-109.30) | 103.65  (98.80-112.40) | 101.70  (100.50-105.60) | 0.047 |  |  |  |
|  | rs26722 | 103.15  (91.90-112.40) | 101.45  (97.50-106.20) | - | 0.01 |  |  |  |
|  | rs16891982 | 103.2  (91.9-112.4) | 101.7  (97.5-106.2) | - | 0.006 |  |  |  |
|  | rs26722 | 71.60  (59.30-81.90) | 74.45  (69.60-82.60) | - | 0.003 |  |  |  |
|  | rs16891982 | 71.6  (59.3-81.9) | 73.9  (67.3-82.6) |  | 0.005 |  |  |  |
| Calcium | rs26722 | 2.39  (1.97-2.67) | 2.47  (2.23-2.58) | - | 0.003 |  |  |  |
|  | rs16891982 | 2.39  (1.97-2.67) | 2.44  (2.23-2.58) | - | 0.031 |  |  |  |
|  | rs4880 | 2.41  (2.13-2.63) | 2.38  (1.97-2.66) | 2.40  (2.15-2.67) |  |  |  | 0.06 |
| Calcium++ | rs4880 | 1.25  (1.16-1.35) | 1.25  (1.07-1.34) | 1.26  (1.18-1.38) |  |  |  | 0.036 |
|  | krs17553719 | 1.25  (1.07-1.38) | 1.26  (1.16-1.38) | 1.25  (1.18-1.29) | 0.032 |  |  |  |
| Potassium | rs17553719 | 4.5  (3.7-6.06) | 4.5  (3.7-5.9) | 4.4  (3.9-5.4) |  | 0.041 |  |  |
|  | rs26722 | 4.50  (3.70-6.06) | 4.65  (3.90-5.90) | - | 0.045 |  |  |  |
| Creatinine | rs1799750 | 68.0  (45.0-115.0) | 68.0  (45.0-116.0) | 71.0  (48.0-124.0) |  |  |  |  |
|  | rs1800566 | 68.0  (45.0-116.0) | 71.50  (48.0-124.0) | 66.0  (45.0-94.0) | 0.022 |  |  |  |
| Total cholesterol | rs1800795 | 4.97  (3.07-7.81) | 5.29  (2.67-8.63) | 5.06  (3.29-8.96) | 0.043 |  |  |  |
|  | krs17553719 | 5.075  (3.07-8.96) | 5.08  (2.67-7.63) | 5.42  (3.37-7.87) |  | 0.041 |  | 0.034 |
|  | rs2066853 | 5.15  (2.67-8.63) | 4.78  (3.26-8.96) | 5.57  (5.57-5.57) | 0.024 |  | 0.029 |  |
| HDL cholesterol | rs1800795 | 1.55  (0.76-2.83) | 1.71  (0.88-3.00) | 1.58  (0.75-2.61) | 0.006 |  | 0.037 |  |
|  | rs1126809 | 1.58  (0.76-3.00) | 1.71  (0.75-2.85 | 1.67  (0.94-2.41) | 0.036 |  | 0.034 |  |
| MTL cholesterol | rs1143634 | 2.79  (1.04-6.07) | 3.05  (1.45-6.15 | 2.98  (1.47-4.95) | 0.040 |  | 0.024 |  |
|  | rs1800566 | 2.82  (1.04-6.15) | 3.17  (1.27-6.07 | 3.01  (1.54-4.95) | 0.043 |  | 0.031 |  |
|  | rs2066853 | 2.98  (1.04-6.15) | 2.59  (1.04-6.07) | 3.24  (3.24-3.24) | 0.017 |  | 0.021 |  |
| Triglycerides | rs17553719 | 1.1  (0.32-5.50) | 1  (0.40-7.60) | 1.3  (0.5-4.8) |  | 0.049 |  | 0.044 |
| Sodium | rs17553719 | 139.0  (134.0-145.0) | 139.0  (135.0-144.0) | 138.0  (134.0-143.0) |  | 0.04 |  | 0.06 |
| Pancreatic amylase | rs1001179 | 28.00  (4.00-133.00) | 24.50  (10.00-73.00) | 32.00  (19.00-63.00) |  |  |  | 0.037 |
|  | rs1143634 | 27.00  (10.00-133.00) | 27.00  (4.00-73.00) | 22.00  (12.00-45.00) |  | 0.015 |  | 0.017 |
|  | rs2066853 | 27.00  (4.00-133.00 | 27.00  (10.00-50.00) | 50.00  (50.00-50.00) |  |  |  |  |
|  | rs17553719 | 27.00  (10.0-133.0) | 27.00  (4.00-82.00) | 33.00  (15.00-58.00) |  | 0.01 |  | 0.01 |
| Alkaline phosphatase | rs7787362 | 55.0  (26.0-175.0) | 58.0  (28.0-26.0) | 55.0  (13.0-141.0) | 0.009 |  | 0.032 |  |
| Urea | rs1800012 | 4.60  (1.70-9.90) | 4.60  (2.10-13.20) | 3.70  (2.80-4.50) |  | 0.045 |  | 0.044 |
|  | rs1800795 | 4.50  (2.10-8.90) | 4.60  (1.70-9.90) | 4.75  (1.70-13.20) |  | 0.044 |  | 0.040 |
|  | rs4880 | 4.55  (2.20-8.50) | 4.50  (1.70-9.90) | 4.90  (2.10-13.20) |  |  |  | 0.048 |
|  | rs1800629 | 4.60  (2.10-10.70) | 4.50  (1.70-13.20) | 5.00  (3.30-7.30) |  |  |  | 0.04 |
| TSH | rs4880 | 1.39  (0.01-3.67) | 1.50  (0.30-52.88) | 1.56  (0.10-10.19) |  |  | 0.020 |  |
|  | rs1050450 | 1.47  (0.01-52.88) | 1.46  (0.14-7.71) | 1.72  (0.59-2.61) |  |  | 0.02 |  |
| CRP | rs1799750 | 0.54  (0.00-138.89) | 0.58  (0.03-21.91) | 0.88  (0.06-11.98) |  |  |  |  |
|  | rs1800012 | 0.54  (0.00-138.89) | 0.71  (0.01-11.98) | 0.27  (0.10-0.35) |  | 0.041 |  | 0.031 |
|  | rs1800629 | 0.51  (0.00-138.89) | 0.77  (0.08-11.57) | 1.27  (0.37-2.58) | 0.021 |  |  |  |
| GGT | rs1143634 | 13.00  (0.00-218.00) | 11.00  (0.00-713.00) | 17.00  (5.00-174.00) | 0.058 | 0.022 |  | 0.006 |
|  | rs26722 | 12.00  (0.00-2713.00) | 18.50  (6.00-56.00) | - | 0.039 |  |  |  |
| IgE | rs1143634 | 36.00  (0.10-1879.0) | 39.80  (0.10-493.0) | 16.20  (0.60-398.5) |  | 0.049 |  | 0.030 |

CRP – C reactive protein, LDL – low density lipoprotein, HDL – high density lipoprotein, AST – aspartate aminotransferase, ALT – alanine transaminase, GGT – gamma-glutamyl transferase. HT – heterozygous genotype, MT – minor genotype, WT – wild type, C1 and C2 – codominant 1 and 2, D – dominant, R - recessive.