**Table S7\_** Identified SNPs in the coding and non-coding regions of *MGAT5* in UC patients mainly harboring a genetic background (either early onset disease or family history).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Chr: bp** | **rs nomenclature** | **Alleles** | **EUR MAF** | **CEU MAF** | **Gene region** |
| 2: 134250470 | rs1257198 | G/A | 0.281 (G) | 0.227 (G) | Intron |
| 2: 134250861 | rs3762484 | T/C | 0.063 (C) | 0.061 (C) | Intron |
| 2: 134251669 | rs1356671 | C/T | 0.065 (T) | 0.035 (T) | Intron |
| 2: 134251775 | rs56807763 | **A**/**C**/G | 0.018 (C) | 0.035 (C) | Intron |
| 2: 134252156 | rs148068522 | G/A | 0.008 (A) | 0.005 (A) | Intron |
| 2: 134252340 | rs753294145 | G/T | - | - | Intron |
| 2: 134252373 | rs72976124 | **G**/**A**/C | - | - | Intron |
| 2: 134254718 | rs1034767237 | T/C | - | - | Intron |
| 2: 134257776 | rs1257220 | A/G | 0.260 (A) | 0.260 (A) | Intron |
| 2: 134290348 | rs3814022 | C/G | 0.242 (G) | 0.242 (G) | Intron |
| 2: 134311223 | rs4953911 | **T**/**A**/C | 0.493 (A) | 0.493 (A) | Intron |
| 2: 134344883 | rs3214771 | A/- | 0.317 (-) | 0.258 (-) | Intron |
| 2: 134349829 | rs34876684 | A/G | 0.012 (G) | 0.005 (G) | Exon 9 |
| 2: 134403184 | rs3748900 | G/A | 0.339 (A) | 0.354 (A) | Intron |
| 2: 134413128 | rs2289464 | A/G | 0.086 (G) | 0.071 (G) | Intron |
| 2: 134422950 | rs2289465 | T/C | 0.028 (C) | 0.020 (C) | Intron |
| 2: 134422955 | rs2289466 | A/G | 0.041 (G) | 0.020 (G) | Intron |
| 2: 134422979 | rs2289467 | C/T | 0.048 (T) | 0.040 (T) | Intron |
| 2: 134428486 | rs62170036 | **T**/A/**G** | 0.097 (G) | 0.066 (G) | Intron |
| 2: 134441993 | rs2289468 | C/T | 0.019 (T) | 0.010 (T) | Intron |
| 2: 134448769 | rs2230908 | C/A | 0.054 (A) | 0.035 (A) | Exon 16 |
| 2: 134448868 | rs1454081815 | C/T | - | - | 3'UTR |
| 2: 134449047 | rs115651006 | G/A | 0.052 (A) | 0.056 (A) | 3'UTR |
| 2: 134449068 | rs62170042 | G/T | 0.055 (T) | 0.035 (T) | 3'UTR |
| 2: 134449363 | rs681148 | C/T | 0.443 (C) | 0.470 (C) | 3'UTR |
| 2: 134450368 | rs61501319 | C/T | 0.023 (T) | 0.010 (T) | 3'UTR |
| 2: 134450393 | rs34944508 | C/T | 0.051 (T) | 0.051 (T) | 3'UTR |
| 2: 134450403 | rs982742545 | G/A | - | - | 3'UTR |
| 2: 134450506 | rs651970 | A/G | 0.313 (A) | 0.374 (A) | 3'UTR |
| 2: 134450642 | rs626540 | A/G | 0.313 (A) | 0.374 (A) | 3'UTR |
| 2: 134450809 | rs113300199 | T/A | 0.024 (A) | 0.010 (A) | 3'UTR |
| 2: 134450813 | rs199684345 | T/A | 0.020 (A) | 0.010 (A) | 3'UTR |
| 2: 134450828 | rs1044064850 | G/A | - | - | 3'UTR |
| 2: 134450904 | rs75561369 | G/A | 0.026 (A) | 0.020 (A) | 3'UTR |
| 2: 134451250 | rs56687571 | G/C | 0.027 (C) | 0.010 (C) | 3'UTR |
| 2: 134451322 | rs569832033 | T/C | 0.001 (C) | 0.005 (C) | 3'UTR |
| 2: 134451571 | rs2439568 | G/A | 0.341 (G) | 0.384 (G) | 3'UTR |
| 2: 134451583 | rs636975 | A/G | 0.440 (A) | 0.470 (A) | 3'UTR |
| 2: 134452020 | rs669740 | C/T | 0.442 (C) | 0.470 (C) | 3'UTR |
| 2: 134452046 | rs113670398 | C/T | 0.059 (T) | 0.035 (T) | 3'UTR |
| 2: 134452524 | rs79594066 | T/C | 0.050 (C) | 0.025 (C) | 3'UTR |
| 2: 134452535 | rs191482755 | A/G | 0.006 (G) | 0.005 (G) | 3'UTR |
| 2: 134452564 | rs2290482 | **G**/**A**/C | 0.023 (A) | 0.010 (A) | 3'UTR |
| 2: 134452819 | rs2290483 | A/G | 0.107 (G) | 0.066 (G) | 3'UTR |
| 2: 134453311 | rs139933732 | C/T | 0.012 (T) | 0.005 (T) | 3'UTR |
| 2: 134453452 | rs74398272 | T/C | 0.016 (C) | 0.010 (C) | 3'UTR |
| 2: 134453649 | rs73960911 | A/G | 0.019 (G) | 0.025 (G) | 3'UTR |
| 2: 134453973 | rs1041938 | A/T | 0.085 (T) | 0.056 (T) | 3'UTR |
| 2: 134453978 | rs34497810 | **G**/A/**C** | 0.082 (C) | 0.051 (C) | 3'UTR |
| 2: 134454290 | rs7841 | C/T | 0.091 (T) | 0.121 (T) | 3'UTR |

**Chr** – Chromosome; **MAF** – Minor frequent allele; **EUR** – Europe; **CEU** - Utah Residents (CEPH) with Northern and Western European Ancestry