**Table S2**.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model3** |  |  |  | | **Weight1** | |  |  | **Weight2** | |  |  | **Weight3** | |  |  | **Weight4** | |
|  |  | ***by.x***4 | | ***F*** | ***Pr* > *F*** |  | ***by.x*** | ***F*** | ***Pr* > *F*** |  | ***by.x*** | ***F*** | ***Pr* > *F*** |  | ***by.x*** | ***F*** | ***Pr* > *F*** |
| **A:** | |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Family | |  | 0.04 | | 39.01 | <0.0001 |  |  |  | NS |  |  |  | NS |  |  |  | NS |
| SH | |  | 53.04 | | 42.44 | <0.0001 |  | 88.77 | 40.83 | <0.0001 |  | 199.18 | 39.03 | <0.0001 |  | 435.48 | 28.88 | <0.0001 |
| TL | |  |  | |  | NS5 |  |  |  | NS |  |  |  | NS |  |  |  | NS |
| UW | |  |  | |  | NS |  |  |  | NS |  |  |  | NS |  |  |  | NS |
| Tank | |  |  | |  | NS |  | -2.84 | 21.35 | <0.0001 |  | -1.23 | 10.58 | 0.0012 |  |  |  | NS |
| Age | |  | 1.93 | | 112.39 | <0.0001 |  | 2.20 | 203.50 | <0.0001 |  | 4.34 | 149.45 | <0.0001 |  | 8.77 | 99.09 | <0.0001 |
|  | |  |  | |  | |  |  |  | |  |  |  | |  |  |  | |
| **B:** | |  |  | |  | |  |  |  | |  |  |  | |  |  |  | |
| SH | |  | 42.62 | | 27.94 | <0.0001 |  | 88.77 | 40.83 | <0.0001 |  | 199.18 | 39.03 | <0.0001 |  | 435.48 | 28.88 | <0.0001 |
| TL | |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| UW | |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tank | |  |  | |  |  |  | -2.83 | 21.35 | <0.0001 |  | -1.23 | 10.58 | 0.0012 |  |  |  |  |
| Age | |  | 0.96 | | 100.03 | <0.0001 |  | 2.20 | 203.50 | <0.0001 |  | 4.34 | 149.45 | <0.0001 |  | 8.77 | 99.09 | <0.0001 |
|  | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | |  | | |  |  |  |  |  |  |  |  |  |  |  |  |
| Normality test *P*6 | | | | | <0.0001 | |  |  | 0.015 | |  |  | 0.174 | |  |  | <0.0001 | |
| Kurtosis | |  |  | | 8.85 | |  |  | 0.24 | |  |  | 0.11 | |  |  | 0.54 | |

1Body weight was recorded on each animal at approximately 6, 7, 9 and 12 months post-hatching (Weight1, Weight2, Weight3 and Weight4). In stepwise model selection, we used growth records from hatch year 2010 offspring (*n* = 1,657 animals) from the growth selected families, animals from the growth selected families with their corresponding parents and grandparents were used in the association analysis.

2Stepwise model selection was performed with SAS procedure REG [19] using significance level (SL) of SLENTRY = 0.50 and SLSTAY = 0.05.

3Model A included: design variable family, fixed effect tank and covariates (age, SH, TL and UW). Model B included: fixed effect tank and covariates (age, SH, TL and UW). Founder-strain composition effects were: SH = Shasta; TL = Troutlodge; and UW = University of Washington.

4Parameter estimate from stepwise model selection with SAS Procedure REG [19].

5NS indicates the variable had a non-significant (*P* > 0.05) contribution to the predictive power of the growth trait model.

6P-value from Shapiro-Wilk normality test (Departure from multivariate normal).