

# Association of Missense *MTTP* Gene Polymorphism with Carcass Characteristics and Meat Quality Traits in Pigs

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## Supplementary Online Material (SOM)

Table S1. Family structure of all pig breeds analyzed

| Number of animals                            | Large White | Landrace | Pulawska | Duroc   | Pietrain | Whole population |
|----------------------------------------------|-------------|----------|----------|---------|----------|------------------|
| <i>n</i> of boars/ <i>n</i> of pigs per sire | 51/4.80     | 64/4.22  | 21/3.43  | 10/3.80 | 18/3.00  | 164/4.20         |
| <i>n</i> of sows/ <i>n</i> of pigs per dam   | 158/1.55    | 161/1.67 | 47/1.53  | 29/1.31 | 37/1.45  | 435/1.58         |

Table S2. Association between ENSSSCT00000010052.2:c.2518C>T polymorphism and slaughter traits evaluated in different pig breeds

| Slaughter traits                         | Genotype | Large White<br>( <i>n</i> = 245) | Landrace<br>( <i>n</i> = 273) | Pietrain<br>( <i>n</i> = 54) | Pulawska<br>( <i>n</i> = 72) | Duroc<br>( <i>n</i> = 38) |
|------------------------------------------|----------|----------------------------------|-------------------------------|------------------------------|------------------------------|---------------------------|
| Carcass yield (%)                        | CC       | 77.57 ± 0.34 <sup>a</sup>        | 76.34 ± 0.20                  | 78.82 ± 0.34                 | 77.30 ± 0.22 <sup>a•</sup>   | 75.61 ± 0.35              |
|                                          | CT       | 76.90 ± 0.26 <sup>b</sup>        | 76.32 ± 0.15                  | 78.19 ± 0.22                 | 77.14 ± 0.19 <sup>ab</sup>   | 76.91 ± 0.68              |
|                                          | TT       | 77.00 ± 0.28 <sup>ab</sup>       | 76.55 ± 0.14                  | 78.68 ± 0.49                 | 76.73 ± 0.25 <sup>b</sup>    | –                         |
| Weight of loin (kg)                      | CC       | 7.70 ± 0.16                      | 7.58 ± 0.10                   | 8.01 ± 0.13 <sup>a•</sup>    | 7.20 ± 0.14                  | 7.36 ± 0.00               |
|                                          | CT       | 7.81 ± 0.12                      | 7.56 ± 0.07                   | 7.81 ± 0.08 <sup>ab</sup>    | 7.38 ± 0.13                  | 7.96 ± 0.00               |
|                                          | TT       | 7.83 ± 0.13                      | 7.71 ± 0.07                   | 7.52 ± 0.18 <sup>b</sup>     | 7.13 ± 0.17                  | –                         |
| Weight of ham without bone and skin (kg) | CC       | 9.27 ± 0.15                      | 9.19 ± 0.10                   | 10.31 ± 0.12                 | 8.95 ± 0.15                  | 9.34 ± 0.09               |
|                                          | CT       | 9.17 ± 0.12                      | 9.05 ± 0.07                   | 10.59 ± 0.08                 | 8.77 ± 0.14                  | 9.47 ± 0.29               |
|                                          | TT       | 9.05 ± 0.13                      | 9.06 ± 0.07                   | 10.39 ± 0.17                 | 8.82 ± 0.18                  | –                         |
| Average backfat thickness (cm)           | CC       | 1.32 ± 0.09 <sup>b</sup>         | 1.34 ± 0.06                   | 1.15 ± 0.08                  | 1.48 ± 0.08                  | 1.35 ± 0.24               |
|                                          | CT       | 1.44 ± 0.07 <sup>b</sup>         | 1.32 ± 0.04                   | 1.11 ± 0.05                  | 1.57 ± 0.07                  | 1.56 ± 0.38               |
|                                          | TT       | 1.56 ± 0.07 <sup>a</sup>         | 1.34 ± 0.04                   | 1.07 ± 0.12                  | 1.50 ± 0.09                  | –                         |
| Loin eye area (cm <sup>2</sup> )         | CC       | 54.20 ± 1.39                     | 53.77 ± 0.87                  | 67.67 ± 1.69                 | 50.87 ± 1.41                 | 48.80 ± 0.04              |
|                                          | CT       | 52.26 ± 1.07                     | 53.38 ± 0.66                  | 66.48 ± 1.10                 | 49.69 ± 1.27                 | 49.35 ± 0.15              |
|                                          | TT       | 53.64 ± 1.17                     | 52.91 ± 0.61                  | 64.37 ± 2.44                 | 50.43 ± 1.64                 | –                         |
| Lean meat percentage                     | CC       | 61.05 ± 0.74                     | 61.23 ± 0.50                  | 66.67 ± 0.60                 | 59.45 ± 0.81                 | 62.27 ± 0.43              |
|                                          | CT       | 60.35 ± 0.57                     | 60.87 ± 0.38                  | 67.63 ± 0.39                 | 58.66 ± 0.73                 | 60.95 ± 1.24              |
|                                          | TT       | 59.87 ± 0.62                     | 60.86 ± 0.35                  | 66.09 ± 0.87                 | 58.98 ± 0.94                 | –                         |
| Weight of primary cuts (kg)              | CC       | 24.15 ± 0.58                     | 23.80 ± 0.20                  | 26.90 ± 0.24                 | 23.07 ± 0.32                 | 23.80 ± 0.23              |
|                                          | CT       | 23.81 ± 0.44                     | 23.67 ± 0.15                  | 27.30 ± 0.16                 | 22.78 ± 0.28                 | 24.38 ± 0.52              |
|                                          | TT       | 24.01 ± 0.48                     | 23.66 ± 0.14                  | 26.66 ± 0.35                 | 22.88 ± 0.37                 | –                         |

values are presented as Least Squares Means ± standard errors

means with different superscripts differ significantly between genotypes (<sup>a,b</sup>*P* ≤ 0.05, <sup>a,b•</sup>*P* ≤ 0.1 – trends)