

Supplementary Material

Genome-wide association studies demonstrate that *TASPI* contributes to increased muscle fiber diameter

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Table S1. Data for muscular histological traits of Pekin ducks and mallards

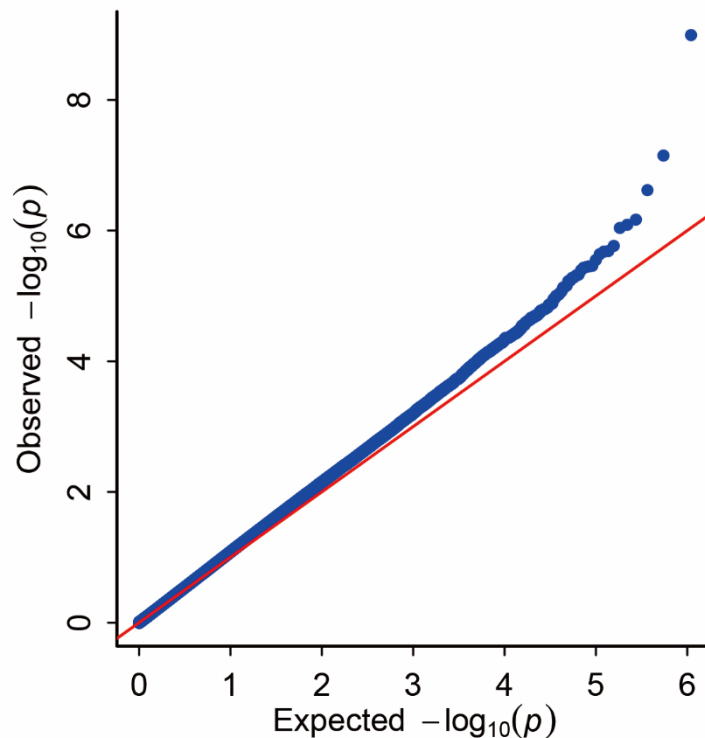


Figure. S1. Quantile-quantile (QQ) plot of muscle fiber diameter.

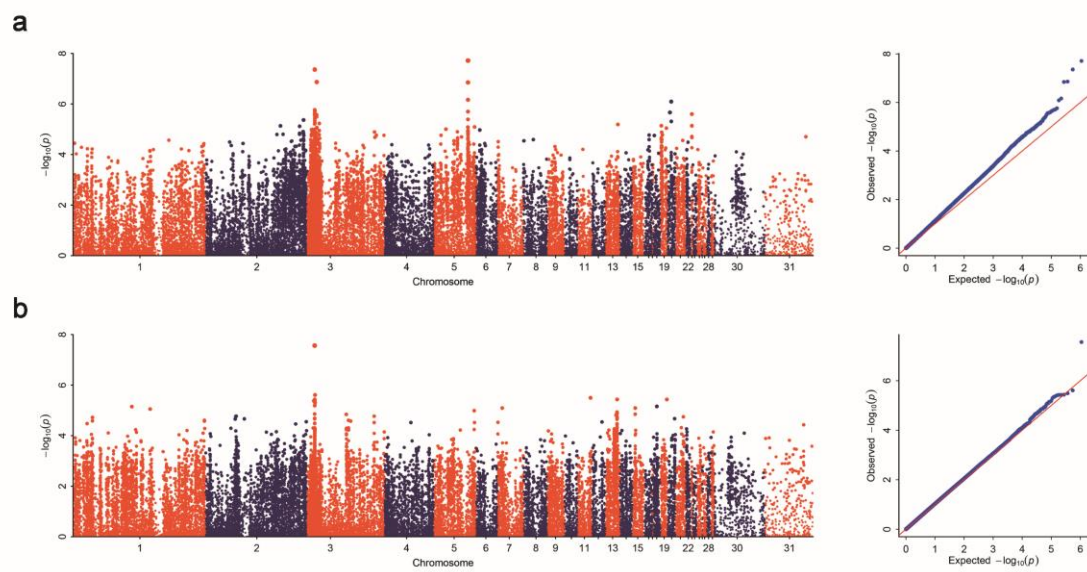


Figure. S2. Manhattan and quantile-quantile (QQ) plot of muscle fiber area and muscle fiber density. **a** GWAS results of muscle fiber area. **b** GWAS results of muscle fiber density.

