

|                      | Position | SNP                  |
|----------------------|----------|----------------------|
|                      | 1        | 17788974 1:17788974  |
|                      | 1        | 2111536 1:2111536    |
|                      | 1        | 5088914 1:5088914    |
|                      | 1        | 58136041 1:58136041  |
|                      | 1        | 58901534 1:58901534  |
|                      | 1        | 6054823 1:6054823    |
|                      | 1        | 6057511 1:6057511    |
|                      | 1        | 6068284 1:6068284    |
|                      | 1        | 6068296 1:6068296    |
|                      | 1        | 62265668 1:62265668  |
|                      | 1        | 79010300 1:79010300  |
|                      | 2        | 4963950 2:4963950    |
|                      | 3        | 4492088 3:4492088    |
|                      | 3        | 4499947 3:4499947    |
|                      | 3        | 4504702 3:4504702    |
|                      | 4        | 52468637 4:52468637  |
|                      | 4        | 65185405 4:65185405  |
|                      | 4        | 65195651 4:65195651  |
|                      | 4        | 65472831 4:65472831  |
|                      | 5        | 2977578 5:2977578    |
|                      | 5        | 3605534 5:3605534    |
|                      | 5        | 61364366 5:61364366  |
|                      | 6        | 55426838 6:55426838  |
|                      | 6        | 56386475 6:56386475  |
|                      | 6        | 58784171 6:58784171  |
|                      | 7        | 10670279 7:10670279  |
|                      | 7        | 59708206 7:59708206  |
|                      | 8        | 2907497 8:2907497    |
|                      | 8        | 52734676 8:52734676  |
|                      | 8        | 53200484 8:53200484  |
|                      | 8        | 53647924 8:53647924  |
|                      | 8        | 54421800 8:54421800  |
|                      | 8        | 59461141 8:59461141  |
|                      | 8        | 5993722 8:5993722    |
|                      | 8        | 5993736 8:5993736    |
|                      | 9        | 51653288 9:51653288  |
|                      | 9        | 57902113 9:57902113  |
|                      | 9        | 57902114 9:57902114  |
|                      | 10       | 10962767 10:10962767 |
|                      | 10       | 22050836 10:22050836 |
|                      | 10       | 27166741 10:27166741 |
|                      | 10       | 47706601 10:47706601 |
|                      | 10       | 54084249 10:54084249 |
|                      | 10       | 5514678 10:5514678   |
|                      | 10       | 56151862 10:56151862 |
|                      | 10       | 56158606 10:56158606 |
|                      | 10       | 8489698 10:8489698   |
| Chromosome           | 1        | 1                    |
| Ala                  |          |                      |
| Arg                  |          |                      |
| Asp                  |          |                      |
| Cys                  |          |                      |
| Ile                  |          |                      |
| Leu                  |          |                      |
| Lys                  |          |                      |
| Phe                  |          |                      |
| Gly                  |          |                      |
| His                  |          |                      |
| Pro                  |          |                      |
| Ser                  |          |                      |
| Tyr                  |          |                      |
| Val                  |          |                      |
| Asp total            |          |                      |
| Ala total            |          |                      |
| Arg total            |          |                      |
| Asn total            |          |                      |
| BCAA                 |          |                      |
| Cys total            |          |                      |
| Glu total            |          |                      |
| Gly total            |          |                      |
| His total            |          |                      |
| Ile BCAA             |          |                      |
| Ile total            |          |                      |
| Leu BCAA             |          |                      |
| Leu total            |          |                      |
| Lys total            |          |                      |
| Met total            |          |                      |
| Pro total            |          |                      |
| Ser total            |          |                      |
| Thr total            |          |                      |
| Total                |          |                      |
| Trp total            |          |                      |
| Tyr total            |          |                      |
| Val BCAA             |          |                      |
| Val total            |          |                      |
| Arg/Glu family       |          |                      |
| Asp family           |          |                      |
| Cys/Ser family       |          |                      |
| Glu family           |          |                      |
| Glu/Glu family       |          |                      |
| Gly/Ser family       |          |                      |
| Ile/Asp family       |          |                      |
| Lys/Asp family       |          |                      |
| Met/Asp family       |          |                      |
| Phe/Shikimate family |          |                      |
| Pro/Glu family       |          |                      |
| Ser family           |          |                      |
| Ser/Ser family       |          |                      |
| Shikimate family     |          |                      |
| Thr/Asp family       |          |                      |
| Tyr/Shikimate        |          |                      |
| Ala/Pyruvate         |          |                      |
| Leu/Pyruvate         |          |                      |
| Pyruvate family      |          |                      |
| Val/Pyruvate         |          |                      |

P-value