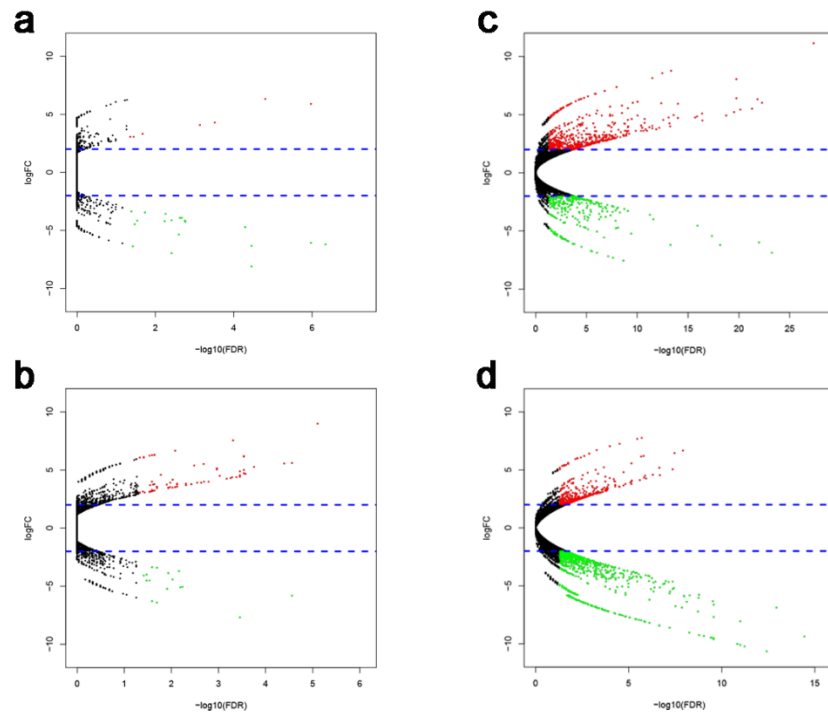


Figure. S3. Volcano plot comparing transcriptomes of the development stage between Pekin duck and mallard. **a** Volcano plot comparing transcriptomes between Pekin duck and mallard at 2 weeks. **b** Volcano plot comparing transcriptomes between Pekin duck and mallard at 4 weeks. **c** Volcano plot comparing transcriptomes between Pekin duck and mallard at 6 weeks. **d** Volcano plot of comparing transcriptomes between Pekin duck and mallard at 8 weeks.

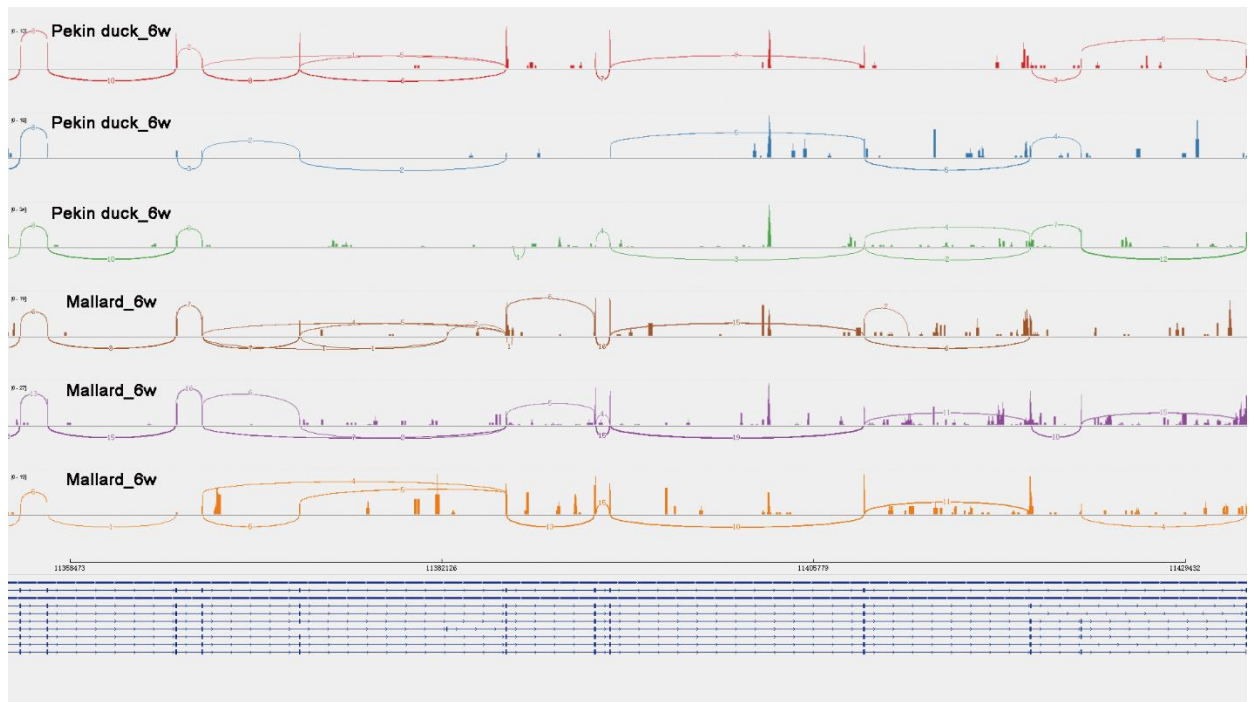


Figure. S4. Sashimi plot of Pekin ducks and mallards at 6 weeks.

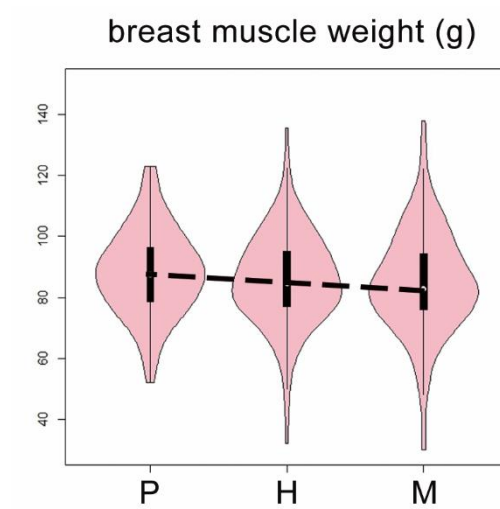


Figure. S5. Association of QTL genotype with the breast muscle weight of the F₂ segregating population. P: Pekin duck; H: Heterozygotic; M: Mallard.

Table S1A. Data for muscular histological traits of mallards

id	age	density (no./mm ²)	area(um ²)	diameter(um)
P208	8w	3374.25	186.70	14.67
P209	8w	3388.25	189.50	14.67
P210	8w	1938.65	341.61	19.85
P211	8w	2417.68	319.14	18.94
P215	8w	2593.43	226.28	16.12
P216	8w	2225.84	271.67	17.85
P241	8w	2157.27	265.43	17.43
P247	8w	2139.01	175.53	14.16
P248	8w	1589.08	385.05	20.99
P365	8w	1791.57	347.05	19.91

Table S1B. Data for muscular histological traits of Pekin ducks

id	age	density (no./mm ²)	area(um ²)	diameter(um)
Y228	8w	1749.66	267.67	17.78
Y249	8w	3856.77	142.63	12.15
Y352	8w	2633.55	230.69	16.22
Y355	8w	3478.23	146.81	12.85
Y357	8w	3547.59	179.89	14.25
Y358	8w	3471.44	160.32	13.62
Y359	8w	3846.48	170.28	13.82
Y372	8w	3397.54	156.18	13.40
Y386	8w	2523.48	246.56	16.91
Y387	8w	2431.14	196.67	14.58